# Central University of Rajasthan 

(Established under the Central Universities Act, 2009)


## MINUTES

of the

## Thirteenth Meeting of the Academic Council

Meeting No. : Thirteenth ( $\mathbf{1 3}^{\text {th }}$ )

| Venue $:$ | Conference Room (SP-IV) |
| :--- | :--- |
|  | Central University of Rajasthan, |
|  | Bandarsindri, NH-8, |
|  | Tehsil - Kishangarh-305817 |
|  | Dist. -Ajmer (Rajasthan) |

Date
: Monday, $29^{\text {th }}$ Feb., 2016
Time : 10:30 A.M.

Minutes of the $13^{\text {th }}$ Meeting of the Academic Council held on $29^{\text {th }}$ February 2016 at 10:30 A.M. onwards in the Conference Room (SP-IV), Central University of Rajasthan, Bandarsindri, NH8, Tehsil - Kishangarh, District - Ajmer, (Rajasthan)

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Minutes of the $13^{\text {th }}$ Meeting of the Academic Council held on $29^{\text {th }}$ February 2016 at 10:30 A.M. onwards in the Conference Room (SP-IV), Central University of Rajasthan, Bandarsindri, NH8, Tehsil - Kishangarh, District - Ajmer, (Rajasthan)

The following members were present:

| 1. Prof. Arun K Pujari | $:$ | Chairman |
| :--- | :--- | :--- |
| 2. Prof. N.V. Thakkar | $:$ | Member |
| 3. Prof. E. D. Jemmis | $:$ | Member |
| 4. Prof. A. K. Gupta, Dean | $:$ | Member |
| 5. Prof. Supriya Agarwal, Dean |  | Member |
| 6. Prof. Neeraj Gupta, Dean | $:$ | Member |
| 7. Prof. R. T. Pardasani | $:$ | Member |
| 8. Prof. R. L. Meena, DSW | $:$ | Member |
| 9. Dr. S.N. Ambedkar, Dean |  | Member |
| 10. Dr. M. R. P. Singh,Dean | $:$ | Member |
| 11. Dr. D. C. Sharma, Dean | $:$ | Member |
| 12. Dr. Manish Shrimali,Dean | $:$ | Member |
| 13. Dr. Sunil Ganpati Naik, Dean | Member |  |
| 14. Dr. S.Kandasamy | $:$ | Member |
| 15. Dr. Mamta Rani | $:$ | Member |
| 16. Dr. Vipin Kumar | $:$ | Member |
| 17. Dr. Pawan Kumar Dadhich | $:$ | Member |
| 18. Dr. Jagdish Jadhav | $:$ | Member |
| 19. Dr. Laxmi Kant Sharma |  | Member |
| 20. Dr. Jugal Kishore Prajapat | $:$ | Member |
| 21. Dr. N. Laxmi Aiyar | $:$ | Member |
| 22. Dr. Pradeep Verma | $:$ | Member |
| 23. Dr. Anand Kumar | $:$ | Member |
| 24. Dr. Raghu Chitta | $:$ | Member |
| 25. Dr. Vijay Kumar M. | $:$ | Member |
| 26. Shri K.V.S.Kameswara Rao | $:$ | Member \& Secretary |

Leave of absence was granted to:

1. Mr. Arjun Malhotra : Member
2. Dr. Madhav Chavhan : Member
3. Shri H. K. Dua : Member
4. Prof. Dheeraj Sanghi : Member
5. Dr. Jitendra Kumar : Member
6. Dr. Sanjay Kumar : Member
Item

## Particulars


#### Abstract

13-.1.0 $\quad$ Welcome and Presentation by Hon'ble Vice Chancellor Prof. Arun K. Pujari, Vice Chancellor extended hearty welcome to all the members and thanked them for gracing the meeting with their esteemed presence. Being the first Academic Council meeting after his taking over as Vice Chancellor at Central University of Rajasthan, he introduced himself to the external and other members of the Academic Council and also introduced Mr. K.V.S. Kameswara Rao, Registrar who also joined the University recently.

Prof. Pujari, then expressed that at every meeting of the Academic Council, a tradition may be started by the Vice Chancellor to present brief activities of the University. While appreciating the proposal Prof. E.D. Jemmis, suggested that a three minute presentation by each of Deans of Schools of Studies about various achievements or activities that happened in the respective School should be presented. All members appreciated the suggestion.


Prof. Pujari has mentioned that from the period since last meeting of the Academic Council the University has seen mixed events. He announced that Dr. Vijay Kumar Prajapati, Assistant Professor, Dept. of Biochemistry has bagged INSA award and congratulated him. He added that during the period, there were Hon'ble Visitor's meeting and meeting by the Ministry of Human Resource Development. He apprised the members of the various buildings that were built by the CPWD. The Faculty Housing could be ready by next academic year. Administrative building might take some more time. A few buildings for the Schools and additional hostel buildings will be ready. Solar panels were placed on the roof tops for generation of solar power. Various workshops conducted. Encouraged participation in President's Innovation Competition. Signed an MOU with Namibian Institute of Public Administration and Management (NIPAM). Also felt sorrow for the sad demise of a Ph.D. scholar.

After brief presentation by the Chairman, Mr. Kameswara Rao, Registrar and MemberSecretary was asked to go ahead with the agenda items of the meeting.

The detailed item-wise Agenda of the Academic Council meeting was then taken up.

| 13-2.0 | 13-2.1 | Confirmation of Minutes of the Twelfth Academic Council Meeting held on Friday, the 22nd May, 2015. <br> [Copy of the Minutes of the Twelfth Academic Council Meeting held on Friday, the $\mathbf{2 2}^{\text {nd }}$ May, 2015, is attached herewith as Annexure A. <br> Resolution: Confirmed. |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 13-2.2 | Action Taken Reports <br> Noted by the Academic Council with the comments as mentioned below. It was also suggested that if any action is pending / not yet taken, it has to be reported in the next meeting after action is taken. |  |  |
|  |  | Item No. | Particulars | Action Taken |
|  |  | 12-4.1 | To start 3 years Integrated M.Sc. B.Ed. Innovative programme from academic year 2015-16. | As per the approval of the Executive Council, three years Integrated M.Sc. B.Ed. programme under innovative scheme in the stream of Physics, Chemistry, Mathematics and Economics has been started from the Academic Year 2015-16 with an intake capacity of 15 |


|  |  | students in each programme. <br> The intake capacity was corrected to 25 students in each programme |
| :---: | :---: | :---: |
| 12-4.2 | Implementation of subject <br> 'Environmental Studies' compulsory <br> for all streams   | Dept. of Env. Science has started the course of Environmental Studies at undergraduate level with 03 credits from the Session 2015-16. |
| 12-4.3 | Roadmap about Textile Industry and Textile Education by Dr. K.K. Goswami in compliance to item No. 24.3[3B(4)] of Minutes of the Second meeting of the Court. | Matter has been put up to Executive Council and Hon'ble Vice Chancellor has been empowered to take the decision accordingly. <br> It was suggested the new Vice Chancellor is to be notified about the decision to be taken. |
| 12-4.4 | Incorporation of the CBSE Course "Knowledge Traditions and Practices of India" for the purpose of admission to undergraduate programme of the University. | The action is pending. |
| 12-4.5 | Medium of Examinations as per University Ordinance 54 | Relevant order has been issued. |
| 12-4.6 | Applicable Fee and other fee of Ph.D. Scholars from the date of commencement of Pre-Ph.D. classes | No action required. |
| 12-4.7 | To review the revision of fee structure and fee payable by the students of the University for various courses/services | Revision of the fee @ $10 \%$ in all the components every year (Fee structure) is Implemented. The remaining actions are pending |
| 12-4.8 | Establishment of a Community Development Cell | Community Development Cell has been established in the University. |
| 12-4.9 | Minor Correction/revision/addition in the syllabus of M.Sc. Physics, Integrated M.Sc. B.Ed. and Pre-Ph.D. syllabus | Necessary Correction/revision / addition in the syllabus of M.Sc. Physics, Integrated M.Sc. B.Ed. and Pre-Ph.D. syllabus has been incorporated. |
| 12-4.10 | Policy decision on the matter of (A) de-registration of Ph.D. Students (B) research work in any research organisation outside the University and (C) failure in pre-Ph.D. course work (D) pre-Ph.D. Research Methodology paper | As per the recommendations of the Executive Council, a committee has been constituted to make necessary provisions in the Ordinance No. 09 for Point no. (A), (B) and (C). Executive council authorized Hon'ble Vice Chancellor for point No. (D) to approve the syllabus of pre-Ph.D. Research Methodology paper. <br> It was suggested that, the research work if substantially completed then only deregistration should be considered. As per the merits of the case, and recommendations of the concerned Dean/Head of the Dept. (recommendation of the Doctoral Committee, at the respective School level decision could be taken) However, Vice Chancellor is authorized to take final decision as regards permitting deregistration and the mater can be reported in the Academic Council accordingly. It was also recommended to make provisions accordingly in the Ordinance. |
| 12-4.11 | To start Diploma in Early Childhood Education and Development Course under Community College scheme | Implemented. <br> However, later on the course was discontinued, as there was some |


|  |  |  | from session 2015-16 | typographical error in the minimum qualification required. |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 12-4.12 | Transcript Certificate to the student | No action required. |
|  |  | 12-4.13 | Change of credits in respect of Education component in Integrated M.Sc. programme. | Implemented. |
|  |  | 12-4.14 | UGC Guidelines on adoption of Choice Based Credit System (CBCS). | Implemented. |
|  |  | 12-4.15 | To consider the Academic Calendar for the Academic Year 2015-16 | No action required. |
|  |  | 12-4.16 | Payment of UGC Non-NET Fellowship to Pre-Ph.D. students failed in course work. | Action Noted. |
|  |  | 12-4.17 | To consider the updating/ modification in the scheme and syllabi of M.A. Hindi programme to be effective from 2015-16. | Necessary Updation / modification in the scheme and syllabi of M.A. Hindi programme has been made. |
|  | Resolution: Noted and with recommendation that the Items for consideration were not placed before the Executive Council, will be placed as Reporting Item in next meeting of Executive Council. |  |  |  |
| 13-3.0 | Reporting Items |  |  |  |
|  | 13-3.1 | Approval of Vocational courses on "Modular Ceiling Installation" <br> A letter from Prof. Neeraj Gupta, Dean, School of Architecture and Head, Dept. of Architecture has been received for approval of vocational courses on "Modular Ceiling Installation" to the students of B.Voc(Interior Design). School of Architecture has developed a set of three courses on "Modular Ceiling Installation". The said courses are proposed to be offered to the students of B.Voc. (Interior Desing) immediately after their EoSE exams scheduled in Nov., 2015. The letter along with the detailed syllabus is placed herewith as (Annexure-B) <br> Placed before the Academic Council for ratification. <br> Resolution: The Academic Council noted and ratified the action taken by the Vice Chancellor. |  |  |
|  | 13-3.2 | Conduct of CUCET-2016 by Central University of Rajasthan as Coordinating University. <br> The Central University of Rajasthan is the Coordinating University for Central Universities Common Entrance Test-2016 (CUCET-2016) for admission to various Programmes of 09 participating Universities. <br> The participating Universities are: Central University of Haryana, Central University of Jammu, Central University of Jharkhand, Central University of Karnataka, Central University of Kashmir, Central University of Kerala, Central University of Punjab, Central University of Rajasthan and Central University of Tamil Nadu. URL for CUCET-2016 i.e. www.cucet216.co.in is live now and the application forms will be live w.e.f. 09.03.2016. Tentative last date for submission of application forms is 08.04 .2016 and the tentative dates for conduct of CUCET-2016 examination is 15-16 May 2016. <br> Prof. R.T. Pardasani is the Coordinator of CUCET - 2016 <br> Placed before the Academic Council. <br> Resolution: Academic Council noted and the external members congratulated the entire University family for its growth with in short span of time for the |  |  |


|  |  | development of infrastructure and for its abilities to handle the common entrance test on behalf all the participating 9 Universities for the third time in succession. Among the 13 new Central Universities which were established in 2009, it has been very commendable for Central University of Rajasthan to grow up to this level far ahead of the other remaining ones. <br> Academic Council ratified Prof. R.T. Pardasani, as Coordinator CUCET2016. It was resolved that Coordinator CUCET- 2016 will also discharge the duties of the Controller of Examination for this purpose. Prof. R. T. Pardasani informed that all the accounts of CUCET are audited by a Chartered Accountant and a report is given. He added that all the major financial decisions are taken by a National Committee. It was also clarified that CUCET is not a body of CURaj and next year it may be coordinated by some other participating Central University. |
| :---: | :---: | :---: |
| 13-4.0 |  | Items for Consideration |
|  | 13-4.1 | List of PhD students whose registrations were approved by School Boards of various schools for the session 2013-14 and 2014-15. <br> School-wise list is enclosed in Annexure-C. <br> Placed before the Academic Council for approval of School Board Recommendation <br> Resolution: The Academic Council accepted the Ph.D. students' registrations as were approved by the School Boards of various schools for the session 2013-14 and 2014-15. <br> It was suggested that from next time onwards, a list of such Ph.D. students' registration each year could be placed as a reporting item to the Academic Council. |
|  | 13-4.2 | List of faculty members recommended the Committee to be recognized as research supervisor <br> School-wise list is enclosed in Annexure-D. <br> Placed before the Academic Council for approval of recommendation <br> Resolution: The Academic Council accepted and approved the list. <br> It was resolved that faculty with Ph.D. degree and fulfilling other eligibility conditions are to be considered eligible to be a supervisor automatically. If selection committee records so then also they are eligible to be a supervisor. <br> It was suggested that each faculty member of CURaj should have an independent web page in the University Website which will increase the visibility to the outsiders and students |
|  | 13-4.3 | List of elected and nominated students for Students' Council for the session 2015-16. <br> The list of the elected and nominated students for the Students' Council for the session 2015-16 is placed herewith (Annexure-E). <br> Placed before the Academic Council for consideration and approval. <br> Resolution: The Academic Council accepted and approved the list and delay is condoned. | recommended by School Boards

Revision of syllabus of existing individual Course (Annexure-F)

- Research Methodology (Unit I and II) - Pre Ph.D. coursework - Department of Commerce, Department of Management, Department of English, Department of Chemistry
- Integrated M.Sc. B.Ed. (Philosophy Chemistry)
- Dept. of Computer Science \& Engineering:-
- CSIS 301 - Random Process and Probability Theory and Distribution are added to curriculum,
- CSIS 306 - Programing Abstraction is replaced by Programme Elective III and Programming Abstraction, and
- CSIS 310 - Dynamics of Communication Skills and Technical Writing,
- Dept. of Physics:-
- A minor change (reshuffle of 2 courses between 2 nd and 3 rd semester) in the 2 years M.Sc. Physics and 3 Years M.Sc. B.Ed. Physics course curriculum as recommended by the School Board for the change for 2015-16 batch onwards
- Elective courses (02) in the 6th Semester of Integrated M.Sc. Physics and syllabus of these two elective courses i.e. Atomic and Nuclear Physics and Statistical Thermodynamics and Modern Dynamics w.e.f. Jan., 2016 (for 2013 batch-onwards)
- Syllabus of Integrated M.Sc. B.Ed. (Philosophy of Physics)
- Dept. of Computer Science:-
- Addition of a subject in 6th Semester of Integrated M.Sc. (5 years) programme and related minor revision effective from the Academic Session 2016-17.
New Courses
- Game Theory - in $5^{\text {th }}$ Semester for M.Sc., Statistics, M.Sc. Computer Science - w.e.f. 2015-16 (Annexure-G)
- Public Administration- for All in Integrated Studies (Annexure-H)
- Introduction to Economics Thought (2 credits, semester 1), Integrated M.Sc. Economics. (Annexure-I)
- Mathematical Methods in Economics (3 credits, Semester III), Integrated M.Sc. Economics. (Annexure-J)
- Theories of Economic Growth (3 Credits, Semester IV) for the programme of Integrated M.Sc. Economics. (Annexure-K)


## Revision of Existing Course Structure and Programmes (Annexure-L)

- M.Sc. (Microbiology)
- M. Sc. (Biotechnology)
- M. Sc. (Tec) Mathematics
- M. Sc. - B. Ed Mathematics
- Integrated M. Sc. (Mathematics)
- Pre-Ph.D. Coursework
- M.Sc. (Environment Science)
- Integrated M.Sc. (Environment Science)
- M.Sc. (Computer Science)
- Minor changes in the Chemistry Course Scheme of Integrated M.Sc. Programme (5 Year):- Replacement of Inorganic Chemistry Laboratory-III with Physicals Chemistry Laboratory-II in Semester VI.

|  |  | Introduction of New Programmes of Studies <br> It is proposed to have following new programmes of studies in the forthcoming academic year. <br> - M.Sc. (Atmospheric Science) - School of Earth Sciences- (Annexure-M) <br> - M.Sc. (Big Data Analytics) - School of Mathematics, Statistics and Computational Sciences (Annexure-N) <br> - Post Graduate Diploma in Cyber Law- Dept of Public Policy, Law and Governance, School of Social Sciences (Annexure-O) <br> Placed before the Academic Council for consideration and approval. <br> Resolution: With regard to the proposal for the New Courses, Academic Council approved the New Programme M.Sc. Atmospheric Science in the School of Earth Sciences as proposed in the Annexure-M of Agenda. <br> Academic Council also approved M.Sc. Big Data Analysis proposed by the School of Mathematics, Statistics and Computational Sciences. External Members of the Academic Council observed that the M.Sc. Big Data Analysis is proposed to run in collaboration with TCS, it is better that the course can run by the University as a multi-disciplinary course helping Genomics Research, Climate Research and other disciplines such as Computer Science and Statistics. <br> The programmes LLM and PG Diploma in Cyber Law are not approved now. Approval of Academic Council may be sought by circulation, after the recommendation of the School Board for starting of the said programmes is taken. |
| :---: | :---: | :---: |
|  | 13-4.5 | Approval of Examiner Panel to evaluate Ph.D. thesis of Ms. Anju Yadav, Ph.D. Scholar, 2012 batch. <br> Panel of Examiner to evaluate Ph.D. Thesis of Ms. Anju Yadav, Ph.D. Scholar 2012 batch, as recommended by the School Board is placed as Annexure-P. <br> Placed before the Academic Council for consideration and approval. <br> Resolution: The Academic Council approved the Panel and authorized the Chairman Academic Council to approve the panel for all future cases so that the process of evaluation is not hampered. The matter can be ratified in the Academic Council in the subsequent meetings. |
|  | 13-4.6 | M.Tech. Dissertation evaluation is recommended for approval as follows <br> Placed before the Academic Council for consideration and approval. <br> Resolution: This matter is referred back to School Board to review to follow uniform procedure of the University. |


|  | 13-4.7 | Consider the case of Mr. Sandeep Kumar, Ph.D. Scholar, Dept. of Environment Science, for approval of Co-Supervisor from outside the University <br> A letter dated $11^{\text {th }}$ September, 2015 from Dr. Garima Kaushik, Research Supervisor of Ph.D. scholar Mr. Sandeep Kumar, Dept. of Env. Science, duly forwarded by concerned Head and Dean of the school has been received regarding allotment of Co-Supervisor i.e. Dr. Reginald Ebin Masto (Sr. Scientist) from Environmental management division, CSIR- Central Institute of Mining and Fuel Research, Dhanbad, Jharkhand to Mr. Sandeep Kumar. The request is approved by the School Board. (Annexure-Q) <br> Placed before the Academic Council for consideration and approval. <br> Resolution: It was advised that bio-data (A letter from concerned faculty member from the respective Institute to be recognized as Co- Supervisor) of the proposed Co-supervisor is to be obtained along with his consent. His request is to be considered by the School Board for acceptance. It was also suggested that a format should be designed for recognition of the Supervisor from outside the University. Vice Chancellor is authorized to decide on such matters on behalf of the Academic Council. |
| :---: | :---: | :---: |
|  | 13-4.8 | Implementation of the UGC guidelines on determination of a uniform span period to qualify a Degree in the University. <br> A D.O. Letter No. F.12-1/2015(CPP-II) dated $15^{\text {th }}$ October, 2015 has been received from Secretary, UGC, New Delhi. <br> The UGC has formulated the guidelines on determination of a Uniform Span period within which a student may be allowed to quality a Degree. The guidelines along with the said letter is placed herewith as Annexure-R. <br> Placed before the Academic Council for Consideration. <br> Resolution: Academic Council approved and suggested to forward these UGC guidelines to the Committee which is constituted for amending in Ordinance No.3. |
|  | 13-4.9 | Implementation of the Scheme of B.Voc. Degree Programme <br> An email dated $9^{\text {th }}$ October, 20165 sent to Sh. Nikhil Kumar by Prof. Neeraj Gupta, Dean, School of Architecture and Head, Dept. of Architecture have been received. The said email enumerates the commencement of the B.Voc (Interior Design) programmed under the Community College Scheme w.e.f January, 2014 with six monthly admission cycles. <br> Further, the approval for current year i.e. for 2015-16 has also been received for B.Voc. (Building Technology) and B.Voc. (Solid Waste management), each with sanctioned intake of 50 every year. These two programmes are proposed to be commenced in July 2016. The e-mail is placed herewith as Annexure-S. <br> Placed before the Academic Council for Consideration. <br> Resolution: The Academic Council approves the proposals of the B.Voc. programmes and DDU Kaushal Kendra sanctioned by the UGC. |
|  | 13-4.10 | Establishment of the Intellectual Property Management Cell in the University <br> A rough draft of the Intellectual Property Management Cell (to be established in the University) has been submitted by Prof. A. K. Gupta, Dean, School of |


|  |  | Life Sciences which is placed herewith as (Annexure-T). <br> The Item was Placed before the Deans' Committee vide items No. 22-4.5 for perusal and consideration. <br> The Deans' Committee recommended to seek comments by circulating the draft of the Intellectual Property Management Cell among all the Deans. It was further resolved to put up the matter in the next meeting of the Deans' meeting after seeking necessary comments. <br> Placed before the Academic Council for Consideration. <br> This item has been deferred stating that it has to be put up in the Deans' Committee and then later on to the Academic Council. |
| :---: | :---: | :---: |
|  | 13-4.11 | To consider Eligibility Criteria for Admission in M.Tech. CSE <br> School board has recommended change the Eligibility Criteria for Admission in M.Tech. CSE as under: - <br> "B.E. / B.Tech. in any branch of Engineering / MCA / M.Sc. (CS/IT) with 6.5 CGPA (on a 10 -point scale) or $60 \%$ for OC/Gen/OBC whereas 6.0 CGPA (on a 10 -point scale) or $55 \%$ in case of SC/ST/PWD candidates in qualifying degree. <br> For sponsored seats: <br> Candidates with requisite qualifications (mentioned above) and having at least two year of work experience in the relevant field of Govt./Govt.-recognized Organizations (University/Colleges engaged in teaching and research Govt. R \& D institutions or R \& D centers of industry) are eligible to apply under the category of sponsored students. <br> Resolution: <br> Eligibility Criteria for admission in M.Tech. (CSE) have been recommended to AC." <br> Resolution: Academic Council approved the proposal. |
|  | 13-4.12 | To consider the recommendation of Deans' Committee on criteria for admission under CUCET-2016 to various programmes of CURaj. <br> It is recommended that admission to various courses for CURaj will be solely based on CUCET-2016 score. Past academic record will not be taken into account for preparation of merit list. However, past record will be considered for the eligibility purpose. <br> Placed before the Academic Council for consideration. <br> Resolution: Academic Council approved the proposal for all PG and Integrated Programmes. <br> It was also resolved that students who have successfully qualified in UGC JRF (not UGC NET) or similar nationwide written test such as CSIR, ICMR, ICAR etc. are exempted from written test of the Entrance Examination for admission to Ph.D. Programme. These candidates can appear directly for the Interview, subject to fulfilling other admission criteria. For other Candidates (who are not exempted) will be shortlisted for the Interview based on CUCET Score. The merit list will be prepared only on the basis of Performance in the Interview. |

## 13-4.13 To consider implementation of Exit Option for Five Year Integrated

 Programme in the University.Exit option, as mentioned in Integrated Syllabus states that:
"Exit options available after B.Sc. and M. Sc. degree, if not continuing further for B. Ed degree/Master's degree. The candidate will get Certificate in Education along with BSc degree and Diploma in Education with MSc degree if take exit after B.Sc. and M.Sc. respectively."

Now that CURaj has 5-year Integrated Master Programme instead of 6-Year Programme, it is necessary to formalize the same as follows.

- For all 5-year integrated Master programmes, exit option shall be available after 3 years.
- Any student after successfully fulfilling the academic requirement of first 6 semesters can exercise the 'exit option'.
- Students who exercise 'Exit option' at the end of three-years will be given B.Sc. Certificates and their enrollment will be terminated. The student will not be permitted to withdraw the option once exercised.
- Students shall be advised to express option to exit before completion of $6^{\text {th }}$ semester.
- Students who do not exercise 'Exit option' will be given a degree Integrated B.Sc. - M.Sc. certificate at the end of five-years.

Relevant portion of Gazette notification of UGC is given below.
a) The Integrated/Dual Degree Programentes mast nox dilute the standards as prescribed under the Regulations soade by the UGC and oher Statutory authorities concemed in terms of syllabi, programme turation and cxamination requirements.
b) If the Integrated/Dual Degree Programmes intend to offer two separate degrees with an option for in interim exit or lateral entry, tbe duration of the Integrated/Dual Degree Programme must not be less than the dumaion equal to the sum total of the prescribed duration of the two degrees that are being combioed in the Integrated/Dual Degree Programme. Provided that all sweh programmes wonuld tigry the nomenclature of "lolegratedDual Degree (bame of the first degree) - (name of the final degree)", Provided further that both the degrees awarded under the Integrated/Dual Degree progranume shall be individually and separacely recognised as equivalent to corresponding degrews and not as one single jolegrated degree.
c) If the integrited Programme intends to offer a single degree without permission to exit and lateral cancy, the programone duration may be reluxed by not more than $20 \%$ of the sum total of the prescribed duration of the two degrees that ane being combined to moke the single Integrated degree.

## Placed before the Academic Council for consideration.

Resolution: The academic council while agreeing with the proposal decided as under:

For the existing five year integrated master's programmes, students can exercise exit option after successfully completing the academic requirement of first three years (six semesters). Such student will be eligible to receive B.Sc. degree certificate.

After five years (ten semesters) students, on completion of academic requirements, will be eligible to receive the degree with nomenclature of "Integrated / Dual Degree B.Sc. - M. Sc. (name of discipline)".
To enable students take proper decision formal counselling sessions may be organized for different streams at the end of sixth semester.

A committee, to be appointed by the Hon'ble Vice Chancellor, will holistically review the ongoing Integrated programmes.

## 13-4.14 To consider Direct Admission of International Students for different programmes of studies in the University

Preamble- To enhance global visibility of CURaj, it is necessary to increase the number of international enrollment. Govt. of India permits universities to enroll international students as supernumerary seats. CURaj seriously falls short of meeting this limit as it depends only ICCR application for international enrollment. It is proposed to have direct admission of International Students. In the case of Direct Admission, the international student, the entire expenses of education is self-supported. Thus it is proposed to have two modes of entry of international students.

## Admission through ICCR

These applicants are nominated/ sponsored by Government of India under various Scholarship Schemes of the Indian Council for Cultural Relations (ICCR). Candidates are advised to contact the nearest Indian Diplomatic Mission for necessary information about these scholarships.

## Direct Admission Under Supernumerary Category

Those Foreign Students who fulfil the eligibility criteria of the program of their choice but do not wish to appear for the entrance test and interview may be considered for admission under this category. Admission to such candidates shall be given according to the merit list prepared on the basis of marks obtained by them in the qualifying examination. Applicants seeking admission under Supernumerary Category are advised to send their applications online on the prescribed form to

International Affairs Office, Central University of Rajasthan

## International Student

An applicant shall be considered as a "International Student" on satisfying the following conditions: -
(i) Possesses a valid foreign passport.
(ii) Possesses a valid visa issued by a competent authority of the Indian Government clarifying the reasons of his/her stay in the country.

## Eligibility

- Minimum eligibility qualifications for international students will be the same as for Indian students for each program mentioned in the University Prospectus.
- The program on which eligibility is to be relied upon must be from an Institute included in the list of the Association of Indian Universities (AIU). New Delhi- 110002 (http://www.aiuweb.org)
- In case the University/Board is not included in the said list, the candidate has to obtain and submit an Equivalence Certificate to this effect from the Association of Indian Universities.
- English translations of all transcripts, duly attested, are to be submitted.
- Candidates applying from their own country should get their transcripts attested by the concerned accredited authorized government agency and also duly certified by the Indian Embassy or Consulate.
- On being granted admission, all applicants should produce their Students Visa within one month of completion of admission formalities. In case of failure to obtain a visa within the stipulated period, the admission shall stand cancelled. A copy of this visa is to be submitted in the Office of the Foreign Affairs, CURaj.
- Upon arrival in India every foreign student must register with the Foreigners Regional Registration Officer (FRRO)


## Fees

The fee structure and related rules are given as follows.
a. For courses in School of Architecture, School of CSE, School of Earth Sciences, School of Management US \$ 2000
b. For School of Chemistry, School of Physics, School of Maths, School of Life Sciences US \$ 1500
c. For other schools US \$ 1000

## Process of direct admission

The International Affairs Office shall forward the applications after a preliminary scrutiny to the concerned school of CURaj. A 3-member committee (Admission Committee for this purpose) including Dean and HoD/Coordinator examines the degrees and evaluates the prerequisite and suitability for the proposed programme. This committee's decision of recommending or rejecting candidate for direct admission is communicated to International Affairs Office. International Affairs Office then collates all recommendations for the session. After approval by Chairman, Academic Council, admission is offered to the candidate. The decision of the university (rejection or acceptance) is communicated to the candidate.

## Establishment of International Affairs Office

It is proposed to establish a division in the university to handle various matters of international collaborations such as MOUs with international agencies, Direct Admission of International Students, Visits of International delegates to CURaj etc. A senior teacher, preferably a professor will be incharge of this unit. Administrative support staff will be worked out separately.

Placed before the Academic Council for consideration.
Resolution: Academic Council approved proposal with the following change:
a. For the admission to Ph.D., the Supervisor for the International student should be identified at the time of offering admission.
b. Per Semester Fee structure for the International Students will be as under:
> a. For courses in School of Architecture, School of CSE, School of Earth Sciences, School of Management, School of Chemistry, School of US \$ 1000 Physics, School of Life Sciences and Dept. of Culture and Media Studies.
b. For other schools

US \$ 500
13-4.15 Conversion of 'I' Grade to appropriate letter grade
Ordinance 3 states "...... convert 'I' grade to proper letter grade not exceeding 'B' $\qquad$
This rule was followed when the University had 7 point scale. The spirit of this is that an ' $I$ ' grade student can convert I grade to a grade that is lower than the highest grade. In 10 point scale, the grade lower than the highest grade is $\mathrm{B}+$. Hence, it is proposed that in the context of 10 point scale, the rule should read "...... convert ' $I$ ' grade to proper letter grade not exceeding 'B+'. ......"

Placed before the Academic Council for consideration.
Resolution: Academic Council approved.

The University has constituted a committee vide Office Order No. CURAJ/R/F.76/2015-16/4725 dated 08.02.2016 to review Ordinance No. 3 and Ordinance No. 9 and to submit the recommendations. However, considering the prevalent scenario and to assist the Research Scholars immediately, the following interim matters may be considered by the Academic Council: -

|  | 13-4.16 | To consider Teachers to take supernumerary Research Scholars over and above the stipulated limit of 4 students <br> (a) To ratify the action taken by the Vice-Chancellor on permitting Dr Sunil G Naik, Dr A Nagaraju and Dr Nishtha Kessvani to take one additional research scholar over and above 4 research scholars <br> (b) To permit Supernumerary PhD Students (over and above 4 students) Under following special circumstances, a faculty member will be allowed to take $5^{\text {th }}$ student over and above the stipulated limit of 4 PhD students. <br> - A teacher under UGC FRP/INSPIRE programmes is for a contract duration of 5 years, in case such a teacher is willing to supervise a student, the teacher can do so as a co-supervisor and not as a sole supervisor. The main idea is that in case the teacher leaves the university, the student is left without a supervisor. The teacher can take a PhD student joining with a regularly appointed teacher of the university, both as co-supervisor. This will be counted as supernumerary student for the regularly appointed teacher. <br> - Schemes like Visvesvaraya PhD Scheme for Electronics \& IT support scholarship over and above the approved intake for PhD. Research scholars admitted under this scheme will be added as supernumerary research scholars to the corresponding supervisors. <br> - If a research scholar wants to change the current supervisor and the Dean feels that it is essential to carry out the change immediately, then the limit of 4 students should not come on the way of effecting the change. <br> - Any other such situation that may arise in future can be permitted with approval of the Vice Chancellor <br> Placed before the Academic Council for consideration. <br> Resolution: Academic Council approved the proposal with the correction that "UGC FRP/INSPIRE" should be read as "INSPIRE". |
| :---: | :---: | :---: |
|  | 13-4.17 | Change of Supervisor <br> If a PhD student requests for change of supervisor and the current supervisor has no objection for the change and there is a faculty member willing to supervise the student after the change, the change should be immediately done at the level of Dean(Research) based on the following three endorsement. <br> - The application of the change of supervisor by the candidate <br> - No objection from the current supervisor for the change <br> - Acceptance of the new supervisor to take the student after the change <br> - The School board can be informed in its meeting about the change, later. <br> Placed before the Academic Council for consideration. <br> - Resolution: Academic Council approved the procedure for change of supervisor as enumerated above. It was also decided that a student can change the supervisor at one time only during whole Ph.D. Course period. |
|  | 13-4.18 | Revised duration of Non-JRF Scholarship. <br> The duration of the Non-JRF scholarship is 03 years at present. It is proposed to extend the scholarship for $3+1+1=5$ years in the following manner: |


|  | a) The progress report is to be submitted six- monthly by the student for first three years, <br> b) The attendance record and the actual work quality will be evaluated at the end of 03 years and scholarship will be extended for 01 year. <br> c) The second extension for the $5^{\text {th }}$ year, will be done on very special circumstances. <br> A contingency grant of Rs. 5000/- per annum may also be considered. <br> Placed before the Academic Council for consideration and approval. <br> Resolution: Academic Council approved |
| :---: | :---: |
| 13-5.0 | Any other item(s) with permission of the Chair. <br> A point was raised with regard to the panel of experts for Selection Committees were not put up for the Academic Council and the old list of experts was only put to use. <br> The query was answered by stating that the list is to be provided by the respective School Boards and in the absence of such list, the existing list of panel of experts is being used in view of the urgent need of the recruitment process to be completed at the University. <br> Academic Council ratified the existing panel of experts and endorsed the present practice in the absence of fresh approved list and suggested that fresh panel of experts should be sent by the School Board for the Selection Committee at the earliest. |

The meeting ended with vote of thanks to the Chair

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# Central University of Rajasthan 

(Established under the Central Universities Act, 2009)


Minutes
of the

## Fourteenth Meeting of the Academic Council

Meeting No. : Fourteenth ( $\left.\mathbf{1 4}^{\text {th }}\right)$
Venue : Conference Room (SP-IV) Central University of Rajasthan, Bandarsindri, NH-8, Tehsil - Kishangarh-305817
Dist. -Ajmer (Rajasthan)
Date
: Friday, $\mathbf{3 0}^{\text {th }}$ September, 2016
Time : 11:00 A.M.

Minutes of the $14^{\text {th }}$ Meeting of the Academic Council held on $30^{\text {th }}$ September, 2016 at 11:00 A.M. onwards in the Conference Room (SP-IV), Central University of Rajasthan, Bandarsindri, NH-8, Tehsil - Kishangarh, District - Ajmer, (Rajasthan)

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|  |  | - |
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|  | 14-5.1 | Request for names of the External Members for Academic Council |

Minutes of the $14^{\text {th }}$ Meeting of the Academic Council held on $30^{\text {th }}$ September 2016 at 11:00 A.M. onwards in the Conference Room (SP-IV), Central University of Rajasthan, Bandarsindri, NH-8, Tehsil - Kishangarh, District - Ajmer, (Rajasthan)

The following members were present:

1. Prof. Arun K Pujari : Chairman
2. Prof. R. T. Pardasani : Member
3. Prof. A. K. Gupta : Member
4. Prof. Neeraj Gupta : Member
5. Prof. Supriya Agarwal : Member
6. Prof. Pradeep Verma, Dean : Member
7. Prof. S.N. Ambedkar, Dean : Member
8. Prof. Manish Shrimali, Dean : Member
9. Dr. D. C. Sharma, Dean : Member
10. Dr. M. R. P. Singh, Dean : Member
11. Dr. N. Lakshmi Aiyar, Dean : Member
12. Dr. Pawan Kumar Dadheech : Member
13. Dr. Jitendra Kumar : Member
14. Ms. Ritu B. Rai, Dean : Member
15. Dr. Pankaj Goyal : Member
16. Dr. Jagdish Jadhav : Member
17. Dr. Sunil Ganpati Naik, Dean: Member
18. Dr. Vipin Kumar : Member
19. Dr. S.Kandasamy : Member
20. Dr. Praveen Sahu : Member
21. Dr. Laxmi Kant Sharma : Member
22. Dr. Chandi C. Mandal : Member
23. Dr. Jogeswar Panigrahi : Member
24. Dr. Bhumika Sharma : Member
25. Dr. Tulsee Giri Goswami : Member
26. Dr. Sanjay Kumar : Member
27. Dr. Vijay Kumar M. : Member
28. Shri K.V.S.Kameswara Rao : Secretary

## Item

No.

## Particulars

14-1.0 $\quad$ Welcome and Presentation by Chairman, Academic Council.
Prof. Arun K. Pujari, Vice Chancellor extended hearty welcome to all the members and thanked them for gracing the meeting with their esteemed presence.

Before formally starting the meeting Chairman mentioned that there was no external member since the term of the external members was over and nomination was yet to be made. As there was no representation from external members the minimum requirement of 02 external members attending the meeting could not be met and the fact was put forward before the members of Academic Council and their opinion was sought whether to go ahead with the agenda since the quorum was not fulfilled as regard to presence of external members who were not available.

All the members unanimously suggested and agreed to go ahead with the agenda of the meeting as the $3^{\text {rd }}$ Convocation of the University was scheduled on $1^{\text {st }}$ October, 2016 and many items were related to the Convocation.

Chairman thanked the External Members (i) Prof. N. V. Thakkar .(ii) Mr. Arjun Malhotra (iii) Dr. Madhav Chavhan (iv) Shri H. K. Dua (v) Prof. Dheeraj Sanghi (vi) Prof. E. D. Jemmis whose term was over, for the valuable guidance and support extended by them and placed on record their contribution as Members of Academic Council of the University. It was suggested that letters of appreciation should be sent to them.

Chairman, then expressed that every year the Convocation of Central University of Rajasthan will take place on $1^{\text {st }}$ October and accordingly it should also be noted in the Academic Calendar of the University.

After brief presentation by the Chairman, Secretary was asked to go ahead with the agenda items of the meeting.

The detailed item-wise Agenda of the Academic Council meeting was then taken

| 14-2.0 | 14-2.1 | Confirmation of Minutes of the 13th Meeting of the Academic Council held on Monday, 29th February 2016 (Annexure-A) <br> Resolution: Confirmed. |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 14-2.2 | Action Taken Reports |  |  |
|  |  | Item No. Particulars <br> $13-4.1$ List of PhD students whose <br> registrations were approved by School <br> Boards of various schools for the <br> session 2013-14 and 2014-15. <br> It was suggested that from next time  <br> onwarts, A list of such Ph.D. students <br> registration each year could be placed <br> as a reporting item to the Academic <br> Council.  |  | Action Taken |
|  |  |  |  | Noted. |
|  |  |  |  |  |
|  |  | 13-4.2 | List of faculty members recommended the Committee to be recognized as research supervisor. | Necessary orders released. |
|  |  | 13-4.4 | Modification of various individual course syllabi of various schools as recommended by School Boards | Necessary modification and amendments implemented. <br> New Programme M.Sc. Atmospheric Science in the School of Earth Sciences has been started from the |



| 14-3.0 | Reporting Items |  |
| :---: | :---: | :---: |
|  | 14-3.1 | Approval for New/revised/modified syllabus <br> 1. Revised syllabus for M.Sc. (Biochemistry) to be implemented from the Academic Session 2016-17 (July Batch) (Annexure-B ) <br> 2. Syllabus for Integrated M.Sc. Chemistry, Semester VII to $X$ to be implemented from the Academic Session 2016-17 (July Batch) (Annexure-C) <br> 3. Revised syllabus of Integrated M.Sc. Mathematics ( 05 years), M.Sc. Tech. Mathematics (03 years), Integrated M.Sc. B.Ed. Mathematics (3 years) and Ph.D. (Mathematics) to be implemented from the Academic Session 201617 (July Batch) (Annexure-D) <br> 4. Proposed/modified syllabus and structure of M.Sc. Integrated (Statistics) for the semester VII-X including minor modifications on content semester 1 to VI and M.A./M.Sc. (Statistics) to be implemented from the Academic Session 2016-17 (July Batch) (Annexure-E) <br> 5. Modified syllabus of Integrated M.Sc. B.Ed. (Physics) for the semester 3rd and 4th Semester: shifting of PE305 from 3rd Semester to 4th Semester and change in the nomenclature of the shifted lab course to PE403: Physics Lab-III, to be implemented from the Academic Session 2016-17 (July Batch) (Annexure-F) <br> 6. The Revised syllabus for M.Sc. (Computer Science) duly approved by School Board, to be implemented from the Academic Session 2017-18 (July Batch) (Annexure- G) <br> Placed before the Academic Council for Consideration. <br> The above-mentioned syllabus (From Point No. 1 to 5) was placed before $33^{\text {rd }}$ Deans' Committee vide item No. 33-4.1 for consideration. The Deans approved the revision/modification of the syllabus as proposed and recommended to report the above-mentioned revision/modification of syllabus in ensuing meeting of the Academic Council. <br> Placed before the Academic Council for approval. <br> Resolution: The Academic Council noted and approved the action taken by the Vice Chancellor. <br> Further, Objections were raised by Dr. Sanjay Kumar regarding Proposed/modified syllabus and structure of M.Sc. Integrated (Statistics). The Academic Council ratified the abovementioned syllabus subject to deliberate it again in School/School Board Meeting and to be put up the ratified syllabus in Deans Committee. |
|  | 14-3.2 | Syllabus and revised nomenclature of M.Sc.(Big Data Analytic) programme <br> It is hereby suggested the revised nomenclature of the programme as M.Sc. (Computer Science) in Big Data Analytics instead of M.Sc.(Big Data Analytic), duly approved by School Board. |


|  |  | Syllabus for M.Sc. (Computer Science) in Big Data Analytics implemented from the Academic Session 2016-17 (July Batch) is enclosed herewith. (Annexure-H) <br> Placed before the Academic Council for approval. <br> The Academic Council noted and approved the nomenclature of M.Sc.(Big Data Analytic) programme as M.Sc. (Computer Science) in Big Data Analytics and Syllabus for M.Sc. (Computer Science) in Big Data Analytics. |
| :---: | :---: | :---: |
|  | 14-3.3 | Fee Structure for new PG programme; M.Sc.(Big Data Analytic) <br> Reference is made to the ION dated 09.06.2016 submitted by Coordinator, M.Sc. Big Data Analytic. It has been proposed the same fee structure for new PG Programme i.e. M.Sc. (Big Data Analytic) as that of Category B that includes M.B.A./M.Arch/M.Tech CSE/M. Pharma. (Annexure-I) <br> The Fee Structure for the aforesaid 02 new programmes was placed before 32 ${ }^{\text {nd }}$ Deans' Committee vide item no. 32-4.7 for consideration. The Deans Committee approved and resolved that the fee structure for new PG Programme i.e. M.Sc. (Big Data Analytics) should be as that of Category B that includes M.B.A./M.Arch/ M.Tech CSE/M. Pharma. The Deans Committee recommended to place the said fee structure before the Academic Council for consideration. <br> Placed before the Academic Council for approval. <br> The Academic Council noted and approved the Fee Structure of M.Sc. (Computer Science) in Big Data Analytics as that of Category B that includes M.B.A./M.Arch/M.Tech CSE/M. Pharma. |
|  | 14-3.4 | Reporting, Rehearsal and Academic Dress during Convocation 2016 ( ${ }^{\text {rd }}$ Convocation) of the University. <br> The $3^{\text {rd }}$ Convocation of the University is scheduled on $1^{\text {st }}$ October, 2016. Important Instructions regarding Reporting, Rehearsal and Academic Dress along with General Instructions, etc. have been circulated after due approval of the Competent Authority. (Annexure-J) <br> Placed before the Academic Council for approval. <br> The Academic Council noted and approved. |
|  | 14-3.5 | Indian Dress Code for Academic Dress for Convocation in the University. <br> As resolved by the Executive Council vide Agenda Item 24-4.2 in its $24^{\text {th }}$ Meeting held on $10^{\text {th }}$ August, 2016, the University has adopted Indian Dress Code for Academic Dress for various dignitaries, members of the University Authorities, Officials and Degree Recipient Students of various Schools of Studies for Convocations in the University .(Annexure-K) <br> The New Dress Code will be effective from ensuing $3{ }^{\text {rd }}$ Convocation scheduled to be held on $1^{\text {st }}$ October, 2016 in the University. <br> Placed before the Academic Council for approval. <br> The Academic Council noted and approved. |


|  | 14-3.6 | To report Panel of experts on Selection Committees for appointment against teaching positions <br> Panel of experts for all subjects as approved by the Executive Council in its $21^{\text {st }}, 22^{\text {nd }}, 23^{\text {rd }}$ and $24^{\text {th }}$ Meetings held on $12^{\text {th }}$ December 2015, $3^{\text {rd }}$ March 2016, $27^{\text {th }}$ June 2016 and $10^{\text {th }}$ August 2016 respectively are reported to the Academic Council, which may kindly be noted. <br> Placed before the Academic Council for information. <br> The Academic Council noted as per practice. |
| :---: | :---: | :---: |
|  | 14-3.7 | NAAC Report <br> The report given by the NAAC was placed before the Council. <br> The Academic Council Members noted the report and appreciated the collective efforts put in by all concerned for getting 'A' Grade and suggested to place the report on CURaj Website. |
| 14-4.0 |  | Items for Consideration |
|  | 14-4.1 | The Proceedings of the Third Convocation <br> The proceedings of Third Convocation scheduled on 1st October 2016 in the University are placed as Annexure-L <br> Placed before the Academic Council for consideration and approval. <br> The Academic Council approved the Proceedings of the Third Convocation scheduled on 1st October 2016 in the University. |
|  | 14-4.2 | Approval to confer Degree Certificates to the successful students of 2012-13, 2013-14 and 2014-15 batches during the Third Convocation of the University <br> As per the recommendations in Academic Council in its $4^{\text {th }}$ meeting held on $23^{\text {rd }}$ Sept, 2011 and resolution passed in Executive Council in its $9^{\text {th }}$ meeting held on $25^{\text {th }}$ Sept 2011, the list of successful students of batches 2012-13, 2013-14 and 2014-15 is placed as Annexure-M. <br> Placed before the Academic Council for consideration. <br> The Academic Council approved the Degree Certificates to be conferred to the successful students of 2012-13, 2013-14 and 2014-15 batches during the Third Convocation of the University. |
|  | 14-4.3 | Approval to award the Gold Medal and Certificate of Merit to the toppers of all the programmes. <br> It is proposed to award the Certificate of Merit to the toppers with Gold medals during the third Convocation Ceremony of the University scheduled on $09^{\text {th }}$ July, 2013. The list of toppers is placed as Annexure-N before the Academic Council for consideration. <br> Placed before the Academic Council for consideration. <br> The Academic Council approved awarding the Gold Medal and Certificate of Merit to the toppers of all the programmes during the Third Convocation of the University. |


|  | 14-4.4 | Two New Courses in existing syllabus of Ph.D. (Environmental Science) programme. <br> Dept. of Environmental Science has admitted two new students in the Ph.D. Progrmame from the session July2016. Considering the requirement of students and area of specialization of faculty members, Dept. has decided to introduce following two new courses in the existing Ph.D. syllabus after due approval of the meeting of the faculty members of the Dept. of Environmental Science: <br> 1. Geospatial Technology for Environmental Management <br> 2. Nanotechnology: Environmental Application. <br> The Dept. has communicated to members of School Board for approval of the aforesaid two new courses. The Detailed syllabus of two new courses are enclosed herewith. (Annexure-O) <br> Placed before the Academic Council for Consideration and approval. <br> The Academic Council approved aforesaid two New Courses in existing syllabus of Ph.D. (Environmental Science) programme from the session July 2016. |
| :---: | :---: | :---: |
|  | 14-4.5 | Inclusion of the Intellectual Property Rights (IPR) as a generic elective subject under the Choice Based Credit System (CBCS). <br> Reference is made to the D.O. Letter No. 1-1/2016(Secy) dated $15^{\text {th }}$ July, 2016 received from Secretary, UGC, New Delhi. It has been requested vide ibid letter to devise, through Academic Council, inclusion of the Intellectual Property Rights (IPR) as a generic elective subject under the Choice Based Credit System (CBCS) in the University. (Annexure-P) <br> Placed before the Academic Council for Consideration and approval. <br> The Academic Council approved the inclusion of the Intellectual Property Rights (IPR) as a generic elective subject under the Choice Based Credit System (CBCS). It was deliberated that the Credits for the same can be decided later. Further, Academic Council deliberated in the matter that IPR can be one of such course which can be offered as General Purpose Course in the University. The course may be started from next Academic Year and Syllabus for the same can be designed accordingly. Dr. S. Kandasamy nominated to be the faculty in-charge for the same. |
|  | 14-4.6 | Settling the issue of students of Integrated M.Sc. programme (2013 Batch): In year 2013, University admitted students to 6 -year integrated MSc-B.Ed programme in 04 subjects (Chemistry, Mathematics, Physics and Economics) and on $9^{\text {th }}$ December 2013, a letter (F.No.61-1/2013/NCTE/Acad./A78686) from NCTE indicated that the request for approval of this programme is not accorded by NCTE. Hence, the students were informed. The programme was redesigned as 5 -Year Integrated MSc programme and all the students were asked to give individual undertaking that they have willingness for this change. (Undertaking Copy is Enclosed). <br> These students have completed 6 semesters in May, 2016. In a meeting in March, 2016, these students were advised to exit from 5-Year MSc programme and seek admission to 3-Year M.Sc. B.Ed. Programme through CUCET, in case they want to join B.Ed programme in this university. |

Meanwhile, University received approval from NCTE to start 3-Yr Integrated MSc-B.Ed programme in 4 subjects (Physics, Chemistry, Mathematics and Economics) with intake of 25 for each subject. The programme was launched in the year 2015.

## Matter for Consideration:

Students of 5-Year Integrated MSc programme (2013 Batch) who have completed 6 semesters are now demanding that they should be admitted to 3Year M.Sc. B.Ed. programme.
Several consultations with students, Deans etc. have taken place to examine different possibilities.

## The following is placed before consideration of Academic Council:

In principle, approval of Academic Council is being sought to transfer the students of 2013 Batch to 3 year M.Sc. B.Ed. programme provided he/she fulfill eligibility criteria and subject to approval of NCTE without any violation of GoI/CURaj reservation norms.

Placed before the Academic Council for Consideration.
The Academic Council discussed the matter in brief and following points were emerged:

1. The HODs shall ask students of 5 -Year Integrated M.Sc. programme (2013 Batch) to submit their choice as regards their interest to switch over to Integrated M.Sc.-B.Ed. programme after exiting the current programme and joining the new programme.
2. The number of seats of 3-Year M.Sc.-B.Ed. programme shall be calculated after deducting number of seats advertised in CUCET from the total intake sanctioned by NCTE.
3. After receiving the choices, the NCTE will be approached for following approval:
a) If the total choices received is less than or equal to the remaining vacant seats in the said programme, the seats of 3-Year M.Sc.-B.Ed. programme may be filled on the basis of the merit only up to the total intake sanctioned by NCTE.
b) If the choices of the students, so received, exceed the total remaining vacant seats in 3-Year M.Sc.-B.Ed. programme, then University will seek permission from NCTE for one time increase of intake for 3-Year M.Sc.-B.Ed. programme, only for the batch of 2013 as a special case and such choices will be entertained subject to receiving approval from NCTE for those enhanced seats.
4. The matter will further be taken up with the Academic Council after approval of NCTE.

The Provision of Leave of Absence (LoA) for Ph.D. Scholars after completion of Course work has been under discussion.

At present there is no such provision in the Ordinance on the subject. The following points in this regard may please be perused:

1. If, a student after completion of the Course work and after completion of the minimum residential period, wishes to take up some employment can be permitted for Leave of Absence (LoA), if so recommended by the DRC and Supervisor.
2. Basic unit of Leave of Absence (LoA) is Semester.
3. During the Leave of Absence (LoA) no fellowship is payable.
4. During the period of Leave of Absence (LoA) the student will have to pay the Semester Fee in order to keep the Registration alive.
5. During this Leave of Absence (LoA) period student will not be allowed to stay in the hostel.
6. Leave of Absence (LoA) can be for a maximum period of 03 Academic Year or 06 Semesters.
7. After Leave of Absence, the student could be allowed to submit the Thesis within the allowable period which should not exceed six years (for boys Scholars) and seven years (for girls Scholars) excluding Leave of Absence (LoA) period.

## Placed before the Academic Council for Consideration.

The Academic Council discussed the matter in brief and it was resolved by the Committee to keep both the options i.e. De-registration and Leave of Absence subject to the following conditions:

1. If, a student after completion of the Course work and after completion of the minimum residential period, wishes to take up some employment, leave can be permitted either as Leave of Absence (LoA) / De-registration, if so recommended by the DRC and Supervisor.
2. Basic unit of Leave of Absence (LoA) / De-registration is one Semester.
3. During the Leave of Absence (LoA) / De-registration no fellowship is payable.
4. During the period of Leave of Absence (LoA) the student will have to pay the Semester Fee in order to keep the Registration alive. In case of Deregistration there shall not be any Semester fee.
5. During this Leave of Absence (LoA) / De-registration period student will not be allowed to stay in the hostel.
6. Leave of Absence (LoA) can be for a maximum period of 03 Academic Years or 06 Semesters and 05 year or 10 Semesters in case of Deregistration.
7. After Leave of Absence, the student could be allowed to submit the Thesis within the allowable period which should not exceed six years (for boy Scholars) and seven years (for girl Scholars) including Leave of Absence (LoA) period.
8. If the Scholar is not able to complete the research work in 02 years after availing of Leave of Absence (LoA) / De-registration, he/she has to reregister himself / herself.
It was also resolved by the Committee that in case of De-registration the concerned Supervisor will not get the benefit of supervising such Research

|  |  | Scholar and the Supervisor is eligible to get the benefit in case of LoA. |
| :---: | :---: | :---: |
|  | 14-4.8 | To approve Syllabus for Dept. of Yoga <br> It is proposed to start the following Programmes of studies in the proposed Department of Yoga in a phased manner: <br> 1. 2 Year MSc in Yoga Therapy <br> 2. 2 Year MSc in Yoga and Consciousness <br> 3. 3 Year MSc B.Ed. in Yoga Education (Subject to approval from NCTE) <br> 4. Ph.D. in Yoga <br> The Syllabus of the aforesaid programmes under the Dept. of Yoga is placed herewith as Annexure- Q <br> Placed before the Academic Council for Consideration. <br> The Academic Council approved in principle the syllabus for Dept. of Yoga for the aforesaid programmes and it was resolved by the Council to take further opinion with respect to the syllabus of the aforesaid programmes after appointment of a Professor in the Dept. of Yoga. |
| 14-5.0 | 14-5.1 | Request for names of the External Members. <br> All the members of the Academic Council were requested to suggest subjectwise Experts for nomination as External Members in the Academic Council. It was also suggested that the disciplines already covered earlier should be avoided. <br> All the members requested to send the names of External Experts from various disciplines through e-mail. <br> Placed before the Academic Council for Consideration. <br> The Academic Council noted. |


| ANNEXURE | ITEM NO. | PAGE NO. |
| :---: | :---: | :---: |
| Annexure-A | $14-2.1$ | $1-17$ |
| Annexure-B | $14-3.1$ | $18-58$ |
| Annexure-C | $14-3.1$ | $59-86$ |
| Annexure-D | $14-3.1$ | $87-207$ |
| Annexure-E | $14-3.1$ | $208-404$ |
| Annexure-F | $14-3.1$ | $405-408$ |
| Annexure-G | $14-3.1$ | $409-428$ |
| Annexure-H | $14-3.2$ | $429-446$ |
| Annexure-I | $14-3.3$ | $447-449$ |
| Annexure-J | $14-3.4$ | $450-452$ |
| Annexure-K | $14-3.5$ | $453-456$ |
| Annexure-L | $14-4.1$ | $457-474$ |
| Annexure-M | $14-4.2$ | $475-506$ |
| Annexure-N | $14-4.3$ | $507-512$ |
| Annexure-O | $14-4.4$ | $513-518$ |
| Annexure-P | $14-4.5$ | 519 |
| Annexure-Q | $14-4.8$ | 520 |

## CENTRAL UNIVERSITY OF RAJASTHAN



Minutes
of

## The Fifteenth Meeting of the Academic Council

| Meeting No. : | Fifteen (15) |
| :--- | :--- |
| Venue $:$ | Conference Room (SP-IV) <br> Central University of Rajasthan, <br> Bandarsindri, NH-8, <br> Tehsil - Kishangarh-305817 <br> Dist. -Ajmer (Rajasthan) |
| Date | $: \quad$ Thursday, 23 ${ }^{\text {rd }}$ February, 2017 |
| Time | $:$ |

Minutes of the $15^{\text {th }}$ Meeting of the Academic Council held on $23^{\text {rd }}$ February, 2017 at 11:00 AM in the Conference Room (SP-IV), Central University of Rajasthan, Bandarsindri, NH-8, Tehsil Kishangarh, District - Ajmer, (Rajasthan)

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|  | 15-3.3 | Hostel accommodation of students who seek admission to additional Master Programme after completing one Master programme in the University |
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| $\begin{aligned} & \text { Item } \\ & \text { No. } \end{aligned}$ | Particulars |  |
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|  | 15-7.3 | 2-Yr MSc Computer Science (Artificial Intelligence) |
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|  | 15-7.5 | 2-Yr MA (English) |
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| 15-11.0 | Any other item(s) with permission of the Chair. |  |
|  |  |  |

Minutes of the $15^{\text {th }}$ Meeting of the Academic Council held on 23rd February, 2017 at 11:00 AM onwards in the Conference Room (SP-IV), Central University of Rajasthan, Bandarsindri, NH-8, Tehsil - Kishangarh, District - Ajmer, (Rajasthan)

The following members were present:

1. Prof. Arun K Pujari : Chairman
2. Prof. R. T. Pardasani : Member
3. Prof. A. K. Gupta : Member
4. Prof. Neeraj Gupta : Member
5. Prof. Supriya Agarwal : Member
6. Prof. Pradeep Verma, Dean : Member
7. Prof. S.N. Ambedkar, Dean : Member
8. Prof. Manish Shrimali, Dean : Member
9. Dr. D. C. Sharma, Dean : Member
10. Dr. M. R. P. Singh, Dean : Member
11. Prof. R. Prasad : Member
12. Prof. K. C. Sharma : Member
13. Prof. Chandrakala Padia : Member
14. Prof. Aparna Rayaprol : Member
15. Dr. N. Lakshmi Aiyar, Dean : Member
16. Dr. Pawan Kumar Dadheech : Member
17. Dr. Jitendra Kumar : Member
18. Ms. Ritu B. Rai, Dean : Member
19. Dr. Pankaj Goyal : Member
20. Dr. Jagdish Jadhav : Member
21. Dr. Sunil Ganpati Naik, Dean: Member
22. Dr. Vipin Kumar : Member
23. Dr. S.Kandasamy : Member
24. Dr. Praveen Sahu : Member
25. Dr. Laxmi Kant Sharma : Member
26. Dr. Chandi C. Mandal : Member
27. Dr. Jogeswar Panigrahi : Member
28. Dr. Bhumika Sharma : MemberDr. Sanjay Kumar : Member
29. Dr. Vijay Kumar M. : Member
30. Shri K.V.S.Kameswara Rao : Secretary

Spcial Invitee:

1. Prof. M. Krishnan, Dept. of Biochemistry
2. Dr. A. Nagaraju, Dept. of Computer Science
3. Dr. Ravi Saharan, Dept. of Computer Science and Engineering
4. Dr. Devesh Sharma, Dept. of Env. Science
5. Dr. Hemlata Manglani, Dept. of Economics
6. Dr. Shaizy Ahmed, Dept. of Social Work
7. Dr. Nishtha Keswani, Dept. of Computer Science

Leave of absence was granted to:

1. Prof. Ram Ramaswamy : Member
2. Dr. Tulsee Giri Goswami : Member
3. Prof. A. P. Singh : Spcial Invitee
4. Prof. Someshwar Das : Spcial Invitee

## DETAILED MINUTES

| Item No. | Particulars |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 15-1.0 | Chairman welcomed all the members and present and introduced all the new Members and put on record the contribution made by the outgoing Members. |  |  |  |
| 15-2.0 | 15-2.1 | Confirmation of the Minutes of the $14^{\text {th }}$ Meeting of the Academic Council held on Friday, September 30, 2016 <br> (Annexure-1) [Page No. 17-29] <br> Minutes of the $14^{\text {th }}$ Meeting of the Academic Council held on Friday, September 30, 2016 were circulated to all the members. No comments were received from any of the members. Hence, the minutes may be confirmed. <br> Resolution: Confirmed |  |  |
|  | 15-2.2 | Action Taken Reports |  |  |
|  |  | Item No. | Particulars | Action Taken |
|  |  | 14-3.1 | Approval for New/ revised/ modified syllabus | Noted. |
|  |  | 14-3.2 | Syllabus and revised nomenclature of M.Sc.(Big Data Analytic) programme | Noted. $\quad$ Nomenclature of M.Sc.(Big programme has been changed. |
|  |  | 14-3.3 | Fee Structure for new PG programme; M.Sc.(Big Data Analytic) | Implemented. |
|  |  | 14-3.4 | Reporting, Rehearsal and Academic Dress during Convocation 2016 (3rd Convocation) of the University. | Noted. |
|  |  | 14-3.5 | Indian Dress Code for Academic Dress for Convocation in the University. | Noted. |
|  |  | 14-3.6 | To report Panel of experts on Selection Committees for appointment against teaching positions | Noted. |
|  |  | 14-3.7 | NAAC Report | Noted. Placed in the University website. |
|  |  | 14-4.1 | The Proceedings of the Third Convocation | Noted. |
|  |  | 14-4.2 | Approval to confer Degree Certificates to the successful students of 2012-13, 2013-14 and 2014-15 batches during the Third Convocation of the University | Noted. Degree Certificates were awarded during $3^{\text {rd }}$ Convocation. |
|  |  | 14-4.3 | Approval to award the Gold Medal and Certificate of Merit to the toppers of all the programmes. | Noted. Gold Medals and Certificates of Merit were awarded during $3^{\text {rd }}$ Convocation |
|  |  | 14-4.4 | Two New Courses in existing syllabus of Ph.D. (Environmental Science) programme. | Implemented. |
|  |  | 14-4.5 | Inclusion of the Intellectual Property Rights (IPR) as a generic elective subject under the Choice Based Credit System (CBCS). | Noted. The IPR has been included as generic elective subject under the Choice Based Credit System (CBCS). Dr. Kandasamy, Associate Professor and Head, Dept. of PPLG has been requested to frame the syllabus for the same. |


| Item No. | Particulars |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 14-4.6 | Setting the issue of students of Integrated M.Sc. programme (2013 Batch). | Noted. Action is in progress. The matter is being put up as a separate Agenda Item No. 15-3.5 |
|  |  | $14-4.7$ | Provision of Leave of Absence (LoA) for Ph.D. Students. | Dean (Research) has informed all the HoDs / Coordinators, Dean (Academics) and faculty members. |
|  |  | 14-4.8 | To approve Syllabus for Dept. of Yoga | Noted. |
|  |  | $14-5.1$ | Request for names of the External Members. | Noted. Action completed. |
|  |  | Resolution: Noted |  |  |
| 15-3.0 | POLICY MATTERS |  |  |  |
|  | 15-3.1 | Revision of Ordinances |  | (Annexure-2) |
|  |  | a. Ordinance 19 <br> (Annexure-2a) [Page No. 30-31] <br> Dean's Committee in its $42^{\text {nd }}$ meeting held on February 16, 2017 considered revision of the Ordinance 19. Revised version and the current version of Ordinance 19 are enclosed herewith for discussion. <br> Resolution: After thorough deliberations the revised version of the Ordinance 19 as attached (Annexure 2a) was approved. |  |  |
|  |  | b. Ordinance 32 (Annexure-2b) [Page No. 32-33] <br> Revised version and the current version of Ordinance 32 are enclosed herewith for discussion. <br> Resolution: After thorough deliberations the revised version of the Ordinance 32 as attached was approved |  |  |
|  |  | c. Ordinance 9 <br> (Annexure-2c) [Page No. 34-42] <br> Meeting of all the Deans held on February 21, 2017 considered revision of the Ordinance 9. Revised version and the current version of Ordinance 9 are enclosed herewith for discussion <br> Resolution: After thorough deliberations the revised version of the Ordinance 9 as attached (Annexure 2c) was approved |  |  |
|  | Academic Council approved the revision of the ordinances mentioned above as proposed. It was observed that a few provisions in the Ordinances require further refinement to have more clarity and suggested that such modifications may be made at the University level and the Vice Chancellor has been authorized to carry out such modifications. |  |  |  |
|  |  | d. Ordinance 3 <br> (Annexure-2d) [Page No. 43-52] <br> Revised version and the current version of Ordinance 3 are enclosed herewith for discussion <br> Resolution: It was resolved that a Sub-Committee consisting of Prof. K. C. Sharma, Prof. Neeraj Gupta and Dr. J. Panigrahi may go through the contents of the Ordinance - 3 and submit the revised Ordinance at the earliest. |  |  |


| Item No. | Particulars |  |
| :---: | :---: | :---: |
|  | 15-3.2 | Minimum and maximum credit requirement of all PG programmes other than PhD <br> To consider that minimum credit per semester for any $2-\mathrm{Yr}$ MA/MSc programme shall be 16 and maximum be 24 . The qualifying minimum credits for qualifying 2 Yr MA/MSc programs shall be 80 credits subject to successfully clearing the Core courses. The qualifying minimum credits for other programmes to be accordingly worked out. Placed before the Academic Council for approval. If approved, suitable modifications in the Ordinance will be taken. <br> Resolution: The Academic Council approved the proposal. Ordinance be accordingly modified. |
|  | 15-3.3 | Hostel accommodation of students who seek admission to additional Master Programme after completing one Master programme in the University <br> Any student seeking admission to another master programme after completing one master programme in this university will be given last preference in Hostel accommodation. Placed before the Academic Council for approval. <br> Resolution: The Academic Council approved the proposal. |
|  | 15-3.4 | Collaborating with IICD <br> (Annexure-3a) [Page No. 53-60] <br> A request from Indian Institute of Crafts Design to enter into collaboration so that the courses offered by IICD are recognized degree of Central University of Rajasthan. A committee was constituted which visited IICD and made assessment of the academic programmes currently being offered by IICD. The report of the committee was placed before the Deans' Committee on January 25, 2017. The Deans' Committee recommended that the following courses offered by IICD be recognised as programmes of the University and executed by IICD. A draft MoU in this regard is being finalised. A copy of the draft MoU is enclosed. The matter is placed before the Academic Council for approval of the MoU and consideration of collaboration with IICD: <br> To recognize the courses offered by IICD as courses of CURaj namely $4-\mathrm{Yr}$ B.Des. and 2-Yr M.Des. <br> To recognize IICD as a Centre to execute these programmes <br> Ordinance may be suitably modified to incorporate this activity of the University <br> In the event of approval of the Academic Council on this, B.Des. and M.Des. should be included in the list of Degrees awarded by the University. The course structure of B.Des. and M.Des. are placed for approval as a separate item. <br> Resolution: The Academic Council approved the proposal. Necessary amendment of Ordinance be taken up. |
|  | 15-3.5 | MoU with IIIT Bangalore <br> (Annexure-3b) [Page No. 61-64] <br> It is proposed to enter into an MoU with IIIT Bangalore to jointly run $2-\mathrm{Yr}$ Master Programme in Digital Society. MoU with IIIT Bangalore is being finalized and the same is enclosed for consideration by Academic Council. <br> Resolution: The Academic Council approved the MOU to be signed with IIIT, Bangalore. |


| Item No. | Particulars |  |
| :---: | :---: | :---: |
|  | 15-3.6 | Accommodating students of $5-\mathrm{Yr}$ Integrated MSc-2013 batch in 3-Yr integrated MSc-BEd <br> (Annexure-4a) [Page No. 65] <br> The recommendation of the Dean's Committee vide agenda item No. 41-5.1 is placed before the Academic Council for consideration and ratification. <br> In order to smooth transition of the students who have completed their $7^{\text {th }}$ Semester of 5-Yr Integrated MSc and joining 3-Yr integrated MSc-BEd, there may be requirement of some extra courses, some renaming the courses or some exemption from courses. Action to be taken for each stream is given in Annexure-4b. [Page No. 66-75] <br> Resolution: It was deliberated in detail and in the best interest of students, the proposal was approved by the Academic Council only for the batch 2013 and it should not be quoted as precedence. |
|  | 15-3.7 | MOOC Courses for Recognition and also adoption of the UGC (Credit Framework for Online Learning Courses through SWAYAM) Regulation, 2016 <br> As per the UGC directive, the University is required to prepare a list of MOOC courses and seek approval of the Academic Council for the Academic Session 2017-18. <br> Academic Council may consider that each Department must identify the set of MOOC courses (with Credits) that can be offered as part of the curriculum in the next academic year. <br> Resolution: The Academic Council approved the proposal and requested the Deans to identify the MOOC courses. |
|  | 15-3.8 | Adoption of UGC regulation, 2016 <br> A letter from the UGC to adopt the UGC (Minimum Standards and Procedure for Award of M.Phil/Ph.D. Degree) regulations, 2016 and to intimate the UGC regarding the progress in this regard. <br> The matter was placed before $24^{\text {th }}$ Executive Council vide item No. 24-5.1 to adopt UGC notification by the University and it has been approved. <br> This is placed in the Academic Council for information. <br> Resolution: The Academic Council approved the proposal. |
|  | 15-3.9 | Adoption of UGC directive regarding equivalence of BVoc <br> The letter received from UGC states that :- <br> (1) Bachelor of Vocation (BVoc), a Bachelor level degree specified by UGC under section 22(3) of UGC Act, 1956 and notified in official Gazette of India dated $19^{\text {th }}$ January, 2013 be recognized at par with the other Bachelor level degrees for competitive exams conducted by Union/State Public Service Commission, Staff Selection Commission or other such bodies where the eligibility criteria is "Bachelor Degree in any Discipline". <br> (2) Students with BVoc Degree should be considered eligible for the transdisciplinary vertical mobility into such courses where entry qualification is a Bachelor degree without specific requirement in a particular discipline. <br> The matter is placed before Academic Council for consideration. |


| Item No. | Particulars |  |
| :---: | :---: | :---: |
|  |  | If approved, BVoc be included as one of the eligibility criteria (refer Agenda Item 15-4.1) in such programmes where entry qualification is a Bachelor degree without specific requirement in a particular discipline in the University. <br> Resolution: The Academic Council approved the proposal. |
|  | 15-3.10 | To start Centre for Desert Studies under School of Earth Sciences <br> To consider recommendation of School Board of School of Earth Sciences to establish a multidisciplinary Centre for Desert Studies under School of Earth Sciences. Centre should take up some of the innovative and emerging areas relevant to desert region. To start with, centre may identify the appropriate areas and concern faculties from different science schools as joint/adjunct faculty. In this process, other institutions working in similar key area could also consider for adjunct faculty. After strengthening the R\&D activities the centre should aim to float academic programme on desert sciences. <br> AC to consider the proposal. <br> Resolution: The Academic Council approved the proposal. |
| 15-4.0 | Admission |  |
|  | 15-4.1 | a. CUCET <br> It is to report to the Academic Council that admission to various courses for the academic year 2017-2018 will be through CUCET -2017. 10 central universities have a joint entrance test CUCET-2017 and it is coordinated by this university. <br> The list of courses, the minimum eligibility and Intake of the courses are enclosed. <br> (Annexure-5) [Page No. 76-83] <br> Resolution: AC accepted as proposed. As approved at agenda item 15.3.8, BVoc is to be included as one of the eligibility criteria in such programmes where entry qualification is a Bachelor Degree without specific requirement in a particular discipline in the University. <br> b. CCMT <br> Admission for all seats ( $18+5$ sponsored) MTech (Computer Science and Engineering) Information Security being offered by Department of CSE and 12 seats of MArch being offered by Department of Architecture will be through central counseling CCMT. In addition, for 8 seats of MArch being offered by Department of Architecture will be through CUCET. <br> Resolution: AC accepted as proposed <br> c. Jointly with IIIT/B <br> Admission for the newly introduced programme MA/MSc (Digital Society) will be jointly organized by IIIT/B and the University. <br> Resolution: AC Accepted to start the Programmes B.Des and M.Des (by IICD). Members also advised that if possible, university should try to join entrance examination being conducted by IIT Guwahati for B.Des. and M.Des. |




| Item No. | Particulars |  |
| :---: | :---: | :---: |
|  | 15-7.1 | 2-Yr MSc (Environment Science) <br> (Annexure-8a) [Page No. 88-89] <br> Recommendation of School Board (of School of Earth Science) for revised course structure with credit distribution is placed for approval. Detailed syllabus of individual courses has been submitted by the concerned department. |
|  | 15-7.2 | 2-Yr MSc (Atmospheric Science) <br> (Annexure-8b) [Page No. 90] <br> Recommendation of School Board (of School of Earth Science) for revised course structure with credit distribution is placed for approval. Detailed syllabus of individual courses is required to be submitted by the concerned department. |
|  | 15-7.3 | 2-Yr MSc Computer Science (Artificial Intelligence) (Annexure-8c) <br> [Page No. 91] <br> Recommendation of School Board of School of Mathematics, Statistics and Computational Sciences for revised course structure with credit distribution is placed for approval. Detailed syllabus of individual courses is submitted by the concerned department. |
|  | 15-7.4 | 2-Yr MSc Computer Science (Big Data Analytics) (Annexure-8d) [Page No. 92] <br> Recommendation for revised course structure with credit distribution is placed for approval. Detailed syllabus of individual courses is submitted by the concerned department. |
|  | 15-7.5 | 2-Yr MA (English) <br> (Annexure-8e) [Page No. 93] <br> Recommendation of School Board of School of Humanities for revised course structure with credit distribution is placed for approval. Detailed syllabus of individual courses is submitted by the concerned department. |
|  | 15-7.6 | 2-Yr MA (Hindi) <br> (Annexure-8f) [Page No. 94] <br> Recommendation of School Board (of School of Humanities) for revised course structure with credit distribution is placed for approval. <br> Detailed syllabus of individual courses is submitted by the concerned department. |
|  | 15-7.7 | 2-Yr MSc (Physics) <br> (Annexure-8g) [Page No. 95] <br> Recommendation of School Board (of School of Physics) for revised course structure with credit distribution is placed for approval. Detailed syllabus of individual courses is required to be submitted by the concerned department. |
|  | 15-7.8 | 3-Yr Integrated MSc-BEd (Physics) <br> (Annexure-8h) [Page No. 96-97] <br> Recommendation of School Board (of School of Physics) for revised course structure with credit distribution is placed for approval. Detailed syllabus of individual courses is required to be submitted by the concerned department. |
|  | 15-7.9 | 5-Yr Integrated MSc (Physics) (Annexure-8i) [Page No. 98] <br> Recommendation of School Board (of School of Physics) for revised course structure with credit distribution is placed for approval. Detailed syllabus of |


| Item <br> No. | Particulars |  |
| :---: | :---: | :---: |
|  |  | individual courses is required to be submitted by the concerned department. |
|  | 15-7.10 | 5-Yr Integrated MSc (Mathematics) <br> (Annexure-8j) [Page No. 99] <br> Recommendation of School Board of School of Mathematics, Statistics and Computational Sciences for revised course structure with credit distribution is placed for approval. Detailed syllabus of individual courses is required to be submitted by the concerned department. |
|  | 15-7.11 | 3-Yr Integrated MSc-BEd (Maths) <br> (Annexure-8k) [Page No. 100] <br> Recommendation of School Board of School of Mathematics, Statistics and Computational Sciences for revised course structure with credit distribution is placed for approval. Detailed syllabus of individual courses is submitted by the concerned department. |
|  | 15-7.12 | 2-Yr M Pharm (Pharmaceutical Chemistry) (Annexure-81) [Page No. 101] <br> Recommendation of School Board (of School of Chemical Sciences and Pharmacy) for revised course structure with credit distribution is placed for approval. Detailed syllabus of individual courses is required to be submitted by the concerned department. |
|  | 15-7.13 | 5-Yr Integrated MSc (Environment Science) <br> (Annexure-8M) <br> [Page No. 102] <br> Recommendation of School Board (of School of Earth Sciences) for revised course structure with credit distribution is placed for approval. Detailed syllabus of individual courses has been submitted by the concerned department. |
|  | 15-7.14 | Ph.D. Environment Science <br> (Annexure-8N) [Page No. 103] <br> Recommendation of School Board (of School of Earth Sciences) for revised course structure with credit distribution is placed for approval. Revised Syllabus for Pre-PhD course work has been submitted by the Department through the School Board for consideration by Academic Council. |
|  | 15-7.15 | 2-Yr MSc Computer Science <br> (Annexure-8O) [Page No. 104] <br> Recommendation of School Board (of School of Mathematics, Statistics and Computational Sciences) for revised course structure with credit distribution is placed for approval. Detailed syllabus of individual courses is required to be submitted by the concerned department. |
|  | 15-7.16 | 2-Yr MSc Statistics <br> (Annexure-8P) [Page No. 105] <br> Recommendation of School Board (of School of Mathematics, Statistics and Computational Sciences) for revised course structure with credit distribution is placed for approval. Detailed syllabus of individual courses is required to be submitted by the concerned department. |
|  | Resolution: Academic Council approved as proposed. It was also suggested that the Credit Justification may be relooked by the concerned schools and can be given within one month for approval. |  |



| Item No. | Particulars |  |
| :---: | :---: | :---: |
|  | 15-8.4 | 4-Yr B.Des. and 2-Yr M.Des. at IICD <br> (Annexure-9d) <br> [Page No. 110-119] <br> In continuation to the Item 15-3.4, 4-Yr B.Des. and 2-Yr M.Des. are now to be included in the list of programmes offered by the University. Course structure and the syllabus are provided by IICD. The course structure is placed before the Academic Council for approval. <br> Resolution: Academic Council approved. |
|  | 15-8.5 | To start 2-Yr MSc (Maths) in place of 3-Yr MSc-Tech (Mathematics) <br> (Annexure-9e) [Page No. 120] <br> To consider recommendation of School Board of School of Mathematics, Statistics and Computational Sciences to start MSc (Mathematics) in place of MSc Tech (Mathematics). The matter is placed before the Academic Council for consideration. <br> Course structure with syllabus of the newly designed programme is approved by the School Board is placed before the Academic Council for consideration. <br> Resolution: Academic Council approved. |
|  | 15-8.6 | PhD Programme in Atmospheric Science <br> (Annexure-9f) <br> [Page No. 121] <br> Recommendation of the School Board to start new Ph.D. Programme in the Department of Atmospheric Science from July 2017 with intake 02. The eligibility criterion is included in 15-4.1 (a). Syllabus for Pre-PhD course work is submitted by the Department through the School Board for consideration by Academic Council. <br> Resolution: The Programme is approved by the Academic Council (to be kept on hold for one year and to start from next academic session). |
|  | 15-8.7 | PhD Programme in Yogic Science <br> Recommendation of Deans' Committee to start PhD programme in Yogic Science is placed for consideration of AC. <br> A Letter was received from Secretary, UGC, New Delhi stating to encourage research in AYUSH systems. <br> The matter was placed before $41^{\text {st }}$ Deans' Committee vide item No. 41-4.3 for opening of Research Course in Yoga and Naturopathy under Dept. of Yoga in the University. The Deans' Committee approved the proposal in principle to start PhD Programme in Yoga and Naturopathy in Dept. of Yoga. It was recommended to place the matter before the Academic Council in its ensuing Meeting. <br> Placed before the Academic Council for ratification. <br> Resolution: Academic Council approved. |
|  | 15-8.8 | To start 2-Yr MTech (Computer Science) in Cyber-Physical Systems (Annexure-9g) [Page No. 122-123] <br> To consider recommendation of School Board of School of Mathematics, Statistics and Computational Sciences to start MTech (Cyber-Physical Systems) is placed before the Academic Council for consideration. The proposed programme |


| Item <br> No. | Particulars |  |
| :---: | :---: | :---: |
|  |  | will be jointly offered by Department of CS and Department of CSE. The first semester will be same as the existing MTech programme of Department of CSE The dissertation will be supervised by the teachers of Department of CS. <br> There will not be any commitment of scholarship from any source. It is proposed to start the course with intake 18. The admission to this programme will be through CUCET. <br> Resolution: Academic Council approved the proposal. However, it was commented that the Credits are in higher side. The Council was assured that it would be reviewed within one month. |
| 15-9.0 | PhD Registration |  |
|  | 15-9.1 | School Boards of different schools recommended PhD Registration for the year 2015-16. The list is enclosed for consideration of the Academic Council <br> Resolution: Academic Council approved. |
| 15-10.0 | Individual Cases |  |
|  | 15-10.1 | Change of Supervisor <br> Recommendation of School Board, School of Earth Sciences for joint supervision of research scholars of Env. Science Programme, Batch 2012. <br> Mr. Aamir Hussain Bhatt - Joint Supervision by Dr. Devesh Sharma as Supervisor and Prof. K.C. Sharma as Joint Supervisor <br> Ms. Garima Sharma - Joint Supervision by Dr. L. K. Sharma as Supervisor and Prof. K.C. Sharma as Joint Supervisor <br> To be approved <br> Resolution: Academic Council approved. |
|  | 15-10.2 | Leave of Absence <br> Mr. Shardendu Kumar, Research Scholar of Environment Science programme 2014 batch has joined FCI on 16.08.2016 and informed the department on 25.08.2016 through e-mail requesting to permit him for continuation of Ph.D through De-registration or cancellation of Ph.D. <br> The request of Mr. Shardendu Kumar for continuation of Ph.D. while working at FCI was not recommended by the School Board as he has not completed minimum 02 years for Ph.D. Programme in August 2016. <br> The matter is placed before Academic Council for consideration. <br> Resolution: The recommendation of the School Board was approved. |
| 15-11.0 | Any other item(s) with permission of the Chair. |  |
|  | 15.11.1 | The Syllabus of IPR - Elective subject <br> Resolution: It was resolved that the School Board recommendation is required. |

The meeting ended with vote of thanks to the Chair.

## CENTRAL UNIVERSITY OF RAJASTHAN



## Minutes

of
The 16th Meeting of the Academic Council

| Meeting No. : | Sixteen (16) |
| :--- | :--- |
| Venue $:$ | Conference Room <br> First Floor of Administrative Building <br> Central University of Rajasthan, <br> Bandarsindri, NH-8, |
|  | Tehsil - Kishangarh-305817 <br> Dist. -Ajmer (Rajasthan) |
| Date | $: \quad$ Sunday, 12 ${ }^{\text {th }}$ November, 2017 |
| Time | $:$ |

Minutes of the $16^{\text {th }}$ Meeting of the Academic Council held on $12^{\text {th }}$ November, 2017 at 02:30 PM in the Conference Room first floor of Administrative Building, Central University of Rajasthan, Bandarsindri, NH-8, Tehsil Kishangarh, District - Ajmer, (Rajasthan)

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| 16-1.0 | Welcome by Chairman, Academic Council. |  |
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| 16-2.0 | 16-2.1 | Confirmation of the Minutes of the $15^{\text {th }}$ Meeting of the Academic Council held on Thursday, February 23, 2017. |
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|  | 16-4.1 | To establish Innovation Cell at CURAJ. |
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| 16-5.0 | Evaluation \& Examination |  |
|  | 16-5.1 | Format of Degree Certificate and Provisional Degree Certificate for Ph.D. |
|  | 16-5.2 | Revised format for Provisional Certificate and Application form for provisional certificate of all courses other than $\mathrm{Ph} . \mathrm{D}$. |
| 16-6.0 | Curricula Revision |  |
|  | 16-6.1 | Global Initiative of Academic Network (GIAN) course, and initiative of MHRD, GOI has approved a course on (Machine Learning) conducted from $30^{\text {th }}$ October, 2017 to $11^{\text {th }}$ Nov, 2017. |
| 16-7.0 | Revision of Course Structure and Syllabi |  |
|  | 16-7.1 | To Revise syllabus of M.Des., and B.Des., programme in collaboration with IICD. |
|  | 16-7.2 | Course Structure / Syllabus ofPhD Programme in Architecture |
|  | 16-7.3 | The Syllabus of IPR - Elective subject |
|  | 16-7.4 | Approval of proposed GIAN Course as 2 credit course |


| Item <br> No. | Particulars |  |
| :---: | :---: | :---: |
|  | 16-7.5 | Replacing of $4^{\text {th }}$ Unit of Neural Network paper by Big Data Analysis and Mining in Deep Web Repositories (GIAN Course) in M.Sc. Computer Science in Big Data Analytics programme of $2^{\text {nd }}$ Semester. |
|  | 16-7.6 | Syllabus revision of M.Sc. Computer Science in Big Data Analytics |
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|  | 16-8.1 | To start B. Tech., in Computer Science and Engineering and B.Tech., in Electronics\& Communication |
| 16-9.0 | Admissions |  |
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| 16-10.0 | Other Matters |  |
|  | 16-10.1 | Institute of Eminence |
|  | 16-10.2 | Constitution of Student Council |
|  | 16-10.3 | Confirmation of Newly Constituted School Boards and Board of Studies |
| 16-11.0 | Any other item(s) with permission of the Chair. |  |
|  | 16-11.1 | Syllabus revision of Dept. of Statistics. |

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Minutes of the $\mathbf{1 6}^{\text {th }}$ Meeting of the Academic Council held on12 ${ }^{\text {th }}$ November, 2017 at 2:30 PM onwards in the Conference Room first floor of Administrative Building, Central University of Rajasthan, Bandarsindri, NH-8, Tehsil - Kishangarh, District - Ajmer, (Rajasthan)

The following members were present:

1. Prof. Arun K Pujari : Chairman
2. Prof. Neeraj Gupta : Member
3. Prof. Supriya Agarwal : Member
4. Prof. Pradeep Verma, Dean : Member
5. Prof. S.N. Ambedkar, Dean : Member
6. Prof. Manish Shrimali, Dean : Member
7. Dr. D. C. Sharma, Dean : Member
8. Dr. M. R. P. Singh, Dean : Member
9. Prof. Vipin Kumar, Dean : Member
10. Dr. Laxmi Kant Sharma : Member
11. Prof. J.K. Prajapat : Member
12. Prof. Aparna Rayaprol : Member
13. Prof. Maithili Sharan : Member
14. Dr. N. Lakshmi Aiyar, Dean : Member
15. Dr. Pawan Kumar Dadheech : Member
16. Dr. Jitendra Kumar : Member
17. Ms. Ritu B. Rai, Dean : Member
18. Dr. Pankaj Goyal : Member
19. Dr. JagdishJadhav : Member
20. Dr. S.Kandasamy : Member
21. Dr. Praveen Sahu : Member
22. Dr. Chandi C. Mandal : Member
23. Dr. JogeswarPanigrahi : Member
24. Dr. Bhumika Sharma : Member
25. Dr. Sanjay Kumar : Member
26. Dr. Ajit Patra : Member
27. Dr. TulsiGiriGoswami : Member
28. Dr. Vijay Kumar M. : Member
29. Shri K.V.S.Kameswara Rao : Secretary

Spcial Invitee:
Prof. M. Krishnan, Dept. of Biochemistry
Leave of absence was granted to:

1. Prof. R. Prasad : Member
2. Prof. ChandrakalaPadia : Member
3. Prof. Ram Ramaswamy : Member
4. Prof. K. C. Sharma : Member
5. Prof. A. K. Gupta : Member

## DETAILED MINUTES



| ItemNo. | Particulars |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | run 2-Yr Master Programme in Digital Society has been singed and the said programmes has been started from Academic Session 2017-18 |
|  |  | 15-3.6 | Accommodating students of $5-\mathrm{Yr}$ Integrated MSc2013 batch in 3-Yr integrated M.Sc.,B.Ed., | Students of 5-Yr Integrated M.Sc.,2013 batch has been accommodating in 3-Yr integrated M.Sc.,-B.Ed., programme. |
|  |  | 15-3.7 | MOOC Courses for Recognition and also adoption of the UGC (Credit Framework for Online Learning Courses through SW AY AM) Regulation, 2016 | Request to identity the MOOC Courses for Academic Session 201718 bas been sent to concernDeans of the School |
|  |  | 15-3.8 | Adoption of UGC regulation, 2016 | UGC (Minimum Standards and Procedure for Award of M.Pbil.,/Ph.D., Degree) regulations, 2016 adopted. |
|  |  | 15-3.9 | Adoption of UGC directive regarding equivalence of B.Voc., | B.Voc., has been included as one of the eligibility criteria in such programmes where entry qualification is a Bachelor degree without specific requirement in a particular discipline in the University. |
|  |  | 15-3.10 | To start Centre for Desert Studies under School of Earth Sciences | Department is approaching different stakeholders to initiate the programme. |
|  |  | 15-4.0 | Admissions |  |
|  |  | 15-4.1 (a) | CUCET 2017 | As per approved eligibility criteria, CUCET 2017 conducted successfully and students were admitted in 10 participating universities for Academic Session 2017-18. |
|  |  | (b) | CCMT | Students bave been admitted to M.Tech., (Computer Science and Engineering) and M.Arch., (Department of Architecture) through central counseling CCMT in Academic Session 2017-18. |
|  |  | (c) | Jointly with IIIT / B | The Programame M.A/M.Sc. Digital Society bas been started |
|  |  | 15-5.0 | Evaluation \& Examination |  |
|  |  | 15-5.1 | Panels of Examiners | Noted. |
|  |  | 15-5.2 | Conversion formula from CGPA to Percentage on the back side of the Mark-sheet | Formula to calculate CGPA is printed on back side of the Mark sheet. |
|  |  | 15-5.3 | Revised Format of Grade-sheet | Noted. |
|  |  | 15-5.4 | Internal Examinations of Post Graduate Courses should not affect classes | Noted. The respective departments were intimated the decision for further implementation. |
|  |  | 15-6.0 | Curricula Revision | Approved and implemented. |
|  |  | 15-6.1 | 3-Yr Integrated MSc-B.Ed., (Economics) |  |
|  |  | 15-6.2 | Change of name of the course PH-203 |  |
|  |  | 15-6.3 | Replacing math's Project by an Open elective in MSc |  |


| ItemNo. | Particulars |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | (Maths) |  |
|  |  | 15-6.4 | To consider recommendation of School Board of School of Mathematics, Statistics and Computational Sciences for starting new course "Integral Equation and Calculus of V ariations" in place of minor project of "V I Sem. of Integrated MSc Programme". |  |
|  |  | 15-7.0 | Revision of Course Structure and Syllabi |  |
|  |  | 15-7.1 | 2-Yr MSc (Environment Science) | Approved and implemented. |
|  |  | 15-7.2 | 2-Yr MSc (Atmospheric Science) |  |
|  |  | 15-7.3 | 2-YrMSc Computer Science (Artificial Intelligence) |  |
|  |  | 15-7.4 | 2-Yr MSc Computer Science (Big Data Analytics) |  |
|  |  | 15-7.5 | 2-YrMA (English) |  |
|  |  | 15-7.6 | 2-YrMA (Hindi) |  |
|  |  | 15-7.7 | 2-YrMSc (Physics) |  |
|  |  | 15-7.8 | 3-Yr Integrated M.Sc.,--B.Ed., (Physics) |  |
|  |  | 15-7.9 | 5-Yr Integrated M.S.,c (Physics) |  |
|  |  | 15-7.10 | 5-Yr Integrated M.Sc .,(Mathematics) |  |
|  |  | 15-7.11 | 3-Yr Integrated M.Sc.,B.Ed., (Maths) |  |
|  |  | 15-7.12 | 2-YrM Pharm (Pharmaceutical Chemistry) |  |
|  |  | 15-7.13 | 5-Yr Integrated MSc (Environment Science) |  |
|  |  | 15-7.14 | Ph.D. Environment Science |  |
|  |  | 15-7.15 | 2-Yr MSc Computer Science |  |
|  |  | 15-7.16 | 2-Yr MSc Statistics |  |
|  |  | 15-8.0 | New Programmes of Studies |  |
|  |  | 15-8.1 | 2-Yr MSc/MA in Digital Society | These courses approved and started from Academic Session 2017-18. <br> PhD Programme in Yogic Science is to be started from next Academic Session. <br> At present only 2-Yr MSc (Yoga Therapy) programme bas been started. 2-Yr MSc (Yoga and Consciousness) is to be started later. |
|  |  | 15-8.2 | 2-Yr M Pharm (Pharmaceutics) |  |
|  |  | 15-8.3 | 2-Yr MSc (Yoga Therapy) and 2-Yr MSc (Yoga and Consciousness) |  |
|  |  | 15-8.4 | 4-Yr B.Des. and 2-Yr M.Des. at IICD |  |
|  |  | 15-8.5 | To start 2-Yr MSc (Maths) in place of 3-Yr MScTech (Mathematics) |  |
|  |  | 15-8.6 | PhD Programme in Atmospheric Science |  |
|  |  | 15-8.7 | PhD Programme in Yogic Science |  |


| ItemNo. | Particulars |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 15-8.8 | To start 2-Yr MTech (Computer Science) in CyberPhysical Systems |  |
|  |  | 15-9.0 | PhD Registration | Noted. |
|  |  | 15-10.1 | Change of Supervisor | Implemented. |
|  |  | 15-10.2 | Leave of Absence | Leave of Absence to Mr. Sabrdendu Kumar, Research Scholar of Environment Science programme, 2014 was not approved and the same was intimated to the student. |
|  |  | 15.11.1 | The Syllabus of IPR - Elective subject | The recommendation of School Board bas been received and is placed as separate agenda item. |
|  |  | Resolution: Noted |  |  |
| 16-3.0 | Convocation |  |  |  |
|  | 16-3.1 | 4th Convocation Proceedings $\text { (Annexure- } 2 \text { ) [Page No. - } 29 \text { ] }$ <br> A proceeding of the 4th convocation to be held on 13th November, 2017 is placed before Academic Council for approval. <br> The Academic Council approved the Proceedings of the Fourth Convocation scheduled on $13^{\text {th }}$ November 2017 in the University. |  |  |
|  | 16-3.2 | Award of Degrees during the Convocation <br> As per the Ordinance 9, the date of viva is deemed to be the date of award of Ph.D. Degree. The Ph.D., viva-voce takes place all through the year and after the formal notification, the provisional degree certificate is given to the candidates. Two Ph.D. candidates, who successfully defended the thesis on 6th November, 2017 are also included in the list of degree recipients for the 4th Convocation scheduled on 13th November 2017. It is proposed in future that only those candidates whose results are formally notified by the office of the CoE at least one month before the date of convocation shall be included in the list of degree recipients. <br> Submitted before Academic Council for consideration. <br> The Academic Council resolved that in future, only those candidates whose results are formally notified by the office of the CoE at least one week before the date of convocation shall be included in the list of degree recipients in Convocation. |  |  |
|  | 16-3.3 | Approval to award the Gold Medal and Certificate of Merit to the toppers of all the programmes. $\text { (Annexure- } 3 \text { ) [Page No. -50] }$ <br> It is proposed to award the Certificate of Merit to the toppers with Gold medals selected from all programmes during the fourth Convocation Ceremony of the University scheduled on $12^{\text {th }}$ November, 2017. <br> The list of toppers prepared from the departments is placed before the Academic Council for consideration. |  |  |


| ItemNo. | Particulars |  |
| :---: | :---: | :---: |
|  |  | The Academic Council approved awarding the Gold Medal and Certificate of Merit to the toppers of all the programmes during the Fourth Convocation of the University. |
|  | 16-3.4 | Approval to confer Degree Certificates to the successful students during the fourth Convocation of the University. (Annexure- 4) [Page No. - 52] <br> The list of successful students of batches 2013-14, 2014-15 and 2015-16, is placed before the Academic Council for consideration. <br> The Academic Council approved the Degree Certificates to be conferred to the successful students of 2013-14, 2014-15 and 2015-16 batches during the Fourth Convocation of the University. |
| 16-4.0 | Policy Matters |  |
|  | 16-4.1 | Innovation Cell at CURAJ. <br> Prof. Someshwar Das, Prof. of Atmospheric Science has been nominated as a coordinator for Innovation cell and the activities of the same was framed for the implementation during the year 2017-18. <br> Placed before Academic Council for approval. <br> The details and need of innovation Cell at CURAJ was narrated and presented to the Academic Council. <br> Academic Council approved the same. |
|  | 16-4.2 | Alternative arrangement of an administrative supervisor/another supervisor in the absence of a research supervisor <br> The matter was put up to 48th Deans' committee vide item No 48-4.8. The Deans' Commitee resolved that Head of Deprtment should be the Administartive Supervisor in the absence of a Research Supervisor. <br> The matter is reported to Academic Council for ratification. <br> Academic Council approved the resolution of Deans' Committee in this regard. |
|  | 16-4.3 | CURAJ Armstrong award for Vocational Education <br> (Annexure- 5) [Page No. - 101] <br> It is proposed : <br> To award CURAJ Armstrong Medal for Girl students, sponsored by Armstrong World Industries (India) Pvt. Ltd., for Excellence in vocational Education: First position : Medal or Shield, Merit Certificate and Prize of INR 11000/Second position: Medal or Shield, Merit Certificate and Prize of INR 5100/ <br> For Selecting the student for Armstrong Medal, combine result of all three years in the B.Voc., (Interior Design) programme will be taken into account. The award will be given in Convocation. The list of the awardees is placed |


| ItemNo. | Particulars |  |
| :---: | :---: | :---: |
|  |  | The matter is reported to Academic Council for ratification. <br> The Academic Council approved CURAJ Armstrong Medal for Girl students, sponsored by Armstrong World Industries (India) Pvt. Ltd., for Excellence in vocational Education (B.Voc., (Interior Design) programme) First and Second Position to be given during the period of the MoU. The First two batches will be conferred the award during the Fourth Convocation of the University. |
|  | 16-4.4 | Collaborating with Public Affair Centre, Bangalore <br> Request was taken from Public Affair Centre (PAC), non-profit organization to enter into MoU so that to undertake and support evidence-led public policy research based on diverse social accountability tools, disseminate research findings, and facilitates collective citizen action through awareness and capacity building on both supply and demand sides of service delivery. PAC's work particularly focuses on governance as experienced from an average citizen's perspective. <br> In the event of approval of Academic Council necessary steps will be taken to sign the MoU and Implement the same in the University. <br> Placed before Academic Council for consideration. <br> The Academic Council approved the MoU to be signed with Public Affair Centre (PAC), a non-profit organization. |
|  | 16-4.5 | Collaborating with Institute of Development Studies, Jaipur. <br> The matter is placed before the Academic Council for approval to initiate the MoU with IDS, Jaipur and authorize Vice Chancellor to take necessary steps to sign the MoU with IDS, Jaipur on behalf of Central University of Rajasthan. <br> Placed before Academic Council for consideration. <br> The Academic Council approved the MoU to be signed by the Central University of Rajasthan with Institute of Development Studies, Jaipur. Vice Chancellor has been authorized for taking necessary steps for getting the MoU signed with IDS, Jaipur |
| 16-5.0 | Evaluation \& Examination |  |
|  | 16-5.1 | Format of Degree Certificate and Provisional Degree Certificate for Ph.D. $\text { (Annexure- 6) [Page No. - } 102 \text { ] }$ <br> The formats of Degree Certificate and Provisional Degree Certificate for Ph.D. finalized and recommended by duly constituted Committee after incorporating the suggestions given by Deans' committee. <br> The item is Placed before Academic Council for approval. <br> Format of Degree Certificate and Provisional Degree Certificate for Ph.D., is approved by the Academic Council. In the Hindi version of the provisional certificate, a minor modification of language to match English |


| ItemNo. | Particulars |  |
| :---: | :---: | :---: |
|  |  | version was suggested and approved. |
|  | 16-5.2 | Revised format for Provisional Certificate and Application form for Provisional Certificate of all courses other than Ph.D. $\text { (Annexure-7 ) [Page No. - } 109 \text { ] }$ <br> Keeping in view of issuing Provisional Certificate to the students admitting various courses, the new format of application form and the template of the Provisional Certificate, as approved by the Vice Chancellor, is placed before the Academic Council for ratification. It is also proposed that the fee of Rs. 200/- as approved for the Provisional Degree Certificate be applicable for all programmes. <br> The item is placed before Academic Council for ratification. <br> Revised format for Provisional Certificate and Application form for Provisional Certificate of all courses other than Ph.D., is approved by the Academic Council. |
| 16-6.0 | Curricula Revision <br> Schools and Departments have suggested some revision of individual courses and those are recommended by the respective School Boards. The School Board recommendation on Curriculum Revision is placed below for consideration of Academic Council. |  |
|  | 16-6.1 | Global Initiative of Academic Network (GIAN) course, and initiative of MHRD, GOI has approved a course on (Machine Learning) conducted from $30^{\text {th }}$ October, 2017 to $11^{\text {th }}$ Nov, 2017. <br> The School Board approved for the student participation in the above-said course along with exemption from the course to be conducted in the $2^{\text {th }}$ Semester. <br> School Board recommendation is submitted before Academic Council for approval. |
|  |  |  |
| 16-7.0 | Revision of Course Structure and Syllabi <br> The course structure and syllabi of different Programmes of Studies are proposed to be revised by the respective School Boards. These are listed below for consideration of Academic Council. |  |
|  | 16-7.1 | Revised syllabi of M.Des., and BDes, programme in collaboration with IICD. $\text { (Annexure- 8) [Page No. - } 111 \text { ] }$ <br> Revised syllabi of BDes, and MDes, programme from IICD, recognized by Central University of Rajasthan. <br> It is placed before the Academic Council for approval. |
|  | 16-7.2 | Course Structure/ Syllabus of PhD Programme in Architecture <br> (Annexure- 9) [Page No. - 118] |


| ItemNo. | Particulars |  |
| :---: | :---: | :---: |
|  |  | Ph.D. Programme in the Department of Architecture has been started with admission of one scholar from July 2017. The Scheme and Syllabus for Pre-PhD course work is submitted by the Department through the School Board. <br> The Item is placed before Academic Council for approval |
|  | 16-7.3 | The Syllabus of IPR - Elective subject <br> (Annexure-10) [Page No. - 119] <br> IPR course syllabus duly recommended by School Board. <br> It is placed before Academic Council for approval. |
|  | 16-7.4 | Approval of proposed Global Initiative of Academic Network (GIAN) Course as 2 credit course $\text { (Annexure- 11) [Page No. - } 120 \text { ] }$ <br> Department of Architecture will be conducting GIAN (Global Initiative for Academic Network) Course, approved by the MHRD, Government of India, on "Researching Sustainability in Built Environment" from January 8, 2018 to January 12, 2018. The Architecture department would like to offer as 2 credit course to all the participants. <br> Item is placed before Academic Council for approval. |
|  | 16-7.5 | Replacing of $4^{\text {th }}$ Unit of Neural Network paper by Big Data Analysis and Mining in Deep Web Repositories (GIAN Course) in M.Sc. Computer Science in Big Data Analytics programme of $2^{\text {nd }}$ Semester. <br> (Annexure-12) [Page No. - 123 ] <br> Global Initiative of Academic Network (GIAN) course, and initiative of MHRD, GOI has approved a course on Big Data Analysis and Mining in Deep Web Repositories which is going to be held from $8^{\text {th }}$ January 2018 to $12^{\text {th }}$ January, 2018. <br> As per the GIAN rules and regulations, the course shall be a part of semester course. The School Board decided that syllabus of the above approved course is $04^{\text {th }}$ unit of Neural Network paper for $2^{\text {nd }}$ Semester of M.Sc. (Computer Science) in Big Data Analytics programme. <br> Item is placed before Academic Council for approval. |
|  | 16-7.6 | Syllabus revision of M.Sc. Computer Science in Big Data Analytics <br> (Annexure-13) [Page No. - 126 ] <br> Revised Syllabus of M.Sc. Computer Science in Big Data Analytics duly approved by School Board is placed. |
|  | Resolution: Academic Council approved as proposed. IPR syllabus needs should be circulated to Academic Council members stating that any shortfall of credit requirements, can be met out by having additional lectures. |  |


| ItemNo. | Particulars |  |
| :---: | :---: | :---: |
| 16-8.0 | New Programmes of Studies |  |
|  | 16-8.1 | To start B.Tech. in Computer Science and Engineering and B.Tech. in Electronics\& Communication <br> It is proposed to start B.Tech. in Computer Science and Engineering and B.Tech. in Electronics \& Communication in the University from next Academic Year i.e. Academic Session 2018-19. The Course Structure for both the courses of B.Tech. can be prepared in consultation with various stakeholders like IITs and NITs. <br> The matter is placed before Academic Council for approval. <br> Resolution: Academic Council approved. The B.Tech. programmes to be started for next academic session proposed to be run under School of Engineering \& Technology. |
| 16-9.0 | Admissions |  |
|  | 16-9.1 | CUCET-2018 <br> The meeting of Vice Chancellors and Nodal Officers of participating Central Universities was held on 27.10.2017 at AICTE building at New Delhi to discuss the matter related to CUCET 2018. <br> In the meeting, it was decided that the coordinating University for CUCET 2018 will be Central University of Rajasthan and authorized Vice Chancellor to nominate National Coordinator for CUCET-2018. Vice Chancellor nominated Professor Manish Dev Shrimali, Dean School of Physical Sciences as National Coordinator for the same. <br> Placed before Academic Council for ratification. <br> Resolution: Academic Council accepted as proposed. |
| 16-10.0 | Other Cases |  |
|  | 16-10.1 | Institute of Eminence <br> CURAJ being newly found eligible to apply for IoE status among 12 Central Universities by paying the requisite application fee of Rs. 1 crore, out of which Rs. 75 lakh will be returned in case IoE status is not awarded for Govt. funded Institutes. University is preparing to submit application for Institute of Eminence. <br> Placed before Academic Council for consideration. <br> Resolution: Academic Council accepted as proposed. |
|  | 16-10.2 | Constitution of Students' Council $\text { (Annexure- 14) [Page No. - } 127 \text { ] }$ <br> The list of the elected and nominated students for the Students' Council for the session 2017-18 is placed. |


| ItemNo. | Particulars |  |
| :---: | :---: | :---: |
|  |  | Constitution of student Council is hereby reported to Academic Council. <br> Resolution: Academic Council ratified the Constitution of student Council. |
|  | Vice Chancellor was congratulated by Academic Council for bringing academic and administrative excellence in the University and to be a coordinating University for CUCET examination fourth time. Also, for selecting the CURAJ one among the 12 Central Universities to apply for Institute of Eminence |  |
|  | 16-10.3 | Confirmation of Newly Constituted School Boards and Board of Studies <br> (Annexure-15) [Page No. - 130 ] <br> School board of following Schools have been constituted: <br> 1. School of Mathematics, Statistics \& Computational Sciences <br> 2. School of Chemical Sciences and Pharmacy <br> 3. School of Earth Sciences <br> 4. School of Life Sciences <br> 5. School of Humanities \& Languages <br> 6. School of Architecture <br> 7. School of Social Sciences <br> 8. School of Commerce \& Management <br> 9. School of Physical Sciences <br> 10. School of Engineering \& Technology <br> Board of Studies of the following departments have been constituted: <br> 1. Dept. of Atmospheric Sciences <br> 2. Dept. of Environmental Sciences <br> 3. Dept. of Pharmacy <br> Placed before Academic Council for ratification. <br> Resolution: Academic Council ratified the Constitution of School Boards and Board of Studies. |
|  | 16-11.0 | Any other item(s) with permission of the Chair. |
|  | 16-11.1 | Syllabus revision of Dept. of Statistics. $\text { (Annexure-16 ) [Page No. - } 149 \text { ] }$ <br> Prof. D. C. Sharma, Dean, School of Mathematics and Computations Science presented the amendments and modifications in the syllabus of Statistics without following the procedure of School Board. Dr. Jitendra Kumar, Head, Dept. of Statistic explained the need for modification in the syllabus of M.Sc. Statistics. Dr. Jitendra also presented new Pre- PhD syllabus being implemented without routed through School Board. Chairman, kind fully accepted and advised the faculty that any modification/revision should be implemented after following the due procedure of Syllabus revision of CURAJ. Further, Chairman also conveyed the proper way to represent elective subjects in the syllabus with serial Nos. in order to enable students select the elective subjects among them. |

The meeting ended with vote of thanks by the Chair.

# CENTRAL UNIVERSITY OF RAJASTHAN 



Minutes
of

The Seventeenth Meeting of the Academic Council

| Meeting No. | $:$ | Seventeenth $\left(17^{\text {th }}\right)$ |
| :--- | :--- | :--- |
| Venue | $:$ | Meeting Room <br> First Floor of Administrative Building <br> Central University of Rajasthan, <br> Bandarsindri, NH-8, <br> Tehsil - Kishangarh-305817 <br> Dist. -Ajmer (Rajasthan) |
| Date | $:$ | Friday, 11 ${ }^{\text {th }}$ May, 2018 |
| Time | $:$ | $03: 00$ P.M. |

Minutes of the $17^{\text {th }}$ Meeting of the Academic Council held on $11^{\text {th }}$ May, 2018 at 03:00 PM in the Meeting Room first floor of Administrative Building, Central University of Rajasthan, Bandarsindri, NH-8, Tehsil Kishangarh, District - Ajmer, (Rajasthan)

The following members were present:

1. Prof. Arun K Pujari : Chairman
2. Prof. K. C. Sharma : Member
3. Prof. ChandrakalaPadia : Member
4. Prof. A. K. Gupta : Member
5. Prof. Neeraj Gupta : Member
6. Prof. Supriya Agarwal : Member
7. Prof. Pradeep Verma, Dean : Member
8. Prof. S.N. Ambedkar, Dean : Member
9. Prof. Manish Shrimali, Dean : Member
10. Prof. D. C. Sharma, Dean : Member
11. Prof. M. R. P. Singh, Dean : Member
12. Prof. Vipin Kumar, Dean : Member
13. Dr. Laxmi Kant Sharma : Member
14. Prof. Maithili Sharan : Member
15. Dr. N. Lakshmi Aiyar, Dean : Member
16. Dr. Pawan Kumar Dadheech : Member
17. Dr. Jitendra Kumar : Member
18. Ms. Ritu B. Rai, Dean : Member
19. Dr. Pankaj Goyal : Member
20. Dr. JagdishJadhav : Member
21. Dr. S.Kandasamy : Member
22. Dr. Praveen Sahu : Member
23. Dr. Chandi C. Mandal : Member
24. Dr. Subhasis Bhadra : Member
25. Dr. Arun Kumar Giri : Member
26. Dr. Anjali Sharma : Member
27. Dr. Bhumika Sharma : Member
28. Dr. Sanjay Kumar : Member
29. Dr. Ajit Patra : Member
30. Dr. TulsiGiriGoswami : Member
31. Dr. Vijay Kumar M. : Member
32. Dr. Utpal Debnath : Member
33. Shri K.V.S.Kameswara Rao : Secretary

Spcial Invitee:

1. Prof. M. Krishnan
2. Prof. Someshwar Das
3. Dr. Chandar Sekhar Gahan
4. Dr.Raghu Chitta
5. Dr. Nagaraju Aitha
6. Dr. Pranta Pratik Patnaik
7. Dr.Gyana Ranjan Panda
8. Dr. Chhabi Rani Panigrahi
9. Mr. Ravi Saharan
10. Mr. Atul Nag

Leave of absence was granted to:

1. Prof. R. Prasad : Member
2. Prof. Ram Ramaswamy : Member
3. Prof. Maithili Sharan : Member
4. Prof. Aparna Rayaprol : Member
5. Prof. J.K. Prajapat : Member
6. Dr. JogeswarPanigrahi : Member

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| Item <br> No. | Particulars |  |
| :---: | :--- | :--- |
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## DETAILED AGENDA

| Item No. | Particulars |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 17-1.0 | Welcome by Chairman, Academic Council. <br> Chairman welcomed all the members present and introduced all the new Members and Special Invitee Members. The Chairman apprised the members about the presentation of all Central Universities established in 2009 before the visitor on $06 / 01 / 2018$ and presentation of IOE given on $23 / 04 / 2018$. Central University of Rajasthan placed top among the Central Universities started after 2009 with respect to Publications, Infrastructure facilities and filling of the Statutory positions. Considering among all the Central Universities, Central University of Rajasthan is ranked within first 5-6. Further he mentioned that information on various activities of the University such as International collaboration by the faculty member is not available in the application submitted to various agencies. New Digital Learning and Monitoring cell is going to be established consisting of faculty members to look into the collection of various activities of the University including preparation of NAAC, University Annual Reports etc., and advertisement for recruitment of Information Scientist has been released. University is going to sign a MoU with Indira Gandhi National Centre for the Arts to start new programme. The Chairman also apprised that 5 students of Big Data Analytics programme got placement in TCS, and INSA young scientist award won by the faculty of CURaj. |  |  |  |
| 17-2.0 | 17-2.1 | Confirmation of the Minutes of the $16^{\text {th }}$ Meeting of the Academic Council held on Sunday, November 12, 2017. <br> (Annexure-1) [Page No. : 19-32] |  |  |
|  |  | Resolution: Confirmed |  |  |
|  | 17-2.2 | Action Taken Reports |  |  |
|  |  | $\begin{gathered} \text { Item } \\ \text { No. } \end{gathered}$ | Patticulars | Action Taken |
|  |  | 16-3.0 | Convocation |  |
|  |  | 16-3.1 | 4th Convocation Proceedings | Convocation was beld on 13th November, 2017. 446 students got the degrees in the Convocation. |
|  |  | 16-3.2 | Award of Degrees during the Convocation | Degrees were awarded during $4^{\text {th }}$ Convocation. |
|  |  | 16-3.3 | Approval to award the Gold Medal and Certificate of Merit to the toppers of all the programmes | Gold Medals and Certificates of Merit were awarded during 4th Convocation |
|  |  | 16-3.4 | Approval to confer Degree Certificates to the successful students during the fourth Convocation of the University | Conferred the Degree Certificates during the 4 th Convocation. |
|  |  | 16-4.0 | Policy Matters |  |
|  |  | 16-4.1 | To establish Innovation Cell at Central University of Rajasthan. | Innovation Cell was established. Prof. Someshwar Das is in-charge of Innovation Cell. |
|  |  | 16-4.2 | Alternative arrangement of an administrative supervisor/ another supervisor in the absence of a research supervisor | In the absence of Research Supervisor, HoD or any other teacher nominated by HoD will be appointed as the administrative supervisor. |
|  |  | 16-4.3 | Central University of Rajasthan Armstrong award for Vocational Education | The First two batches conferred the Armstrong award during the Fourth Convocation of the University. |
|  |  | 16-4.4 | Collaborating with Public Affair Centre, Bangalore | MoU with Public Affair Centre, Bangalore has been signed. |
|  |  | 16-4.5 | Collaborating with Institute of Development Studies (IDS), Jaipur. | Dr. Ganesh Kawardia Prof. of Economics has been appointed recently and he will look into the feasibility of collaboration and |


| Item <br> No. | Particulars |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | proceed further for signing of MoU with IDS |
|  |  | $16-5.0$ | Evaluation \& Examination |  |
|  |  | 16-5.1 | Format of Degree Certificate and Provisional Degree Certificate for Ph.D. | Standard format for Degree and provisional certificate for Ph.D bas been framed and implemented |
|  |  | 16-5.2 | Revised format for Provisional Certificate and Application form for provisional certificate of all courses other than Ph.D. | Revised format for application for provisional certificate and revised format of provisional certificate for all courses other than Ph.D has been approved and implemented. |
|  |  | 16-6.0 | GIAN Course \& Credits |  |
|  |  | 16-6.1 | Global Initiative of Academic Network, (GIAN) course, and initiative of MHRD, GOI has approved a course on (Machine Learning) conducted from 30th October, 2017 to 11th Nov, 2017. | Academic Council in its $16^{\text {th }}$ meeting approved the student participation in the above-said course along with exemption from the course of Machine Learning to be conducted in the even Semester for M.Sc. Big data analytics and M.Sc. Computer Science programme. |
|  |  | 16-7.4 | Approval of proposed GLAN Course (Architecture) as 2 credit course | GIAN Course conducted in Architecture Department was approved as 2 credit course for all the participants. |
|  |  | 16-7.5 | Replacing of 4th Unit of Neural Network paper by Big Data Analysis and Mining in Deep Web Repositories (GIAN Course) in M.Sc. Computer Science in Big Data Analytics programme of $2^{\text {nd }}$ Semester. | Replacing of $4^{\text {th }}$ Unit of Neural Network paper by Big Data Analysis was approved and implemented. |
|  |  | 16-7.0 | Revision of Course Structure and Syllabi |  |
|  |  | 16-7.1 | To Revise syllabus of M.Des., and B.Des., programme in collaboration with IICD. | Revised syllabus bas been approved and implemented |
|  |  | 16-7.2 | Course Structure/ Syllabus of Ph.D. Programme in Architecture | Revised course structure/syllabus of Ph.D. Programme in Architecture has been approved and implemented |
|  |  | 16-7.3 | The Syllabus of IPR - Elective subject | Syllabus for IPR has been approved and implemented. |
|  |  | 16-7.6 | Syllabus revision of M.Sc. Computer Science in Big Data Analytics | Revised Syllabus of M.Sc. Computer Science in Big Data Analytics has been approved and implemented. |
|  |  | 16-8.0 | New Programmes of Studies |  |
|  |  | 16-8.1 | To start B. Tech., in Computer Science and Engineering and B.Tech., in Electronics and Communication | As per present situation, attraction towards Engineering programmes found to be declining. Further, faculty appointment could not be done because of the new roaster procedure. However, a brainstorming session is to be beld to finalize the Engineering programmes, till that time it has been kept in abeyance. |


| Item No. | Particulars |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 16-9.0 | Admissions |  |
|  |  | 16-9.1 | CUCET-2018 | CUCET-2018 bas been successfully conducted on $28^{\text {th }}$ and 29th April, 2018. |
|  |  | 16-10.0 | Other Matters |  |
|  |  | 16-10.1 | Institute of Eminence | University applied for Institute or Eminence and given presentation on 23/04/2018. |
|  |  | 16-10.2 | Constitution of Student Council | Student Council constituted for Academic Session 2017-18. |
|  |  | 16-10.3 | Confirmation of Newly Constituted School Boards and Board of Studies | Newly Constituted School Boards and Board of Studies were confirmed. |
|  |  | 16-11.0 | Any other item(s) with permission of the Chair. |  |
|  |  | 16-11.1 | Syllabus revision of Dept. of Statistics. | Revised syllabus of Dept. of Statistics was approved and implemented. |
|  |  | Resolution: Noted |  |  |
| 17-3.0 | Semester Registration Process |  |  |  |
|  | 17.3.1 | Payment of Fee by the Students and Ph.D. Scholars for Semester Registration <br> To register for a semester a student shall pay fee online during the vacations before commencement of the semester. As it is a cashless process, students can pay the requisite fee as per their convenience even before returning to the campus from vacations. The schedule for payment of online fee for the Semester is as follows: <br> *The exact date will be intimated in every semester. <br> Name of the default students and Research Scholars will be notified and removed from the roll of the University and registration of default Research Scholars will be cancelled. If a student of PG programme is requesting to pay the fee after last date (which is with late fee of $25 \%$ ), she/he has to pay re-admission fee apart from the semester fee and in case of Research Scholars, they have to re-register themselves by paying the registration fee fixed by the University time to time. <br> Placed before the Academic Council for consideration <br> Resolution: Payment of semester fee, semester registration, Re-admission and Reregistration for default students as described above is approved. It is further resolved that the list of default Students and Research Scholars should be intimated to Dean of the respective Schools for further action by the Academic Section. Academic Council also resolved that DRC of all Research Scholar should be conducted before the end of each semester and list of Research Scholars recommended by the DRC for continuation of registration should be forwarded to Dean (Academic) office by the respective Deans for further process. |  |  |


| Item No. | Particulars |  |
| :---: | :---: | :---: |
|  | 17-3.2 | Semester Registration Card. <br> University has framed the norms to issue semester Registration Card to Students to indicate that student is a registered student of the respective semester. Students can get their Semester Registration card from the Office of the Dean Academics by showing their ID card and proof of confirmation of payment of fees for the semester. <br> The matter was placed before the $50^{\text {th }}$ Deans' Committee for consideration. The Deans' Committee approved the proposal. Academics Office has started distributing Semester Registration Cards from January 2018 Semester onwards. <br> The matter was placed to Academic Council to approve the procedure for continuation in every semester henceforth. <br> Resolution: Academic Council approved the procedure of Semester Registration for continuation in every semester henceforth. Semester registration cards are to be issued in each semester. ID-cards should also be issued on admission. |
| 17-4.0 | Admission -2018 |  |
|  | 17-4.1 | The list of courses, the minimum eligibility and Intake of the courses for Admission 2018 <br> The list of courses, the minimum eligibility criterion and intake of the courses for Admissions in various programmes of Academic Session 2018-19 is placed before Academic Council for consideration. Also it is proposed to authorize Vice- Chancellor to revise intake for Ph.D admission if required. (Annexure-2) [Page No. : 33-42 ] <br> Resolution: Academic Council ratified the list of courses, the minimum eligibility and Intake of the courses for Admission 2018 and also authorized ViceChancellor to revise the intake of $\mathrm{Ph} . \mathrm{D}$ on request basis. |
|  | 17-4.2 | Increase in the number of Seats for admission in M.Sc (Atmospheric Science) <br> In view of large response of students in CUCET-2018 for admission into M.Sc. (Atmospheric Science) programme, Coordinator, Department of Atmospheric Science has requested to Increase the number of seats from 10 to 15 . This would also fulfill the requirement for qualifying the student for INSPIRE fellowship, for which the eligibility is based on the top rank of the student in a class of at least12 students. <br> Placed before the Academic Council for consideration. <br> Resolution: Academic Council approved the increase in number of seats in M.Sc (Atmospheric Science) from 10 to 15. |
|  | 17-4.3 | Increase in the number of Seats for admission in M.Sc. Computer Science(Big Data Analytics) <br> Approved intake for M.Sc. Computer Science (Big Data Analytics) is 20. It is proposed to increase the number of intake from 20 to 40 (as requested by TCS). <br> Placed before the Academic Council for consideration. <br> Resolution: Academic Council approved Increase in the number of Seats for admission in M.Sc. Computer Science(Big Data Analytics) from 20 to 40 |
|  | 17-4.4 | To Accept students having High School Diploma issued by Northwest Accreditation Commission (NWAC), USA for courses run by the University. <br> Deans' Committee vide agenda item no 50-4.4 recommended to accept students having High School Diploma (Grade12/Senior Secondary) issued by Northwest Accreditation Commission, USA for the admission in the eligible programmes available at CURaj. <br> The Recommendation of Deans' Committee was placed before the Academic Council |


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|  |  | for consideration. <br> Resolution: Academic Council approved the recommendation of Deans' Committee. |
|  | 17-4.5 | Relaxation to GPAT qualified candidates for admission to Ph.D programme in Pharmacy <br> Deans' Committee in its $52^{\text {nd }}$ meeting resolved that $5 \%$ relaxation in CUCET qualifying marks in all categories can be given to GPAT qualified candidates for admission to $\mathrm{Ph} . \mathrm{D}$ programme in Pharmacy. <br> The matter was placed before the Academic Council for consideration <br> Resolution: Academic Council approved the recommendation of Deans' Committee to give relaxation of $5 \%$ in CUCET qualifying marks to GPAT qualified candidates for admission to Ph.D programme in Pharmacy. |
|  | 17-4.6 | CUCET-2018 <br> It is to report to the Academic Council that admission to various courses for the academic year 2018-2019 will be through CUCET -2018. Central University of Rajasthan has participated for $1 \mathrm{UG}, 40 \mathrm{PG}$ programmes and $21 \mathrm{Ph} . \mathrm{D}$. programmes. Total 38,496 students have registered for admission to various programme of Central University of Rajasthan. <br> Resolution: Matter was noted by the Academic Council and the Academic Council also approved admission to following courses which are to be offered in 2018-19 but not included in CUCET-2018 through a separate entrance examination to be conducted at selected centre. <br> 1. $\mathbf{M S c}$ (Sports Biochemistry) with 10 seats <br> 2. MSc (Exercise/Sports Physiology) with 10 seats <br> 3. MSc (Sports Nutrition) with 10 seats <br> 4. M.A (Sport Psychology) with 10 seats. <br> 5. B. Voc with 50 Seats <br> 6. PG diploma in Cultural Informatics with 10 seats |
| 17-5.0 | Evaluation \& Examination |  |
|  | 17-5.1 | Promotion from odd semester to even semester for the students. <br> The revised ordinance 03 is in force from the academic year 2017-18, in which a provision of promotion for next semester is detailed. According to the revised ordinance, a student can be promoted to even semester from odd semester even with backlog papers but cannot be promoted from even semester to odd semester unless $70 \%$ of credits in total are cleared. This new provision is applicable to the students who have taken admission in 2017-18 sessions. <br> On request of some students of other batches to extend this provision to them in this academic year, the Deans' Committee resolved that such request be favorably considered. <br> The matter was placed before the Academic Council for ratification <br> Resolution: Academic Council ratified the matter of promotion from odd semester to even semester for the students of batch other than 2017-18, based on the request of the students. |
|  | 17-5.2 | Re-registration of back papers <br> Below mentioned students of Physics department have requested for re-registration of back papers in current semester (January to June 2018): <br> Programme <br> Name <br> Back paper |


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|  |  |  <br> The abovementioned students have not cleared the papers indicated with their names in their respective semesters and the earliest opportunity to pass these back papers is current semester i.e Jan to May 2018. <br> Dean School of Physical Sciences and Head, Dept. of Physics has recommended to allow them to appear in the Internal and EoSE of Jan to May 2018 Semester and same has been approved by the Competent Authority. <br> The matter was placed before the Academic Council for ratification <br> Resolution: Academic Council ratified the matter and also resolved that all students will be allowed to clear back papers at the earliest opportunity whenever available in the Department. |
|  | 17-5.3 | Explicit list of names of professional programmes <br> It has been brought to the notice by CoE that as per revised ordinance No. 3, in case of professional programmes, a student must secure a minimum of $45 \%$ marks or equivalent letter grade ' $\mathbf{P}$ ' after combining the component of CIA ( $40 \%$ weight) and $\operatorname{EoSE}$ ( $60 \%$ weight). The student shall also be required to independently score minimum of $45 \%$ marks or equivalent letter grade ' $\mathbf{P}$ ' in the EoSE to get promoted in next semester. <br> It is necessary to identify the courses which are professional courses. <br> The matter was placed before $51^{\text {st }}$ Deans' Committee for consideration and the Deans' Committee resolved the following on this matter: <br> Programme of studies that requires approval of any regulatory authority (irrespective of whether approval is obtained or not) is a Professional programme. Professional programmes at present include <br> - M.Tech (Computer Science and Engineering), <br> - M.Tech (Cyber Physical System, <br> - M.Pharm (Pharmaceutics), <br> - M.Pharm (Pharmaceutical Chemistry), <br> - M.Arch (Sustainable Architecture), <br> - M.Sc-B.Ed (Chemistry), <br> - M.Sc-B.Ed (Mathematics), <br> - M.Sc-B.Ed (Physics), <br> - M.Sc-B.Ed (Economics) <br> - MBA <br> The matter was placed before Academic Council for consideration <br> Resolution: It is resolved that the following courses have been approved as professional programmes of studies <br> - M.Tech (Computer Science and Engineering), <br> - M.Tech (Cyber Physical System, <br> - M.Pharm (Pharmaceutics), <br> - M.Pharm (Pharmaceutical Chemistry), <br> - M.Arch (Sustainable Architecture), |


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|  |  | - MBA. <br> - M.Sc. in Computer Science (Big Data Analytics) <br> As per the Ordinance No-03, 13.4 in the professional programmes, a student must score a minimum of $45 \%$ passing marks in each course of these programmes. <br> Note: If a course is offered jointly for professional programme and other programme, then the course will have two different passmark - 45\% for students of professional programme and $35 \%$ for the students of other programme. |
|  | 17-5.4 | Condonation of Attendance <br> As per ordinance-03 of CURaj a student has to put in a minimum of $75 \%$ of attendance in the registered courses and in very exceptional cases such as medical or other unavoidable ground the Competent Authority can condone shortage of attendance of student under following conditions. <br> 1. Condonation cannot be for attendance less than $65 \%$ <br> 2. Condonation can be for only one occasion in the entire duration of programme of study. <br> In view of the above, Deans' Committee resolved that the students having 75\% attendance are eligible to appear EoSE. If a student has attendance between 70-75\%, the course instructor shall report the shortage of attendance to the HoD who shall verify the authenticity and genuineness of reason of absence from the classes. Dean of the School in consultation with the HoD, may condone shortage of attendance upto $5 \%$ after examining the circumstances and merits of the individual case. Dean may reject the case after recording the reasons for such rejection (Ordinance -03 clause 6.5). <br> In very exceptional cases such as medical or any other unavoidable ground, the condonation of the shortage of attendance of a student having attendance between 65$70 \%$ may be recommended and forwarded to office of the CoE and same may be submitted to higher authority for approval. <br> The matter was placed before the Academic Council Consideration <br> Resolution: Academic Council approved the proposal as proposed. |
| 17-6.0 | New Schools |  |
|  | 17-6.1 | Establishment of School of Sports Sciences <br> Ministry of Youth Affairs and Sports, New Delhi (vide its letter No. F.No.1-1/2012ID/Funding Universities dated 12 ${ }^{\text {th }}$ March, 2018) has sanctioned School of Sports Sciences (Ministry of Youth Affairs and Sports) with funding of Rs. 25.00 Crores for 5 years with 12 teaching and 15 non-teaching positions with an intention of starting 5 programmes namely M.Sc. in Sports Nutrition, Exercise Physiology, Sports Biomechanics, Sports Biochemistry and M.A. (Sports Psychology), M.P.T. (Sports Physiotherapy), and Certificate courses (Sports Anthropometry). <br> School of Sports Sciences will be started with three departments: <br> - Department of Sports Bioscience <br> - Department of Sports Psychology <br> - Department of Sports Biomechanics <br> 12 Teaching positions, as sanctioned by Ministry of Youth Affairs and Sports, Department of Sports, Govt. of India will be allotted to this newly formed School. In addition, 7 positions, equivalent to the departments will be allocated to this school. Thus, total 19 positions would be allocated. The School Board will identify the faculty positions and specialization for each stream. Currently the following break-up is approved by the Executive Council in its $31^{\text {st }}$ Meeting held on 28 ${ }^{\text {th }}$ March 2018: |


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|  | The School will offer following 4 programmes from the academic year 2018-19: <br> 1. $\operatorname{MSc}($ Sports Biochemistry) with 10 seats <br> 2. MSc (Exercise/Sports Physiology) with 10 seats <br> Intake to be <br> 3. MSc (Sports Nutrition) with 10 seats increased in <br> 4. MA (Sport Psychology) with 10 seats. subsequent years. <br> M.Sc. in Sport Biomechanics will also be added in subsequent years. The expenditure to run this programme will be made from the grants sanctioned by Ministry of Youth Affairs and Sports for a duration of 5 years. University will approach UGC for support after 5 years. <br> Fee Structure -Fees structure for these programme will be similar to the M.Tech./MBA Programmes of CURAJ and one time development fees of Rs. 5000/-. <br> Executive Council has approved the proposal in principle in $31^{\text {st }}$ Meeting held on $28^{\text {th }}$ March 2018 <br> Placed before the Academic Council for consideration <br> Resolution: Academic Council approved the proposal of establishment of School of Sports Sciences, Education and Research (Ministry of Youth Affairs and Sports), with three Departments consisting of 19 positions ( 12 positions sanctioned from the Ministry of Youth Affairs and Sports and 7 positions (1 Professor, 2 Associate Professor and 4 Assistant Professor) from UGC) : <br> - Department of Sports Bioscience, <br> - Department of Sports Psychology and <br> - Department of Sports Biomechanics. <br> Following courses will be started from the Academic year 2018-19 with fee structure similar to the M.Tech./MBA Programmes of CURAJ and one time development fees of Rs. 5000/- <br> 1. $\mathbf{M S c}($ Sports Biochemistry) with 10 seats <br> 2. MSc (Exercise/Sports Physiology) with 10 seats <br> 3. MSc (Sports Nutrition) with 10 seats <br> 4. MA (Sport Psychology) with 10 seats. <br> Academic Council also resolved that courses run by the School of Sports Science are also considered as professional courses with the minimum passing marks of 45\%. |
| 17-7.0 | New Departments |
|  | Establishment of Department of Society - Technology Interface <br> The proposed department will be established in the School of Social Sciences. The department will offer initially two programmes of studies: <br> - M.Sc. Digital Society <br> - PG Diploma in Cultural Informatics <br> 7 Teaching positions, as specified by UGC (1 Professor, 2 Associate Professor and 4 Assistant Professor) will be allotted to this newly formed department. The School Board will identify the specialization of faculty positions such that both the programmes are properly started. <br> Research - The department will carry out research in all aspects of Societal applications of IT collaborating with existing departments like Department of Social Work, Department of Economics, Department of Culture and Media Studies, Department of Public Policy, Law and Governance of School of Social Sciences. It will also offer PhD Programme. |


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|  |  | 1. M.Sc. Digital Society <br> This programme will be offered in collaboration with IIIT Bangalore (IIITB). MoU has been signed between two institutions for such collaboration. Students of Central University of Rajasthan (CURaj) can attend courses offered by IIITB in latter's Bangalore Campus with no additional fees by students. The grade assigned by IIITB will be accepted as final grade, with adequate rescaling if required by CURaj. Initially, the students of CURaj will attend the first semester at IIITB. Hostel facility will be arranged by IIITB on payment basis. The students will be made clear before the admission about the requirement of their presence at Bangalore for the entire semester. The final semester internship will be arranged by IIITB. <br> Admission - Admission to this programme will be from two sources - <br> - Through CUCET Examination <br> - Candidates recommended by IIITB from the merit list of IIITB entrance test <br> Fee Structure - Fee Structure for this programme will be similar to the M.Tech./ MBA Programmes of CURAJ and one time development fees of Rs. 5000/-. <br> 2. PG Diploma in Cultural Informatics <br> This programme will be offered in collaboration with IGNCA Delhi (IGNCA). MoU has been signed between two institutions for such collaboration. Course syllabus and detailed mode of collaboration is being worked-out. <br> Fee Structure - Fee Structure for this programme will be similar to the M.Tech./ MBA Programmes of CURAJ and one time development fees of Rs. 5000/-. <br> School Board of School of Social Sciences has approved and recommended for consideration of Academic Council in its meeting held on 3rd May, 2018. <br> Placed before the academic Council for consideration <br> Resolution: Academic Council approved the proposal of establishment of Department of Society - Technology Interface with 7 positions (1 Professor, 2 Associate Professor and 4 Assistant Professor) and courses to be offered by the Department with fee structure similar to the M.Tech./MBA Programmes of CURAJ and one time development fees of Rs. 5000/-. Academic Council also resolved that the minimum passing marks for M.Sc in Digital Society will be 45\% and for PG Diploma in Cultural Informatics will be $35 \%$. |
|  | 17-7.2 | Establishment of Department of Data Science and Analytics <br> The proposed department will be established in the School of Mathematics, Statistics and Computational Sciences. The department is initially offering the following programme of study <br> - M.Sc. Big Data Analytics <br> 7 Teaching positions, as specified by UGC (1 Professor, 2 Associate Professor and 4 Assistant Professor) will be allotted to this newly formed department. The School Board will identify the specialization of faculty positions. <br> The department will carry out research in the area of Data Science and Analytics - Basic Research in Big Data Analytics, Big Data Analytics in Climate Science, Big Data Analytics in Bio and Health Science and Big Data Analytics in Economics and Finance collaborating with existing department of Atmospheric Science, Department of Economics, Department of Computer Science, Department of Mathematics, Department of Statistics, School of Life Sciences, School of Chemical Sciences and Pharmacy and School of Earth Sciences. <br> (1) M.Sc. Big Data Analytics <br> The M.Sc. Big Data Analytics programme is being offered in collaboration with TCS. TCS, under the agreement, provides the following: |


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|  |  | - Big Data Analytics lab with Video Conferencing provision <br> - Cloud Computing Environment of TCS <br> - Support for Salary of faculty <br> - Teaching / Internship Support <br> Admission - Admission to this programme will be through CUCET Examination. <br> TCS grant money is being utilized for establishment of Big Data Analytics Laboratories and also to meet the expenses of the faculty positions. University will continue to provide utilization certificate indicating the Salary expenses of regular/guest faculty of the university. <br> Fee Structure - Fee Structure for this programme will be similar to the M.Tech./MBA Programmes of CURAJ and one time development fees of Rs. 5000/-. <br> Course Structure and Syllabus is included in recommendation of School Board of School of Mathematics, Statistics and Computational Sciences. <br> Deans' Committee and Executive Council has approved the matter in principle and recommended to place before Academic Council. <br> Placed before the academic Council for consideration <br> Resolution: Academic Council approved the proposal of establishment of Department of Data Science and Analytics with 7 positions (1 Professor, 2 Associate Professor and 4 Assistant Professor) and course to be offered by the Department with fee structure similar to the M.Tech./MBA Programmes of CURAJ and one time development fees of Rs. 5000/-. Academic Council also resolved that the minimum passing marks for this course will be $45 \%$. The Academic Council advised to adjust the amount received from TCS against UC submitted to TCS. |
| 17-8.0 | New programme of studies, its Course Structure and syllabi |  |
|  | 17-8.1 | To Start 2 Yr M.Ed. and B.Ed. programme in School of Education <br> UGC has sanctioned six positions to start M.Ed. Programme and B.Ed. Programme in the School of Education. University plans to start these programmes at the earliest with prior approval of NCTE. It is proposed to fill these positions at the earliest and to apply to NCTE for approval. Thus, the programmes can be started from Academic Year 2019-20. However, in order to enable the university to apply to NCTE, approval of Academic Council is sought to start M.Ed. and B.Ed. Programme from Academic Year 2019-20. <br> Placed before the Academic Council for consideration. <br> Resolution: Academic Council approved the proposal. |
|  | 17-8.2 | To start B.Tech. in Bio-engineering under School of Engineering \& Technology. <br> It is proposed to start B.Tech. in Bio-engineering under School of Engineering \& Technology from the Academic Year i.e. 2018-19. The course structure for the same can be prepared in consultation with the various stake holders, IITs and NITs. <br> The matter was put up before $31^{\text {st }}$ Executive Council Meeting. Executive Council inprinciple approved the proposal. It was also recommended that the matter may be placed before the Academic Council. Course structure approved by School Board of School of Engineering and Technology is placed at Annexure-3 [Page No. : 43-47] <br> Placed before the Academic Council for consideration. <br> Resolution: Academic Council approved the start of B.Tech. in Bio-engineering under School of Engineering \& Technology from Academic Session 2019-20. Further depending on the infrastructure, possibility of starting in 2018-19 can be explored. |


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| 17-9.0 | Existing programme of studies, Course Structure (New Courses) |  |
|  | 17-9.1 | Inclusion of new elective course "Cloud Computing" to the M. Tech CSE curriculum from the semester Jan-May, 2018. <br> A new elective course " Cloud Computing", course code CSIS-348 of 4 credits to be started from Jan-May 2018 semester, was proposed by the Department in its Departmental Meeting held on 19th December, 2017. The draft syllabus for the said course was circulated to School Board members through email for their inputs/suggestion/modifications. Final syllabus of course "Cloud Computing" after incorporating suggestions form Departmental faculty, School Board Members, Prof. S.K Ghosh, was approved by the Competent Authority. Annexure-4 [Page No. : 48] <br> Placed before the Academic Council for ratification <br> Resolution: Academic Council ratified the Inclusion of new elective course "Cloud Computing" to the M. Tech CSE curriculum from the semester Jan-May, 2018. |
|  | 17-9.2 | Elective Courses for M.Sc. Chemistry Programmes <br> Department of Chemistry has proposed to offer elective courses of $3 / 4$ credits in $3^{\text {rd }}$ Semester for M.Sc (2Yr), $9^{\text {th }}$ Semester for Int. M.Sc. (5Yr) and $4^{\text {th }} \& 6^{\text {th }}$ Semester for Int. M.Sc. B.Ed. (3Yr). School Board has approved that syllabus of elective courses as such for the current batch and suggested some changes for future batches. <br> Detailed syllabus after incorporation of suggestions of School Board is placed at Annexure-5 [Page No. : 49-67] <br> Placed before the Academic Council for consideration <br> Resolution: Academic Council asked to modify the title of the elective courses with respect to the credits and insisted to provide more flexibility for the students to attend elective courses. |
|  | 17-9.3 | Elective Courses for M.Sc. Physics Programme <br> Department of Physics has proposed to offer new elective courses with 3 credits each approved by the School Board of School of Physical Sciences. <br> - Magnetic and Superconducting Properties of Solid (PHY 411) <br> - Introduction to Fourier Optics PHY (412)- <br> - Monte Carlo- Theory and Practice (PHY 413) <br> Detailed syllabus is placed at Annexure-6 [Page No. : 68-71] <br> Placed before the Academic Council for consideration <br> Resolution: Academic Council approved the proposed Elective Courses for M.Sc. Physics Programme. |


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|  | 17-9.4 | Courses for Winter Semester 2018- MOOCS and Electives <br> Proposal for registering the MOOCs and elective courses for the winter semester programme <br> The matter was put up before $50^{\text {th }}$ Deans' Committee Meeting. Deans' Committee approved the proposal and it was resolved that two hours per week (4:00 PM to 6:00 PM ) in a particular day in all the departments can be kept for elective and open elective to enable the students to move from one department to other department without any hindrance. All the Deans/HODs are requested to keep more elective courses/ MOOCs for the student's choice. Yoga and foreign language courses can also be considered as electives. <br> The matter is placed before Academic Council for consideration. <br> Resolution: Academic Council approved the Courses for Winter Semester 2018MOOCS and Electives. |
|  | 17-9.5 | M.A. Hindi (2 Yr) <br> Revised course structure for M.A Hindi programme approved by School Board of School of Humanities and Languages is placed for approval of Academic Council. <br> Annexure-7 [Page No. : 72-73] <br> Resolution: Academic Council approved the revised course structure for M.A. Hindi programme. |
|  | 17-9.6 | M.A. English (2 Yr) <br> Revised course structure for M.A English programme approved by School Board of School of Humanities and Languages is placed for approval of Academic Council. Annexure- 8 [Page No. : 74-75 <br> Resolution: Academic Council approved the revised course structure for M.A. English programme. |
|  | 17-9.7 | Shifting of courses of three Year Integrated M.Sc. B.Ed from one Semester to another <br> Deans' Committee vide agenda item no 53-5.2 recommended shifting of Internship (08 credits), Internship \& Teaching practices (12 credits) to 5th semester from 6th semester, Course named "Classroom Organization and Management" to 4th Semester from 6th Semester and Project/Dissertation in 6th Semester. Annexure-9 [Page No. : 76-82] <br> The Recommendation of Deans' Committee is placed before the Academic Council for approval. <br> Resolution: Academic Council approved the recommendation of Deans' Committee for shifting of courses of three Year Integrated M.Sc. B.Ed from one Semester to another. |
|  | 17-9.8 | M. Arch. (Sustainable Architecture) (2Yr) <br> Revised Course Curriculum and Program Structure for the M.Arch. (Sustainable Architecture) Programme and new electives courses with syllabus approved by the School Board of School of Architecture is placed for approval of Academic Council. Annexure-10 [Page No. : 83-85] <br> Resolution: Academic Council approved ther revised Course Curriculum and program structure for the M.Arch. (Sustainable Architecture). |
| 17-10.0 | Existing programme of studies, revision of syllabi |  |
|  | 17-10.1 | Minor Change in course title/credit hours in the scheme of M.S(2Yr) and |


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|  |  | Integrated M.Sc (5Yr) Chemistry Programmes <br> Minor change in course title/credit hours in the scheme of M.Sc. Programmes approved by School Board of School of Chemical Sciences and Pharmacy with credit distribution is placed for approval. These changes are applicable to current batches of M.Sc.(2Yr) and Integrated M.Sc.(5Yr) programme Annexure-11 [Page No. : 86-87] |
|  | 17-10.2 | M.Sc Environmental Science (2Yr) <br> Revised syllabus of M.Sc Environmental Science with credit distribution approved by School Board of School of Earth Sciences is placed for approval of Academic Council. Annexure-12 [Page No. : 88-89] |
|  | 17-10.3 | M.Sc Atmospheric Science (2Yr) <br> Revised syllabus of M.Sc Atmospheric Science with credit distribution approved by School Board of School of Earth Sciences is placed for approval of Academic Council. Annexure-13 [Page No. : 90-91] |
|  | 17-10.4 | Ph.D Environmental Science <br> Revised syllabus of Ph.D. Environmental Science with credit distribution approved by School Board of School of Earth Sciences is placed for approval of Academic Council. Annexure-14 [Page No. : 92] |
|  | 17-10.5 | M.Sc Biotechnology (2 Yr) <br> Change in course content of MSBT 302(Plant Molecular Biology and Plant Biotechnology) approved by School Board of School of Life Sciences is placed for approval of Academic Council. Annexure-15 [Page No. : 93] |
|  | 17-10.6 | M.Sc Mathematics (2Yr) and Int M.Sc. Mathematics (5Yr) <br> Revised syllabus of M.Sc Mathematics (2Yr) and Int M.Sc. Mathematics (5Yr) with credit distribution approved by School Board of School of School of Mathematics, Statistics and Computational Sciences is placed for approval of Academic Council. Annexure-16 [Page No. : 94-99] |
|  | 10-10.7 | Int M.Sc B.Ed Mathematics (3Yr) <br> Revised syllabus of Int M.Sc B.Ed Mathematics (3Yr) with credit distribution approved by School Board of School of School of Mathematics, Statistics and Computational Sciences is placed for approval of Academic Council. <br> Annexure-17 [Page No. : 100-101] |
|  | 17-10.8 | Ph.D Mathematics <br> Revised syllabus of Ph.D Mathematics with credit distribution approved by School Board of School of School of Mathematics, Statistics and Computational Sciences is placed for approval of Academic Council. Annexure-18[Page No. : 102] |
|  | 17-10.9 | M.Sc. Statistics (2Yr) and Int. M.Sc. Statistics (5Yr) <br> Revised syllabus of M.Sc Statistics with credit distribution approved by School Board of School of School of Mathematics, Statistics and Computational Sciences is placed for approval of Academic Council. Annexure-19 [Page No. : 103-105] |
|  | 17-10.10 | Ph.D Statistics <br> Revised syllabus of Ph.D Statistics with credit distribution approved by School Board of School of School of Mathematics, Statistics and Computational Sciences is placed for approval of Academic Council. Annexure-20 [Page No. : 106] |
|  | 17.10.11 | M.Tech Computer Science- Cyber Physical System (2Yr) <br> Revised syllabus of M.Tech Computer Science- Cyber Physical System with credit distribution approved by School Board of School of School of Mathematics, Statistics and Computational Sciences is placed for approval of Academic Council. Annexure-21 [Page No. : 107] |
|  | 17-10.12 | M.Sc. Computer Science (2Yr) <br> Revised syllabus of M.Sc. Computer Science with credit distribution approved by |




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|  |  | 2018-19 is placed Placed before the Academic Council for Approval. Academic Council approved the fee structure for 2018-19. 27 [Page No. 117-126] |
|  | 17-12.3 | Alumni contribution to be charged from each student from Academic Year 2018-19 <br> A meeting of the Committee duly constituted to frame the rules and regulations for the creation of Corpus Fund and its Utilization etc. was held on 17.04.2018. The Committee recommended that at the time of admissions, a sum of Rs. 1000/- may be charged from each student as Alumni contribution from Academic Year 2018-19 and the same may be distributed to Alumni Fund and Corpus Fund in the ratio of 50:50. <br> The matter was placed before the 54th Deans' committee for consideration and the he Deans' Committee recommended to Academic Council for consideration. <br> The matter was placed before Academic Council for consideration. <br> Resolution: Academic Council approved the alumni contribution of Rs. 1000 to be charged from each student from Academic Year 2018-19. |
|  | 17-12.4 | Approval for Dr. Sanjeev Vidhyarthi as Joint supervisor for Ms. Swagatika Mishra, PhD scholar, Dept. of Architecture. <br> Looking at the requirement of the research work and with the intent to ensure quality output it is proposed to consider Dr. Sanjeev Vidyarthi, Associate Professor of Urban Planning and Policy, Senior fellow of the Great Cities Institute at the University of Illinois, Chicago to be the Joint Supervisor for Ms. Swagatika Mishra, PhD Scholar, Dept. of Architecture. <br> This was placed for the consideration and approval of Academic Council. <br> Resolution: Academic Council resolved that Dr. Sanjeev Vidyarthi can be taken as as co-supervisor, however the process of recognition of Dr. Sanjeev Vidyarthi to supervise Doctoral Students can be initiated as per University norms. |
|  | 17-13.0 | Any other item(s) with permission of the Chair. |
|  | 17-13.1 | Ph.D. Course work for Ph.D. in Dept. of Education <br> Dept. of Education is going to start Ph.D. progarmme from Academic Session 2018-19. The final syllabus of Ph.D. Course work prepared by faculty of Education and evaluated by two subject experts is placed before Academic Council for consideration. <br> Annexure-28 [Page No. 127] <br> Resolution: Academic Council approved the proposal of Ph.D. Course work for Ph.D. in Dept. of Education. |
|  | 17-13.2 | Adoption of MOOCs through SWAYAM Platform at Central University of Rajasthan. <br> As per the directions received from UGC, University needs to adopt Various MOOCs through SWAYAM Platform. Also, each Faculty members/Department/ School is required to choose at least one MOOCs in the forthcoming Academic Session from the available list of courses as per the link provided by UGC. The Courses Chosen by the University are also need to be intimated to UGC. <br> Further, the University needs to upload the link for the TV Channels and Radio Jingles on the University website to popularize the MOOCs among students and faculty members. <br> The matter was placed before Academic Council for consideration. <br> Resolution: Academic Council approved the Adoption of MOOCs through SWAYAM Platform at Central University of Rajasthan and uploading the link for the TV Channels and Radio Jingles on the University website to popularize the MOOCs among students and faculty members. |
|  | 17-13.3 | To start undergraduate programmes and Integrated Dual Degree in Engineering from Academic Session 2018. <br> School of Engineering and Technology has proposed to start B.Tech Programme in |


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|  |  | Computer Science and Engineering, Electrical and Electronics Engineering and Bioengineering with an intake of 30 for each undergraduate programme and Integrated Dual Degree (IDD) in Computer Science with an Intake of 10 from Academic Session 2018. <br> In this regard, Course Structure duly recommended by a Committee through brainstorming session held on May 8, 2018 for the above said undergraduate engineering programmes and Integrated Dual Degree programme is placed before Academic Council for Consideration and approval. Annexure-29 [Page No. 128-159] <br> Resolution: Academic Council approved the starting of Undergraduate Programmes and Integrated Dual Degree in Engineering from Academic Session 2019-20, with an intake of 30 seats for each programme. University is asked to also explore the possibility to start these programmes from Academic Session 2018-19. |
|  | 17-13.4 | Approval for Dr. Srinivasa Gopalan Sampathkumar as Co-supervisor for Mr. Shubham Parashar, PhD Scholar, Dept. of Pharmacy. <br> Looking at the requirement of the research work and with the intent to ensure quality output, Board of Studies, Dept. of Pharmacy has assigned Dr. Srinivasa Gopalan Sampathkumar, Staff Scientist-V, National Institute of Immunology as Co-Supervisor for Mr. Shubham Parashar, PhD scholar, Dept. of Pharmacy along with Dr. Kaisar Raza, Assistant Professor, Dept. of Pharmacy as Supervisor. <br> This was placed for the Academic Council for ratification. <br> Resolution: School Board recommended outside Experts can be considered as Guide/Co-Guide with the condition that the External Guide should get approval as recognized Guide as per CURaj norms. |
|  | 17-13.5 | Course Structure for Int. M.Sc. - 5 Yr. Programme. <br> Revised Course Structure for Int. M.Sc.-5 Yr. programme for the first two semesters is placed before Academic Council for Consideration and approval. <br> Annexure-30 [Page No. 160-161] <br> Resolution: The recommendation of the Committee to revise the Course Structure of Integrated M.Sc. 5 Year programme was considered and revised structure as recommended by the committee for first two semesters is approved. |
|  | 17-13.6 | Revised syllabi/new course syllabi offered by the School of Social Sciences. <br> Revised syllabi/new course syllabi of following programs offered by the School of Social Sciences as approved in its School Board is placed before Academic Council for consideration and approval: <br> Annexure-31[Page No. 162-174] <br> 1. Integrated M.Sc. Economics <br> 2. M. A. Economics <br> 3. M.Sc B Ed. Economics <br> 4. PG Diploma in cultural informatics-New Course Syllabus <br> 5. M.A/ MSc Digital Society <br> 6. M.A Public Policy <br> 7. Masters of Social Work <br> 8. Ph.D. Course Work Curriculum in Social Work <br> Resolution: Academic Council approved the revised syllabi/new course syllabi of above mentioned programmes as proposed. For integrated programme as already resolved at 17-3.5. |
|  | 17-13.7 | Appropriate Grade Conversion between IIIT-Bangalore and Central University of Rajasthan <br> IIIT-Bangalore follows the Four 4 Point Grade Scale System and Central University of Rajasthan follows 10 Points Grade System. Coordinator, Digital Society Progarmme has submitted that the first Semester Students of M.Sc/M.A in Digital Society Programme will |


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|  |  | be given the opportunity to study in IIIT-Bangalore. The COE of the Central University may be authorized for appropriate conversion of the Grade received from IIIT-Bangalore in sync with Grading System of Central University of Rajasthan. <br> It was placed before Academic Council for consideration and approval. <br> Resolution: Academic council approved the conversion of grade between IIITBangalore and Central University of Rajasthan and authorized Controller of Examination for the same. |
|  | 17-13.7 | Registration of Research Scholar for Academic Session 2016-17 <br> Registration of Research Scholar for Academic Session 2016-17 is placed before Academic Council for approval. <br> Annexure-32 [Page No. 175] <br> Resolution: Academic Council approved the Registration of Research Scholar of Academic Session 2016-17. |
|  | 17-13.8 | To start a course of Studies on India's Intellectual Tradition <br> Professor Chandarkala Padia external member suggested that University should start course of Studies on India's Intellectual Tradition. <br> Resolution: Academic council welcomed the proposal and resolved to start a course on India Intellectual Tradition as an open elective course. A three member committee with Prof. Neeraj Gupta as Chairman and two more members to be opted by him may design the course structure and syllabus etc. |

# CENTRAL UNIVERSITY OF RAJASTHAN 



Minutes
of
The Eighteenth Meeting of the Academic Council

| Meeting No. | $:$ | Eighteenth $\left(18^{\text {th }}\right)$ |
| :--- | :--- | :--- |
| Venue | $:$ | Meeting Room <br> First Floor of Administrative Building <br> Central University of Rajasthan, |
| Bate |  | Bandarsindri, NH-8, <br> Tehsil - Kishangarh-305817 <br> Dist. -Ajmer (Rajasthan) |
| Time | $:$ | Thursday, $1^{\text {st }}$ November, 2018 |

Minutes of the $18^{\text {th }}$ Meeting of the Academic Council held on Thursday, 1st November, 2018 at 02:30 PM in the Meeting Room, first floor of Administrative Building, Central University of Rajasthan, Bandarsindri, NH8, Tehsil-Kishangarh, District-Ajmer (Rajasthan)

The following members were present:

| 1. | Prof. Arun K Pujari | : | Chairman |
| :---: | :---: | :---: | :---: |
| 2. | Prof. S. N. Ambedkar | : | Member |
| 3. | Prof. M. D. Shrimali |  | Member |
| 4. | Prof. D. C. Sharma | . | Member |
| 5. | Prof. Pradeep Verma | . | Member |
| 6. | Prof. Vipin Kumar |  | Member |
| 7. | Dr. N. Lakshmi Aiyar |  | Member |
| 8. | Ar. Ritu B Rai |  | Member |
| 9. | Dr. Praveen Sahu |  | Member |
| 10. | Dr. Laxmi Kant Sharma | : | Member |
| 11. | Dr. Ajit Kumar Patra |  | Member |
| 12. | Prof. R. T. Pardasani | : | Member |
| 13. | Prof. Supriya Agarwal |  | Member |
| 14. | Prof. M. Krishnan |  | Member |
| 15. | Prof. Someshwar Das | : | Member |
| 16. | Prof. J. K. Prajapat | : | Member |
| 17. | Prof. M. R. P. Singh | : | Member |
| 18. | Dr. S. Kandasamy | . | Member |
| 19. | Dr. Pankaj Goyal | : | Member |
| 20. | Dr. Chandi Charan Mandal | : | Member |
| 21. | Dr. Anjali Sharma | : | Member |
| 22. | Dr. Subhasis Bhadra |  | Member |
| 23. | Dr. Manas Kumar Patra | : | Member |
| 24. | Dr. Chandra Shekhar Gahan | : | Member |
| 25. | Prof. A. K. Gupta | : | Member |
| 26. | Prof. Neeraj Gupta | : | Member |
| 27. | Dr. Pawan K. Dadheech | : | Member |
| 28. | Dr. Jitendra Kumar | : | Member |
| 29. | Dr. Jagdish Ulhas Jadhav | : | Member |
| 30. | Dr. Bhumika Sharma | : | Member |
| 31. | Dr. Tulsi Giri Goswami | : | Member |
| 32. | Dr. Sanjay Kumar |  | Member |
| 33. | Prof. R. Prasad |  | Member |
| 34. | Prof. K.C. Sharma |  | Member |
| 35. | Prof. Chandrakala Padia |  | Member |
| 36. | Prof. Aparna Rayaprol |  | Member |
| 37. | Dr. Utpal Kumar Debnath |  | Member |
| 38. | Dr. Vijaykumar M. |  | Member |
| 39. | Ms. Hemlata Manglani | : | Member |
| 40. | Dr. Nagaraju Aitha | : | Member |
| 41. | Dr. Deepesh Bhati | . | Member |
| 42. | Dr. Pranta Pratik Patnaik | : | Member |
| 43. | Dr. Gyana Ranjan Panda | : | Member |
| 44. | Sh. K.V.S. Kameswara Rao | : | Ex-officio Secretary |

Special Invitee:

1. Dr. Devesh Sharma

Leave of absence was granted to:

1. Prof. Maithili Sharan

Member

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|  | $18-4.1$ | Amendment in Clause 22 of Ordinance 3. | $18-4.2$ | | Amendment in Ordinance 9 under "SUBMISSION OF THESIS". |
| :--- |

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| 18-1.0 | Welcome by Chairman, Academic Council. <br> Chairman welcomed all the members present including the special invitees. New members were also introduced later. The Chairman apprised the members about the VI Rajasthan Science Congress; an annual event organized successfully by Central University of Rajasthan and congratulated the faculty involved in the task. Prof. Ashutosh Sharma, Secretary DST, Govt. of India inaugurated the Rajasthan Science Congress where the scientific community of Rajasthan as well as of other states was present. To improve the employability enhancement of the graduating students of CURaj, MoU was signed with HireMee - a free online assessment and placement assistance platform. The Chairman also apprised that the Teaching Learning Centre at CURaj organized a workshop on "UGC quality mandate in HEIs." The members were also informed about the Dignitaries who visited the University, International visits by faculty, Awards / Prizes won by faculty, Cultural activities, Projects and Consultancy grants, Awards / Prizes won by students, Other academic / co-curricular / extra-curricular achievement of the students. They were also informed that many of the Research Scholars of the University are also getting an opportunity to visit abroad. In terms of number of publications, CURaj scored the second highest and he expressed that by continuing the hard work, the next level is to be attained. |  |  |  |
| 18-2.0 | 18-2.1 | Confirmation of the Minutes of the $17^{\text {th }}$ Meeting of the Academic Council held on Friday, 11th May, 2018 at 3:00 PM. (Annexure-A) [Page No. : 14 to 37] |  |  |
|  |  | Resolution: Confirmed |  |  |
|  | 18-2.2 | Action Taken Reports |  |  |
|  |  | Item No. | Particulars | Action Taken |
|  |  | 17-3.0 | Semester Registration Process |  |
|  |  | 17-3.1 | Payment of Fee by the Students and Ph.D. Scholars for Semester Registration | As per the approval of the AC, it has been implemented. |
|  |  | 17-3.2 | Semester Registration Card. | As per the approval of the AC, the procedure of Semester Registration for continuation in every semester has been implemented. |
|  |  | 17-4.0 | Admission -2018 |  |
|  |  | 17-4.1 | The list of courses, the minimum eligibility and Intakee of the courses for Admission 2018 | The $A C$ ratified the list of courses, the minimum eligibility and intake of the courses for Admission 2018. |
|  |  | 17-4.2 | Increase in the number of Seats for admission in M.Sc (Atmospheric Science) | As per the approval of AC, the students were admitted in the Department of Atmospheric Science as per the increase in the number of seats. |
|  |  | 17-4.3 | Increase in the number of Seats for admission in M.Sc. Computer Science (Big Data Analytics) | As per the approval of $A C$, the students were admitted in the Department of Computer Science (Big Data Analytics) as per the increase in the number of seats. |
|  |  | 17-4.4 | To Accept students having High School Diploma issued by Northwest Accreditation Commission (NW AC), USA for courses run by the University. | As approved by $A C$, the NW AC was informed accordingly. |
|  |  | 17-4.5 | Relaxation to GPAT qualified candidates for admission to Ph.D programme in Pharmacy | As approved by $A C$, relaxation of $5 \%$ to GPAT qualified candidates in CUCET qualifying marks has been implemented. |
|  |  | 17-4.6 | CUCET-2018 | CUCET-2018 was successfully conducted and the new courses as approved have been implemented. |


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|  |  | 17-5.0 | Evaluation \& Examination |  |
|  |  | 17-5.1 | Promotion from odd semester to even semester for the students. | The AC ratified the matter of Promotion from odd semester to even semester for the students of batch 2017-18 based on the request by the students and the same has been implemented. |
|  |  | 17-5.2 | Re-registration of back papers | The $A C$ ratified the matter and resolved that all students will be allowed to clear the back papers at the earliest opportunity whenever available with the Department. It has been implemented. |
|  |  | 17-5.3 | Explicit list of names of professional programmes | As resolved in AC, professional courses have been identified and accordingly the passing marks have been decided and implemented. |
|  |  | 17-5.4 | Condonation of Attendance | In very exceptional cases, as approved, the condonation of attendance of the students has been implemented. |
|  |  | 17-6.0 | New Schools |  |
|  |  | 17-6.1 | Establishment of School of Sports Sciences | The School has been established with the approved positions and the fee structure. |
|  |  | 17-7.0 | New Departments |  |
|  |  | 17-7.1 | Establishment of Department of Society Technology Interface | The Department has been established with the approved positions and the fee structure. |
|  |  | 17-7.2 | Establishment of Department of Data Science and Analytics | The Department has been established with the approved positions and the fee structure. |
|  |  | 17-8.0 | New programme of studies, its Course Structure and syllabi |  |
|  |  | 17-8.1 | To Start 2 Yr M.Ed. and B.Ed. programme in School of Education | The programme is to be started and the implementation process is on. The coordinator has been identified. |
|  |  | 17-8.2 | To start B.Tech. in Bio-engineering under School of Engineering \& Technology. | As approved by $A C$ to start the programme from the session 2019-20, the process is on. |
|  |  | 17-9.0 | Existing programme of studies, Course Structure (New Courses) |  |
|  |  | 17-9.1 | Inclusion of new elective course "Cloud Computing" to the M. Tech CSE curriculum from the semester Jan-May, 2018. | New Elective course "Cloud Computing" to the $M$. Tech CSE curriculum is included from the semester Jan-May, 2018. |
|  |  | 17-9.2 | Elective Courses for M.Sc. Chemistry Programmes | As approved by $A C$, the title of the elective courses has been modified with respect to the credits and efforts are made to provide more flexibility for the students to attend elective courses. |
|  |  | 17-9.3 | Elective Courses for M.Sc. Pbysics Programme | The elective courses as recommended by the School Board and as approved by AC have been implemented. |


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|  |  | 17-9.4 | Courses for Winter Semester 2018MOOCS and Electives | Academic Council approved the Courses of Winter Semester 2018-MOOCs and Electives. It has been informed by the SWAYAM Cell Coordinator Dr. Umesh Gupta that the list of new courses is generally uploaded to the UGC MOOCs website in the month of May/June (for the semester starting from the July) and in the month of November / December (for the semester starting from January or winter session). The SW AY AM cell will circulate details and web-links of all the courses starting from January 2019 semester case once the UGC-MOOCs/SWAYAM website uploads the same in the month of November 2018, so that the departmental faculty/student may adopt the interested courses/students in their departments for winter season. |
|  |  | 17-9.5 | M.A. Hindi (2 Yr) | Revised course structure bas been approved and implemented. |
|  |  | 17-9.6 | M.A. English (2 Yr) | Revised course structure has been approved and implemented. |
|  |  | 17-9.7 | Shifting of courses of three Year Integrated M.Sc. B.Ed from one Semester to another | Revised syllabus has been approved and implemented. |
|  |  | 17-9.8 | M. Arch. (Sustainable Architecture) (2 Yr) | Revised course curriculum and programme structure bas been approved and implemented. |
|  |  | 17-10.0 | Existing programme of studies, | sion of syllabi |
|  |  | 17-10.1 | Minor Change in course title/credit hours in the scheme of M.S $(2 \mathrm{Yr})$ and Integrated M.Sc (5 Yr) Chemistry Programmes | Revised syllabus has been approved and implemented. |
|  |  | 17-10.2 | M. Sc Environmental Science (2 Yr) | Revised syllabus has been approved and implemented. |
|  |  | 17-10.3 | M.Sc Atmospheric Science (2 Yr) | Revised syllabus has been approved and implemented. |
|  |  | 17-10.4 | Ph.D Environmental Science | Revised syllabus has been approved and implemented. |
|  |  | 17-10.5 | M.Sc Biotechnology (2 Yr) | Revised syllabus has been approved and implemented. |
|  |  | 17-10.6 | M.Sc Mathematics (2Yr) and Int M.Sc. Mathematics ( 5 Yr ) | Revised syllabus has been approved and implemented. |
|  |  | 17-10.7 | Int M.Sc B.Ed Mathematics (3 Yr) | Revised syllabus has been approved and implemented. |
|  |  | 17-10.8 | Ph.D Mathematics | Revised syllabus has been approved and implemented. |
|  |  | 17-10.9 | M.Sc. Statistics (2 Yr) and Int. M.Sc. Statistics (5 Yr) | The syllabus was approved but there is a requirement of slight deviation which is put up as a separate agenda item. |


| Item No. | Particulars |  |  |  |
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|  |  | 17-10.10 | Ph.D Statistics | Revised syllabus has been approved and implemented. |
|  |  | 17-10.11 | M.Tech Computer Science- Cyber Pbysical System (2 Yr) | Revised syllabus has been approved and implemented. |
|  |  | 17-10.12 | M.Sc. Computer Science (2 Yr) | Revised syllabus has been approved and implemented. |
|  |  | 17-10.13 | M.Sc. Computer Science - Big Data Analytics | Revised syllabus has been approved and implemented. |
|  |  | 17-10.14 | Ph.D. Computer Science | Revised syllabus has been approved and implemented. |
|  |  | 17-10.15 | M.Sc. Physics( 2 Yr ) | Revised syllabus has been approved and implemented. |
|  |  | 17-10.16 | M.Com (2 Yr) | Revised syllabus has been approved and implemented. |
|  |  | 17-11.0 | Policy Matters |  |
|  |  | 17-11.1 | Proposal for considering the equivalence of the training programs, organized by TLC@CURaj, (under PMMMNMTT) to orientation and refresher courses of UGC-HRDC as well as for promotion under CAS and for API score. | $A C$ approved and the same has been implemented. |
|  |  | 17-12.0 | Other Matters |  |
|  |  | 17-12.1 | Admission-2018 | The admission to following courses: <br> 1. MSc (Sports Biochemistry) with 10 seats <br> 2. MSc (Exercise/Sports Physiology) with 10 seats <br> 3. MSc (Sports Nutrition) with 10 seats <br> 4. MA (Sport Psychology) with 10 seats. <br> 5. B. Voc. with 50 Seats <br> 6. PG diploma in Cultural Informatics with 10 seats <br> as approved has been implemented. |
|  |  | 17-12.2 | Fee Structure for various existing programmes/new programmes being run in the University for Academic Session 2018-19 | The same has been implemented as per he approval. |
|  |  | 17-12.3 | Alumni contribution to be charged from each student from Academic Year 201819 | The Alumni contribution of Rs 1000 to be charged from each student from Academic Year 2018-19 as approved has been implemented. |
|  |  | 17-12.4 | Approval for Dr. Sanjeev Vidhyarthi as Joint supervisor for Ms. Swagatika Mishra, PhD scholar, Dept. of Architecture. | The necessary order has been issued as per the approval. |
|  |  | 17-13.0 | Any other item(s) with permission of the Chair. |  |
|  |  | 17-13.1 | Ph.D. Course work for Ph.D. in Dept. of Education | As per approval, the same will be included in CUCET 2019. |



| Item No. | Particulars |  |
| :---: | :---: | :---: |
| 18-4.0 | Evaluation \& Examination |  |
|  | 18-4.1 | Amendment in Clause 22 of Ordinance 3. <br> 59th Deans' Committee recommendation for amendment in Clause 22 of Ordinance 3 is as follows: <br> 22. Ranking of Students and Award of Gold Medal <br> 22.1. A merit list of the student for every programme of study shall be prepared on the basis of the FGPA calculated for the award of the certificate/diploma/degree. <br> 22.2. The first rank holder as per the merit list (22.1) in each Programme of Study shall be awarded the Gold Medal and Certificate of Merit, provided that such first rank holder <br> a. should have been first rank holder with minimum 7 CGPA/FGPA in aggregate of all courses; and <br> b. should have passed all the Semesters of a Programme of Study without any break; and <br> c. should have passed all the Courses in a Programme of Study without any back log meaning thereby that he/she has never been awarded "F" or "Dt" grade in any course; and <br> d. should have exhibited good conduct and character during the period of the Programme of Study and <br> e. should not have faced any censure / punishment for any indiscipline during the programme of Study. <br> 22.3. In the event, if the first rank holder in the merit list does not qualify as per Clause 22.2, no Gold Medal shall be awarded. <br> 22.4. In case of tie (having the same CGPA/FGPA) between two or among more students <br> a. the student with maximum number of times he/she obtained highest SGPA will be ranked in higher position in the merit list. <br> b. in case of not resolved by (a), the rank will be decided on the basis of marks obtained. <br> Relevant text regarding Clause 22 of Ordinance 3 is placed as Annexure-D [Page No. : 128]. <br> The matter was placed before the Academic Council for consideration. <br> Resolution: Academic Council approved the recommendation of the Deans' Committee regarding amendment in Clause 22 of Ordinance 3. |
|  | 18-4.2 | Amendment in Ordinance 9 under "SUBMISSION OF THESIS." <br> While submitting the copies of Ph.D. thesis, it is felt that the submission of copies of Ph.D. thesis may be made on hard bound copies in place of spiral bound copies to enable the external examiner to go through the thesis in more presentable and intact manner to reduce the possibility of pages getting teared. Looking into that, it is proposed that a Scholar shall submit hard bound Ph.D. copies instead of spiral bound copies to the office of Dean (Research). <br> Relevant text regarding Ordinance 9 under "SUBMISSION OF THESIS" is placed as Annexure-E [Page No. : 129]. <br> The matter was placed before the Academic Council for consideration. <br> Resolution: Academic Council approved the proposal regarding amendment in Ordinance 9 under "SUBMISSION OF THESIS and recommended to use the word 'stitched bound' instead of ' hard bound'. |
|  | 18-4.3 | To consider incorporation of different aspects of the Massive Online Open Courses (MOOCs) in the Semester Grade Sheet. <br> In compliance to the MHRD directives and as per resolution of Academic Council Meeting, the MOOC courses have been introduced from the current Semester of the University curriculum. MOOC courses are delivered through different MOOC Provider like NPTEL, SWAYAM, NMEICT etc. with different nomenclature of MOOC courses, different credits, different grades and being conducted by different National Institutions. <br> Therefore, while incorporating the MOOC courses with its different variables, it is felt that |



| Item No. | Particulars |  |
| :---: | :---: | :---: |
|  | 18-5.2 | Approval of the course structure and detailed syllabus of four M.Sc. Programmes in the School of Sports Science. <br> School of Sports Science has proposed the course structure and detailed syllabus of four M.Sc. Programmes namely: <br> 1. M.Sc. Sports Psychology <br> 2. M.Sc. Sports Biochemistry <br> 3. M.Sc. Sports Nutrition <br> 4. M.A./M.Sc. Sports Physiology <br> Course structure and detailed syllabus will be placed on table as Annexure-H [Page No. : 135 to 195]. <br> The matter was placed before the Academic Council for consideration but the reservation made by one of the expert members of the School Board will be considered by Vice Chancellor in due course of time. <br> Resolution: Academic Council approved the proposed syllabus and authorized the Vice Chancellor to sort out the reservation made by one of the expert members of the School Board in due course of time. |
|  | 18-5.3 | Implementation of the new syllabus of Integrated M.Sc. Statistics (VII - X Semester) for existing VII Semester students. <br> The department of Statistics requested to implement new integrated M. Sc. syllabus (approved in 17th Academic council) for the existing Integrated M.Sc. batch (2015) and upcoming Integrated M.Sc batches (2016 and 2017). <br> The exact deviation for old to new in the approved Integrated M.Sc syllabus are as follows: <br> 1. VII Semester: Students are learning a course on "MST 105: R: Statistical Programming Language", which is a repetition, as the course is taught in course "MSTA 106: Practical". Hence the department feels that there is no need of this course. <br> 2. VIII Semester: In old syllabus, Design of Experiment-II is offered as an elective, whereas in the new syllabus it made compulsory. Further, elective-II in old syllabus is offered from other department, keeping actuarial science as an elective in view. However, in the new syllabus this has been removed. <br> 3. IX Semester: MSTA 301: Decision Theory and Non parametric is offered as an elective in the new syllabus, whereas MST 303: Multivariate Analysis is offered in IV Semester as compulsory syllabus in new syllabus. We revise the list of electives offered in the IX semester. <br> 4. X Semester: MSTA 401 National Development Statistics is offered as an elective in the IX semester and instead of two electives in the old syllabus, we offer only one elective in last Semester. <br> Old and new scheme for (VII - X Semester) is placed at Annexure-I [Page No. : 196 to 198] <br> Placed before the Academic Council for consideration. <br> Resolution: Academic Council approved the proposed changes and implementation of the new syllabus of Integrated M.Sc. Statistics (VII - X Semester) for existing VII Semester students. |
| 18-6.0 | Other Matters |  |
|  | 18-6.1 | Academic Council member to be co-opted in place of Prof. Ramakrishna Ramaswamy, under Statute 13(1)(viii). <br> Prof. Ramakrishna Ramaswamy has expressed his inability to continue as Member of the Academic Council due to his prior commitments. A new member is to be co-opted preferably from an academic area which is not represented as of now under Statute 13(1)(viii) which says "Six persons not in the service of the university co-opted by the Academic Council for their special knowledge in education progress and development." <br> Placed before the Academic Council for consideration. |


| Item No. | Particulars |  |
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|  |  | $\begin{array}{l}\text { Resolution: Academic Council deliberated the matter and recommended that the } \\ \text { suggested names preferably from an academic area which is not represented may be } \\ \text { sent to the Vice Chancellor which may be circulated to all members and after the } \\ \text { consent, the name may be finalized. }\end{array}$ |
| $\mathbf{1 8 - 6 . 2}$ | $\begin{array}{l}\text { Adoption of UGC Regulations on minimum qualifications for appointment of } \\ \text { teachers and other Academic staff for the maintenance of standards in Higher } \\ \text { Education, 2018. } \\ \text { The UGC has notified UGC Regulations on minimum qualifications for appointment of }\end{array}$ |  |
| teachers and other academic staff in universities and colleges and measures for the |  |  |
| maintenance of standards in Higher Education, 2018 in supersession of the "UGC |  |  |
| Regulations on Minimum qualifications for Appointment of Teachers and other Academic |  |  |
| Staff in Universities and Colleges and Measures for the Maintenance of Standards in Higher |  |  |
| Education 2010" (Regulation No.F.3-1/2009 dated 30th June, 2010). |  |  |
| Placed before the Academic Council for adoption and subsequent implementation for |  |  |
| University Employees (Annexure-J) [Page No. : 199 to 253] |  |  |
| Resolution: Academic Council approved the adoption of UGC Regulations and its |  |  |
| and subsequent implementation. |  |  |$\}$


| Item No. | Particulars |
| :---: | :---: | :--- |
| 18-7.3 | Approval of the course structure of III and IV Semester Integrated M.Sc. (5 year) <br> programme. <br> The revised course structure for the Integrated M.Sc. (5 Years) programme is adopted from <br> the session July 2018. In the 17th academic council meeting, course structure of first two <br> semesters (I \& II) was approved. The course structure of III and IV Semester Integrated <br> M.Sc. (5 year) programme is placed before the Academic Council as Annexure-N [Page <br> No. : 261 to 262]. <br> Placed before the Academic Council for consideration. <br> Resolution: Academic Council resolved that the Vice Chancellor is authorized to <br> approve the syllabus and other aspects on behalf of the Academic Council. |
| $18-7.4$ | Approval for Course Code for Pre-Ph.D. Course work and Approval for Evaluation <br> /Assessment process for ED-501, Internship (8 Credits) and ED-502, Internship and <br> Teaching Practice (12 Credits), V Semester of Integrated M.Sc. B.Ed. Programme <br> (2018 onwards) in School of Education. <br> Detailed syllabus is placed at Annexure-O [Page No. : 263 to 270] <br> Resolution: Academic Council resolved that the Vice Chancellor is authorized to <br> approve the syllabus and other aspects on behalf of the Academic Council. |
| $18-7.5$ | Approval of two courses: Algebra-I (04 Credits), Algebra-II (04 Credits) in <br> Department of Mathematics for Pre-Ph.D. Coursework. <br> Detailed syllabus is placed at Annexure-P [Page No. : 271 to 272] <br> Resolution: Academic Council resolved that the Vice Chancellor is authorized to <br> approve the syllabus and other aspects on behalf of the Academic Council. |

Meeting ended with thanks to the Chair

# CENTRAL UNIVERSITY OF RAJASTHAN 



Minutes
of

The Seventeenth Meeting of the Academic Council

| Meeting No. | $:$ | Seventeenth $\left(17^{\text {th }}\right)$ |
| :--- | :--- | :--- |
| Venue | $:$ | Meeting Room <br> First Floor of Administrative Building <br> Central University of Rajasthan, <br> Bandarsindri, NH-8, <br> Tehsil - Kishangarh-305817 <br> Dist. -Ajmer (Rajasthan) |
| Date | $:$ | Friday, $11^{\text {th }}$ May, 2018 |
| Time | $:$ | $03: 00$ P.M. |

Minutes of the $17^{\text {th }}$ Meeting of the Academic Council held on $11^{\text {th }}$ May, 2018 at 03:00 PM in the Meeting Room first floor of Administrative Building, Central University of Rajasthan, Bandarsindri, NH-8, Tehsil Kishangarh, District - Ajmer, (Rajasthan)

The following members were present:

1. Prof. Arun K Pujari : Chairman
2. Prof. K. C. Sharma : Member
3. Prof. ChandrakalaPadia : Member
4. Prof. A. K. Gupta : Member
5. Prof. Neeraj Gupta : Member
6. Prof. Supriya Agarwal : Member
7. Prof. Pradeep Verma, Dean : Member
8. Prof. S.N. Ambedkar, Dean : Member
9. Prof. Manish Shrimali, Dean : Member
10. Prof. D. C. Sharma, Dean : Member
11. Prof. M. R. P. Singh, Dean : Member
12. Prof. Vipin Kumar, Dean : Member
13. Dr. Laxmi Kant Sharma : Member
14. Prof. Maithili Sharan : Member
15. Dr. N. Lakshmi Aiyar, Dean : Member
16. Dr. Pawan Kumar Dadheech : Member
17. Dr. Jitendra Kumar : Member
18. Ms. Ritu B. Rai, Dean : Member
19. Dr. Pankaj Goyal : Member
20. Dr. JagdishJadhav : Member
21. Dr. S.Kandasamy : Member
22. Dr. Praveen Sahu : Member
23. Dr. Chandi C. Mandal : Member
24. Dr. Subhasis Bhadra : Member
25. Dr. Arun Kumar Giri : Member
26. Dr. Anjali Sharma : Member
27. Dr. Bhumika Sharma : Member
28. Dr. Sanjay Kumar : Member
29. Dr. Ajit Patra : Member
30. Dr. TulsiGiriGoswami : Member
31. Dr. Vijay Kumar M. : Member
32. Dr. Utpal Debnath : Member
33. Shri K.V.S.Kameswara Rao : Secretary

Spcial Invitee:

1. Prof. M. Krishnan
2. Prof. Someshwar Das
3. Dr. Chandar Sekhar Gahan
4. Dr.Raghu Chitta
5. Dr. Nagaraju Aitha
6. Dr. Pranta Pratik Patnaik
7. Dr.Gyana Ranjan Panda
8. Dr. Chhabi Rani Panigrahi
9. Mr. Ravi Saharan
10. Mr. Atul Nag

Leave of absence was granted to:

1. Prof. R. Prasad : Member
2. Prof. Ram Ramaswamy : Member
3. Prof. Maithili Sharan : Member
4. Prof. Aparna Rayaprol : Member
5. Prof. J.K. Prajapat : Member
6. Dr. JogeswarPanigrahi : Member

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| Item <br> No. | Particulars |  |
| :---: | :--- | :--- |
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## DETAILED AGENDA

| Item No. | Particulars |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 17-1.0 | Welcome by Chairman, Academic Council. <br> Chairman welcomed all the members present and introduced all the new Members and Special Invitee Members. The Chairman apprised the members about the presentation of all Central Universities established in 2009 before the visitor on $06 / 01 / 2018$ and presentation of IOE given on 23/04/2018. Central University of Rajasthan placed top among the Central Universities started after 2009 with respect to Publications, Infrastructure facilities and filling of the Statutory positions. Considering among all the Central Universities, Central University of Rajasthan is ranked within first 5-6. Further he mentioned that information on various activities of the University such as International collaboration by the faculty member is not available in the application submitted to various agencies. New Digital Learning and Monitoring cell is going to be established consisting of faculty members to look into the collection of various activities of the University including preparation of NAAC, University Annual Reports etc., and advertisement for recruitment of Information Scientist has been released. University is going to sign a MoU with Indira Gandhi National Centre for the Arts to start new programme. The Chairman also apprised that 5 students of Big Data Analytics programme got placement in TCS, and INSA young scientist award won by the faculty of CURaj. |  |  |  |
| 17-2.0 | 17-2.1 | Confirmation of the Minutes of the $16^{\text {th }}$ Meeting of the Academic Council held on Sunday, November 12, 2017. <br> (Annexure-1) [Page No. : 19-32] |  |  |
|  |  | Resolution: Confirmed |  |  |
|  | 17-2.2 | Action Taken Reports |  |  |
|  |  | Item No. | Particulars | Action Taken |
|  |  | 16-3.0 | Convocation |  |
|  |  | 16-3.1 | 4th Convocation Proceedings | Convocation was held on $13^{\text {th }}$ November, 2017. 446 students got the degrees in the Convocation. |
|  |  | 16-3.2 | Award of Degrees during the Convocation | Degrees were awarded during $4^{\text {th }}$ Convocation. |
|  |  | 16-3.3 | Approval to award the Gold Medal and Certificate of Merit to the toppers of all the programmes | Gold Medals and Certificates of Merit were awarded during $4^{\text {th }}$ Convocation |
|  |  | 16-3.4 | Approval to confer Degree Certificates to the successul students during the fourth Convocation of the University | Conferred the Degree Certificates during the $4^{\text {th }}$ Convocation. |
|  |  | 16-4.0 | Policy Matters |  |
|  |  | 16-4.1 | To establish Innovation Cell at Central University of Rajasthan. | Innovation Cell was establisbed. Prof. Someshwar Das is in-charge of Innovation Cell. |
|  |  | 16-4.2 | Alternative arrangement of an administrative supervisor/ another supervisor in the absence of a research supervisor | In the absence of Research Supervisor, HoD or any other teacher nominated by HoD will be appointed as the administrative supervisor. |
|  |  | 16-4.3 | Central University of Rajasthan Armstrong award for Vocational Education | The First two batches conferred the Armstrong award during the Fourth Convocation of the University. |
|  |  | 16-4.4 | Collaborating with Public Affair Centre, Bangalore | MoU with Public Affair Centre, Bansalore bas been signed. |
|  |  | 16-4.5 | Collaborating with Institute of Development Studies (IDS), Jaipur. | Dr. Ganesh Kawardia Prof. of Economics has been appointed recently and he will look into the feasibility of collaboration and |



| Item No. | Particulars |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 16-9.0 | Admissions |  |
|  |  | 16-9.1 | CUCET-2018 | CUCET-2018 has been successfully conducted on $28^{\text {th }}$ and 29th April, 2018. |
|  |  | 16-10.0 | Other Matters |  |
|  |  | 16-10.1 | Institute of Eminence | University applied for Institute or Eminence and given presentation on 23/04/2018. |
|  |  | 16-10.2 | Constitution of Student Council | Student Council constituted for Academic Session 2017-18. |
|  |  | 16-10.3 | Confirmation of Newly Constituted School Boards and Board of Studies | Newly Constituted School Boards and Board of Studies were confirmed. |
|  |  | 16-11.0 | Any other item(s) with permission of the Chair. |  |
|  |  | 16-11.1 | Syllabus revision of Dept. of Statistics. | Revised syllabus of Dept. of Statistics was approved and implemented. |
|  |  | Resolution: Noted |  |  |
| 17-3.0 | Semester Registration Process |  |  |  |
|  | 17.3.1 | Payment of Fee by the Students and Ph.D. Scholars for Semester Registration <br> To register for a semester a student shall pay fee online during the vacations before commencement of the semester. As it is a cashless process, students can pay the requisite fee as per their convenience even before returning to the campus from vacations. The schedule for payment of online fee for the Semester is as follows: <br> *The exact date will be intimated in every semester. <br> Name of the default students and Research Scholars will be notified and removed from the roll of the University and registration of default Research Scholars will be cancelled. If a student of PG programme is requesting to pay the fee after last date (which is with late fee of $25 \%$ ), she/he has to pay re-admission fee apart from the semester fee and in case of Research Scholars, they have to re-register themselves by paying the registration fee fixed by the University time to time. <br> Placed before the Academic Council for consideration <br> Resolution: Payment of semester fee, semester registration, Re-admission and Reregistration for default students as described above is approved. It is further resolved that the list of default Students and Research Scholars should be intimated to Dean of the respective Schools for further action by the Academic Section. Academic Council also resolved that DRC of all Research Scholar should be conducted before the end of each semester and list of Research Scholars recommended by the DRC for continuation of registration should be forwarded to Dean (Academic) office by the respective Deans for further process. |  |  |


| Item <br> No. | Particulars |  |
| :---: | :---: | :---: |
|  | 17-3.2 | Semester Registration Card. <br> University has framed the norms to issue semester Registration Card to Students to indicate that student is a registered student of the respective semester. Students can get their Semester Registration card from the Office of the Dean Academics by showing their ID card and proof of confirmation of payment of fees for the semester. <br> The matter was placed before the $50^{\text {th }}$ Deans' Committee for consideration. The Deans' Committee approved the proposal. Academics Office has started distributing Semester Registration Cards from January 2018 Semester onwards. <br> The matter was placed to Academic Council to approve the procedure for continuation in every semester henceforth. <br> Resolution: Academic Council approved the procedure of Semester Registration for continuation in every semester henceforth. Semester registration cards are to be issued in each semester. ID-cards should also be issued on admission. |
| 17-4.0 | Admission -2018 |  |
|  | 17-4.1 | The list of courses, the minimum eligibility and Intake of the courses for Admission 2018 <br> The list of courses, the minimum eligibility criterion and intake of the courses for Admissions in various programmes of Academic Session 2018-19 is placed before Academic Council for consideration. Also it is proposed to authorize Vice- Chancellor to revise intake for Ph.D admission if required. (Annexure-2) [Page No. : 33-42 ] <br> Resolution: Academic Council ratified the list of courses, the minimum eligibility and Intake of the courses for Admission 2018 and also authorized ViceChancellor to revise the intake of $\mathrm{Ph} . \mathrm{D}$ on request basis. |
|  | 17-4.2 | Increase in the number of Seats for admission in M.Sc (Atmospheric Science) <br> In view of large response of students in CUCET-2018 for admission into M.Sc. (Atmospheric Science) programme, Coordinator, Department of Atmospheric Science has requested to Increase the number of seats from 10 to 15 . This would also fulfill the requirement for qualifying the student for INSPIRE fellowship, for which the eligibility is based on the top rank of the student in a class of at least12 students. <br> Placed before the Academic Council for consideration. <br> Resolution: Academic Council approved the increase in number of seats in M.Sc (Atmospheric Science) from 10 to 15. |
|  | 17-4.3 | Increase in the number of Seats for admission in M.Sc. Computer Science(Big Data Analytics) <br> Approved intake for M.Sc. Computer Science (Big Data Analytics) is 20. It is proposed to increase the number of intake from 20 to 40 (as requested by TCS). <br> Placed before the Academic Council for consideration. <br> Resolution: Academic Council approved Increase in the number of Seats for admission in M.Sc. Computer Science(Big Data Analytics) from 20 to 40 |
|  | 17-4.4 | To Accept students having High School Diploma issued by Northwest Accreditation Commission (NWAC), USA for courses run by the University. <br> Deans' Committee vide agenda item no 50-4.4 recommended to accept students having High School Diploma (Grade12/Senior Secondary) issued by Northwest Accreditation Commission, USA for the admission in the eligible programmes available at CURaj. <br> The Recommendation of Deans' Committee was placed before the Academic Council |


| Item <br> No. | Particulars |  |
| :---: | :---: | :---: |
|  |  | for consideration. <br> Resolution: Academic Council approved the recommendation of Deans' Committee. |
|  | 17-4.5 | Relaxation to GPAT qualified candidates for admission to Ph.D programme in Pharmacy <br> Deans' Committee in its $52^{\text {nd }}$ meeting resolved that $5 \%$ relaxation in CUCET qualifying marks in all categories can be given to GPAT qualified candidates for admission to Ph.D programme in Pharmacy. <br> The matter was placed before the Academic Council for consideration <br> Resolution: Academic Council approved the recommendation of Deans' Committee to give relaxation of $5 \%$ in CUCET qualifying marks to GPAT qualified candidates for admission to $\mathrm{Ph} . \mathrm{D}$ programme in Pharmacy. |
|  | 17-4.6 | CUCET-2018 <br> It is to report to the Academic Council that admission to various courses for the academic year 2018-2019 will be through CUCET -2018. Central University of Rajasthan has participated for $1 \mathrm{UG}, 40 \mathrm{PG}$ programmes and $21 \mathrm{Ph} . \mathrm{D}$. programmes. Total 38,496 students have registered for admission to various programme of Central University of Rajasthan. <br> Resolution: Matter was noted by the Academic Council and the Academic Council also approved admission to following courses which are to be offered in 2018-19 but not included in CUCET-2018 through a separate entrance examination to be conducted at selected centre. <br> 1. $\mathbf{M S c}$ (Sports Biochemistry) with 10 seats <br> 2. MSc (Exercise/Sports Physiology) with 10 seats <br> 3. MSc (Sports Nutrition) with 10 seats <br> 4. M.A (Sport Psychology) with 10 seats. <br> 5. B. Voc with 50 Seats <br> 6. PG diploma in Cultural Informatics with 10 seats |
| 17-5.0 | Evaluation \& Examination |  |
|  | 17-5.1 | Promotion from odd semester to even semester for the students. <br> The revised ordinance 03 is in force from the academic year 2017-18, in which a provision of promotion for next semester is detailed. According to the revised ordinance, a student can be promoted to even semester from odd semester even with backlog papers but cannot be promoted from even semester to odd semester unless $70 \%$ of credits in total are cleared. This new provision is applicable to the students who have taken admission in 2017-18 sessions. <br> On request of some students of other batches to extend this provision to them in this academic year, the Deans' Committee resolved that such request be favorably considered. <br> The matter was placed before the Academic Council for ratification <br> Resolution: Academic Council ratified the matter of promotion from odd semester to even semester for the students of batch other than 2017-18, based on the request of the students. |
|  | 17-5.2 | Re-registration of back papers <br> Below mentioned students of Physics department have requested for re-registration of back papers in current semester (January to June 2018): <br> Programme <br> Name <br> Back paper |


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|  |  |  <br> The abovementioned students have not cleared the papers indicated with their names in their respective semesters and the earliest opportunity to pass these back papers is current semester i.e Jan to May 2018. <br> Dean School of Physical Sciences and Head, Dept. of Physics has recommended to allow them to appear in the Internal and EoSE of Jan to May 2018 Semester and same has been approved by the Competent Authority. <br> The matter was placed before the Academic Council for ratification <br> Resolution: Academic Council ratified the matter and also resolved that all students will be allowed to clear back papers at the earliest opportunity whenever available in the Department. |
|  | 17-5.3 | Explicit list of names of professional programmes <br> It has been brought to the notice by CoE that as per revised ordinance No. 3, in case of professional programmes, a student must secure a minimum of $45 \%$ marks or equivalent letter grade ' $\mathbf{P}$ ' after combining the component of CIA ( $40 \%$ weight) and $\operatorname{EoSE}$ ( $60 \%$ weight). The student shall also be required to independently score minimum of $45 \%$ marks or equivalent letter grade ' $\mathbf{P}$ ' in the EoSE to get promoted in next semester. <br> It is necessary to identify the courses which are professional courses. <br> The matter was placed before $51^{\text {st }}$ Deans' Committee for consideration and the Deans' Committee resolved the following on this matter: <br> Programme of studies that requires approval of any regulatory authority (irrespective of whether approval is obtained or not) is a Professional programme. Professional programmes at present include <br> - M.Tech (Computer Science and Engineering), <br> - M.Tech (Cyber Physical System, <br> - M.Pharm (Pharmaceutics), <br> - M.Pharm (Pharmaceutical Chemistry), <br> - M.Arch (Sustainable Architecture), <br> - M.Sc-B.Ed (Chemistry), <br> - M.Sc-B.Ed (Mathematics), <br> - M.Sc-B.Ed (Physics), <br> - M.Sc-B.Ed (Economics) <br> - MBA <br> The matter was placed before Academic Council for consideration <br> Resolution: It is resolved that the following courses have been approved as professional programmes of studies <br> - M.Tech (Computer Science and Engineering), <br> - M.Tech (Cyber Physical System, <br> - M.Pharm (Pharmaceutics), <br> - M.Pharm (Pharmaceutical Chemistry), <br> - M.Arch (Sustainable Architecture), |


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|  |  | - MBA. <br> - M.Sc. in Computer Science (Big Data Analytics) <br> As per the Ordinance No-03, 13.4 in the professional programmes, a student must score a minimum of $45 \%$ passing marks in each course of these programmes. <br> Note: If a course is offered jointly for professional programme and other programme, then the course will have two different passmark - 45\% for students of professional programme and $35 \%$ for the students of other programme. |
|  | 17-5.4 | Condonation of Attendance <br> As per ordinance-03 of CURaj a student has to put in a minimum of $75 \%$ of attendance in the registered courses and in very exceptional cases such as medical or other unavoidable ground the Competent Authority can condone shortage of attendance of student under following conditions. <br> 1. Condonation cannot be for attendance less than $65 \%$ <br> 2. Condonation can be for only one occasion in the entire duration of programme of study. <br> In view of the above, Deans' Committee resolved that the students having 75\% attendance are eligible to appear EoSE. If a student has attendance between 70-75\%, the course instructor shall report the shortage of attendance to the HoD who shall verify the authenticity and genuineness of reason of absence from the classes. Dean of the School in consultation with the HoD, may condone shortage of attendance upto $5 \%$ after examining the circumstances and merits of the individual case. Dean may reject the case after recording the reasons for such rejection (Ordinance -03 clause 6.5). <br> In very exceptional cases such as medical or any other unavoidable ground, the condonation of the shortage of attendance of a student having attendance between 65$70 \%$ may be recommended and forwarded to office of the CoE and same may be submitted to higher authority for approval. <br> The matter was placed before the Academic Council Consideration <br> Resolution: Academic Council approved the proposal as proposed. |
| 17-6.0 | New Schools |  |
|  | 17-6.1 | Establishment of School of Sports Sciences <br> Ministry of Youth Affairs and Sports, New Delhi (vide its letter No. F.No.1-1/2012ID/Funding Universities dated 12 ${ }^{\text {th }}$ March, 2018) has sanctioned School of Sports Sciences (Ministry of Youth Affairs and Sports) with funding of Rs. 25.00 Crores for 5 years with 12 teaching and 15 non-teaching positions with an intention of starting 5 programmes namely M.Sc. in Sports Nutrition, Exercise Physiology, Sports Biomechanics, Sports Biochemistry and M.A. (Sports Psychology), M.P.T. (Sports Physiotherapy), and Certificate courses (Sports Anthropometry). <br> School of Sports Sciences will be started with three departments: <br> - Department of Sports Bioscience <br> - Department of Sports Psychology <br> - Department of Sports Biomechanics <br> 12 Teaching positions, as sanctioned by Ministry of Youth Affairs and Sports, Department of Sports, Govt. of India will be allotted to this newly formed School. In addition, 7 positions, equivalent to the departments will be allocated to this school. Thus, total 19 positions would be allocated. The School Board will identify the faculty positions and specialization for each stream. Currently the following break-up is approved by the Executive Council in its $31^{\text {st }}$ Meeting held on 28 ${ }^{\text {th }}$ March 2018: |


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|  | The School will offer following 4 programmes from the academic year 2018-19: <br> 1. $\operatorname{MSc}($ Sports Biochemistry) with 10 seats <br> 2. MSc (Exercise/Sports Physiology) with 10 seats <br> Intake to be <br> 3. MSc (Sports Nutrition) with 10 seats increased in <br> 4. MA (Sport Psychology) with 10 seats. subsequent years. <br> M.Sc. in Sport Biomechanics will also be added in subsequent years. The expenditure to run this programme will be made from the grants sanctioned by Ministry of Youth Affairs and Sports for a duration of 5 years. University will approach UGC for support after 5 years. <br> Fee Structure -Fees structure for these programme will be similar to the M.Tech./MBA Programmes of CURAJ and one time development fees of Rs. 5000/-. <br> Executive Council has approved the proposal in principle in $31^{\text {st }}$ Meeting held on $28^{\text {th }}$ March 2018 <br> Placed before the Academic Council for consideration <br> Resolution: Academic Council approved the proposal of establishment of School of Sports Sciences, Education and Research (Ministry of Youth Affairs and Sports), with three Departments consisting of 19 positions ( 12 positions sanctioned from the Ministry of Youth Affairs and Sports and 7 positions (1 Professor, 2 Associate Professor and 4 Assistant Professor) from UGC) : <br> - Department of Sports Bioscience, <br> - Department of Sports Psychology and <br> - Department of Sports Biomechanics. <br> Following courses will be started from the Academic year 2018-19 with fee structure similar to the M.Tech./MBA Programmes of CURAJ and one time development fees of Rs. 5000/- <br> 1. $\operatorname{MSc}($ Sports Biochemistry) with 10 seats <br> 2. MSc (Exercise/Sports Physiology) with 10 seats <br> 3. MSc (Sports Nutrition) with 10 seats <br> 4. MA (Sport Psychology) with 10 seats. <br> Academic Council also resolved that courses run by the School of Sports Science are also considered as professional courses with the minimum passing marks of 45\%. |
| 17-7.0 | New Departments |
|  | Establishment of Department of Society - Technology Interface <br> The proposed department will be established in the School of Social Sciences. The department will offer initially two programmes of studies: <br> - M.Sc. Digital Society <br> - PG Diploma in Cultural Informatics <br> 7 Teaching positions, as specified by UGC (1 Professor, 2 Associate Professor and 4 Assistant Professor) will be allotted to this newly formed department. The School Board will identify the specialization of faculty positions such that both the programmes are properly started. <br> Research - The department will carry out research in all aspects of Societal applications of IT collaborating with existing departments like Department of Social Work, Department of Economics, Department of Culture and Media Studies, Department of Public Policy, Law and Governance of School of Social Sciences. It will also offer PhD Programme. |


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|  |  | 1. M.Sc. Digital Society <br> This programme will be offered in collaboration with IIIT Bangalore (IIITB). MoU has been signed between two institutions for such collaboration. Students of Central University of Rajasthan (CURaj) can attend courses offered by IIITB in latter's Bangalore Campus with no additional fees by students. The grade assigned by IIITB will be accepted as final grade, with adequate rescaling if required by CURaj. Initially, the students of CURaj will attend the first semester at IIITB. Hostel facility will be arranged by IIITB on payment basis. The students will be made clear before the admission about the requirement of their presence at Bangalore for the entire semester. The final semester internship will be arranged by IIITB. <br> Admission - Admission to this programme will be from two sources - <br> - Through CUCET Examination <br> - Candidates recommended by IIITB from the merit list of IIITB entrance test <br> Fee Structure - Fee Structure for this programme will be similar to the M.Tech./ MBA Programmes of CURAJ and one time development fees of Rs. 5000/-. <br> 2. PG Diploma in Cultural Informatics <br> This programme will be offered in collaboration with IGNCA Delhi (IGNCA). MoU has been signed between two institutions for such collaboration. Course syllabus and detailed mode of collaboration is being worked-out. <br> Fee Structure - Fee Structure for this programme will be similar to the M.Tech./ MBA Programmes of CURAJ and one time development fees of Rs. 5000/-. <br> School Board of School of Social Sciences has approved and recommended for consideration of Academic Council in its meeting held on 3rd May, 2018. <br> Placed before the academic Council for consideration <br> Resolution: Academic Council approved the proposal of establishment of Department of Society - Technology Interface with 7 positions (1 Professor, 2 Associate Professor and 4 Assistant Professor) and courses to be offered by the Department with fee structure similar to the M.Tech./MBA Programmes of CURAJ and one time development fees of Rs. 5000/-. Academic Council also resolved that the minimum passing marks for M.Sc in Digital Society will be 45\% and for PG Diploma in Cultural Informatics will be 35\%. |
|  | 17-7.2 | Establishment of Department of Data Science and Analytics <br> The proposed department will be established in the School of Mathematics, Statistics and Computational Sciences. The department is initially offering the following programme of study <br> - M.Sc. Big Data Analytics <br> 7 Teaching positions, as specified by UGC (1 Professor, 2 Associate Professor and 4 Assistant Professor) will be allotted to this newly formed department. The School Board will identify the specialization of faculty positions. <br> The department will carry out research in the area of Data Science and Analytics - Basic Research in Big Data Analytics, Big Data Analytics in Climate Science, Big Data Analytics in Bio and Health Science and Big Data Analytics in Economics and Finance collaborating with existing department of Atmospheric Science, Department of Economics, Department of Computer Science, Department of Mathematics, Department of Statistics, School of Life Sciences, School of Chemical Sciences and Pharmacy and School of Earth Sciences. <br> (1) M.Sc. Big Data Analytics <br> The M.Sc. Big Data Analytics programme is being offered in collaboration with TCS. TCS, under the agreement, provides the following: |


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|  |  | - Big Data Analytics lab with Video Conferencing provision <br> - Cloud Computing Environment of TCS <br> - Support for Salary of faculty <br> - Teaching / Internship Support <br> Admission - Admission to this programme will be through CUCET Examination. <br> TCS grant money is being utilized for establishment of Big Data Analytics Laboratories and also to meet the expenses of the faculty positions. University will continue to provide utilization certificate indicating the Salary expenses of regular/guest faculty of the university. <br> Fee Structure - Fee Structure for this programme will be similar to the M.Tech./MBA Programmes of CURAJ and one time development fees of Rs. 5000/-. <br> Course Structure and Syllabus is included in recommendation of School Board of School of Mathematics, Statistics and Computational Sciences. <br> Deans' Committee and Executive Council has approved the matter in principle and recommended to place before Academic Council. <br> Placed before the academic Council for consideration <br> Resolution: Academic Council approved the proposal of establishment of Department of Data Science and Analytics with 7 positions (1 Professor, 2 Associate Professor and 4 Assistant Professor) and course to be offered by the Department with fee structure similar to the M.Tech./MBA Programmes of CURAJ and one time development fees of Rs. 5000/-. Academic Council also resolved that the minimum passing marks for this course will be $45 \%$. The Academic Council advised to adjust the amount received from TCS against UC submitted to TCS. |
| 17-8.0 | New programme of studies, its Course Structure and syllabi |  |
|  | 17-8.1 | To Start 2 Yr M.Ed. and B.Ed. programme in School of Education <br> UGC has sanctioned six positions to start M.Ed. Programme and B.Ed. Programme in the School of Education. University plans to start these programmes at the earliest with prior approval of NCTE. It is proposed to fill these positions at the earliest and to apply to NCTE for approval. Thus, the programmes can be started from Academic Year 2019-20. However, in order to enable the university to apply to NCTE, approval of Academic Council is sought to start M.Ed. and B.Ed. Programme from Academic Year 2019-20. <br> Placed before the Academic Council for consideration. <br> Resolution: Academic Council approved the proposal. |
|  | 17-8.2 | To start B.Tech. in Bio-engineering under School of Engineering \& Technology. <br> It is proposed to start B.Tech. in Bio-engineering under School of Engineering \& Technology from the Academic Year i.e. 2018-19. The course structure for the same can be prepared in consultation with the various stake holders, IITs and NITs. <br> The matter was put up before $31^{\text {st }}$ Executive Council Meeting. Executive Council inprinciple approved the proposal. It was also recommended that the matter may be placed before the Academic Council. Course structure approved by School Board of School of Engineering and Technology is placed at Annexure-3 [Page No. : 43-47] <br> Placed before the Academic Council for consideration. <br> Resolution: Academic Council approved the start of B.Tech. in Bio-engineering under School of Engineering \& Technology from Academic Session 2019-20. Further depending on the infrastructure, possibility of starting in 2018-19 can be explored. |


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| 17-9.0 | Existing programme of studies, Course Structure (New Courses) |  |
|  | 17-9.1 | Inclusion of new elective course "Cloud Computing" to the M. Tech CSE curriculum from the semester Jan-May, 2018. <br> A new elective course " Cloud Computing", course code CSIS-348 of 4 credits to be started from Jan-May 2018 semester, was proposed by the Department in its Departmental Meeting held on 19th December, 2017. The draft syllabus for the said course was circulated to School Board members through email for their inputs/suggestion/modifications. Final syllabus of course "Cloud Computing" after incorporating suggestions form Departmental faculty, School Board Members, Prof. S.K Ghosh, was approved by the Competent Authority. Annexure-4 [Page No. : 48] <br> Placed before the Academic Council for ratification <br> Resolution: Academic Council ratified the Inclusion of new elective course "Cloud Computing" to the M. Tech CSE curriculum from the semester Jan-May, 2018. |
|  | 17-9.2 | Elective Courses for M.Sc. Chemistry Programmes <br> Department of Chemistry has proposed to offer elective courses of $3 / 4$ credits in $3^{\text {rd }}$ Semester for M.Sc (2Yr), $9^{\text {th }}$ Semester for Int. M.Sc. (5Yr) and $4^{\text {th }} \& 6^{\text {th }}$ Semester for Int. M.Sc. B.Ed. (3Yr). School Board has approved that syllabus of elective courses as such for the current batch and suggested some changes for future batches. <br> Detailed syllabus after incorporation of suggestions of School Board is placed at Annexure-5 [Page No. : 49-67] <br> Placed before the Academic Council for consideration <br> Resolution: Academic Council asked to modify the title of the elective courses with respect to the credits and insisted to provide more flexibility for the students to attend elective courses. |
|  | 17-9.3 | Elective Courses for M.Sc. Physics Programme <br> Department of Physics has proposed to offer new elective courses with 3 credits each approved by the School Board of School of Physical Sciences. <br> - Magnetic and Superconducting Properties of Solid (PHY 411) <br> - Introduction to Fourier Optics PHY (412)- <br> - Monte Carlo- Theory and Practice (PHY 413) <br> Detailed syllabus is placed at Annexure-6 [Page No. : 68-71] <br> Placed before the Academic Council for consideration <br> Resolution: Academic Council approved the proposed Elective Courses for M.Sc. Physics Programme. |


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|  | 17-9.4 | Courses for Winter Semester 2018- MOOCS and Electives <br> Proposal for registering the MOOCs and elective courses for the winter semester programme <br> The matter was put up before $50^{\text {th }}$ Deans' Committee Meeting. Deans' Committee approved the proposal and it was resolved that two hours per week (4:00 PM to 6:00 PM ) in a particular day in all the departments can be kept for elective and open elective to enable the students to move from one department to other department without any hindrance. All the Deans/HODs are requested to keep more elective courses/ MOOCs for the student's choice. Yoga and foreign language courses can also be considered as electives. <br> The matter is placed before Academic Council for consideration. <br> Resolution: Academic Council approved the Courses for Winter Semester 2018MOOCS and Electives. |
|  | 17-9.5 | M.A. Hindi (2 Yr) <br> Revised course structure for M.A Hindi programme approved by School Board of School of Humanities and Languages is placed for approval of Academic Council. <br> Annexure-7 [Page No. : 72-73] <br> Resolution: Academic Council approved the revised course structure for M.A. Hindi programme. |
|  | 17-9.6 | M.A. English (2 Yr) <br> Revised course structure for M.A English programme approved by School Board of School of Humanities and Languages is placed for approval of Academic Council. Annexure- 8 [Page No. : 74-75 <br> Resolution: Academic Council approved the revised course structure for M.A. English programme. |
|  | 17-9.7 | Shifting of courses of three Year Integrated M.Sc. B.Ed from one Semester to another <br> Deans' Committee vide agenda item no 53-5.2 recommended shifting of Internship (08 credits), Internship \& Teaching practices (12 credits) to 5th semester from 6th semester, Course named "Classroom Organization and Management" to 4th Semester from 6th Semester and Project/Dissertation in 6th Semester. Annexure-9 [Page No. : 76-82] <br> The Recommendation of Deans' Committee is placed before the Academic Council for approval. <br> Resolution: Academic Council approved the recommendation of Deans' Committee for shifting of courses of three Year Integrated M.Sc. B.Ed from one Semester to another. |
|  | 17-9.8 | M. Arch. (Sustainable Architecture) (2Yr) <br> Revised Course Curriculum and Program Structure for the M.Arch. (Sustainable Architecture) Programme and new electives courses with syllabus approved by the School Board of School of Architecture is placed for approval of Academic Council. Annexure-10 [Page No. : 83-85] <br> Resolution: Academic Council approved ther revised Course Curriculum and program structure for the M.Arch. (Sustainable Architecture). |
| 17-10.0 | Existing programme of studies, revision of syllabi |  |
|  | 17-10.1 | Minor Change in course title/credit hours in the scheme of M.S(2Yr) and |


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|  |  | Integrated M.Sc (5Yr) Chemistry Programmes <br> Minor change in course title/credit hours in the scheme of M.Sc. Programmes approved by School Board of School of Chemical Sciences and Pharmacy with credit distribution is placed for approval. These changes are applicable to current batches of M.Sc.(2Yr) and Integrated M.Sc.(5Yr) programme Annexure-11 [Page No. : 86-87] |
|  | 17-10.2 | M.Sc Environmental Science (2Yr) <br> Revised syllabus of M.Sc Environmental Science with credit distribution approved by School Board of School of Earth Sciences is placed for approval of Academic Council. Annexure-12 [Page No. : 88-89] |
|  | 17-10.3 | M.Sc Atmospheric Science (2Yr) <br> Revised syllabus of M.Sc Atmospheric Science with credit distribution approved by School Board of School of Earth Sciences is placed for approval of Academic Council. Annexure-13 [Page No. : 90-91] |
|  | 17-10.4 | Ph.D Environmental Science <br> Revised syllabus of Ph.D. Environmental Science with credit distribution approved by School Board of School of Earth Sciences is placed for approval of Academic Council. Annexure-14 [Page No. : 92] |
|  | 17-10.5 | M.Sc Biotechnology (2 Yr) <br> Change in course content of MSBT 302(Plant Molecular Biology and Plant Biotechnology) approved by School Board of School of Life Sciences is placed for approval of Academic Council. Annexure-15 [Page No. : 93] |
|  | 17-10.6 | M.Sc Mathematics (2Yr) and Int M.Sc. Mathematics (5Yr) <br> Revised syllabus of M.Sc Mathematics (2Yr) and Int M.Sc. Mathematics (5Yr) with credit distribution approved by School Board of School of School of Mathematics, Statistics and Computational Sciences is placed for approval of Academic Council. Annexure-16 [Page No. : 94-99] |
|  | 10-10.7 | Int M.Sc B.Ed Mathematics (3Yr) <br> Revised syllabus of Int M.Sc B.Ed Mathematics (3Yr) with credit distribution approved by School Board of School of School of Mathematics, Statistics and Computational Sciences is placed for approval of Academic Council. <br> Annexure-17 [Page No. : 100-101] |
|  | 17-10.8 | Ph.D Mathematics <br> Revised syllabus of Ph.D Mathematics with credit distribution approved by School Board of School of School of Mathematics, Statistics and Computational Sciences is placed for approval of Academic Council. Annexure-18[Page No. : 102] |
|  | 17-10.9 | M.Sc. Statistics (2Yr) and Int. M.Sc. Statistics (5Yr) <br> Revised syllabus of M.Sc Statistics with credit distribution approved by School Board of School of School of Mathematics, Statistics and Computational Sciences is placed for approval of Academic Council. Annexure-19 [Page No. : 103-105] |
|  | 17-10.10 | Ph.D Statistics <br> Revised syllabus of Ph.D Statistics with credit distribution approved by School Board of School of School of Mathematics, Statistics and Computational Sciences is placed for approval of Academic Council. Annexure-20 [Page No. : 106] |
|  | 17.10.11 | M.Tech Computer Science- Cyber Physical System (2Yr) <br> Revised syllabus of M.Tech Computer Science- Cyber Physical System with credit distribution approved by School Board of School of School of Mathematics, Statistics and Computational Sciences is placed for approval of Academic Council. Annexure-21 [Page No. : 107] |
|  | 17-10.12 | M.Sc. Computer Science (2Yr) <br> Revised syllabus of M.Sc. Computer Science with credit distribution approved by |



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| 17-12.0 | Other Matters |  |  |  |  |  |  |  |  |  |
|  | 17-12.1 | Admission-2018 <br> Admission to following courses which are to be offered in 2018-19 but not included in CUCET-2018 are to be conducted separately. Minimum Eligibility is being worked out by respective faculty in charge. <br> 1. $\mathrm{MSc}($ Sports Biochemistry) with 10 seats <br> 2. MSc (Exercise/Sports Physiology) with 10 seats <br> 3. MSc (Sports Nutrition) with 10 seats <br> 4. M.A (Sport Psychology) with 10 seats. <br> 5. B. Voc with 50 Seats <br> 6. PG diploma in Cultural Informatics <br> Placed before Academic Council for consideration <br> Resolution: as resolved at 17-4.6 |  |  |  |  |  |  |  |  |
|  |  | Fee Structure for various existing programmes/new programmes being run in the University for Academic Session 2018-19 <br> As per the resolution passed in 10th Academic Council Meeting vide item No. 10-4.1, a revision of the fee @ $10 \%$ increase in all the components every year (fee structure) has to be made with regards to MHRD Letter No. F.5-9/2011-Desk U dated 28th March 2013. Accordingly, $10 \%$ increase has been incorporated in Admission Fee for Ph.D. Course Work, Research Fee, Thesis Evaluation Fee, Miscellaneous Campus Amenities Fee (for Ph.D. Programmes only), Admission Fee, Tuition Fee, Lab Fee, Library Fee, Exam Fee, Internet Charges, Student Welfare Fund, Medical Fee, Student Aid Fund, Other Fee, Annual Cashless Insurance, Deposit, Mess Security Deposit, and Hostel Fee (for all programmes). <br> For Example, Fee Structure for Year 2017-18 for Category-A PG Courses was Rs. 15985/- which has now been increased to Rs. 17604/-. |  |  |  |  |  |  |  |  |
|  |  |  |  | Ph.D |  |  |  | B. Voc | M.Sc./M.A. in Digital Society and M.Tech in CS (CPS) | PG Diploma in Cultural <br> Informatics, <br> M.Sc. in <br> (Sports <br> Biochemistry), <br> (Sports <br> Physiology) <br> (Sports <br> Nutrition) and <br> (Sports <br> Psychology) |
|  |  | Category | A | B | C | A | B | - | - | - |
|  |  | New <br> Students | 33749 | 31594 | 43414 | 17604 | 25095 | 17604 | 30095 | 30095 |
|  |  | Old <br> Students | 30650 | 28690 | 39435 | 15985 | 22795 | 15985 | 27795 | - |
|  |  | For the new Sport Nutri follow the one time d M.Sc/M.A Data analyti <br> The revised Academic S |  | , MSc Sc in structu ent fee Society, .Pharm ucture 018-19 | in Spor port Ps as M of Rs M.Sc. (Pharm for vari nd new | Bioche chology, ech Co 5000/mputer ceutics us pro progra | istry, PG di mputer on the Science <br> rammes mes to | Sc in loma in cience same li Cyber <br> being be start | orts Physio Cultural In d Engineeri as approv hysical Syste <br> in the from Acad | gy, M.Sc. in ormatics will $g / \mathrm{MBA}$ and d earlier for , M.Sc. Big <br> niversity for emic Session |


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|  |  | 2018-19 is placed Placed before the Academic Council for Approval. Academic Council approved the fee structure for 2018-19. 27 |
|  | 17-12.3 | Alumni contribution to be charged from each student from Academic Year 2018-19 <br> A meeting of the Committee duly constituted to frame the rules and regulations for the creation of Corpus Fund and its Utilization etc. was held on 17.04.2018. The Committee recommended that at the time of admissions, a sum of Rs. 1000/- may be charged from each student as Alumni contribution from Academic Year 2018-19 and the same may be distributed to Alumni Fund and Corpus Fund in the ratio of 50:50. <br> The matter was placed before the $54^{\text {th }}$ Deans' committee for consideration and the he Deans' Committee recommended to Academic Council for consideration. <br> The matter was placed before Academic Council for consideration. <br> Resolution: Academic Council approved the alumni contribution of Rs. 1000 to be charged from each student from Academic Year 2018-19. |
|  | 17-12.4 | Approval for Dr. Sanjeev Vidhyarthi as Joint supervisor for Ms. Swagatika Mishra, PhD scholar, Dept. of Architecture. <br> Looking at the requirement of the research work and with the intent to ensure quality output it is proposed to consider Dr. Sanjeev Vidyarthi, Associate Professor of Urban Planning and Policy, Senior fellow of the Great Cities Institute at the University of Illinois, Chicago to be the Joint Supervisor for Ms. Swagatika Mishra, PhD Scholar, Dept. of Architecture. <br> This was placed for the consideration and approval of Academic Council. <br> Resolution: Academic Council resolved that Dr. Sanjeev Vidyarthi can be taken as as co-supervisor, however the process of recognition of Dr. Sanjeev Vidyarthi to supervise Doctoral Students can be initiated as per University norms. |
|  | 17-13.0 | Any other item(s) with permission of the Chair. |
|  | 17-13.1 | Ph.D. Course work for Ph.D. in Dept. of Education <br> Dept. of Education is going to start Ph.D. progarmme from Academic Session 2018-19. The final syllabus of Ph.D. Course work prepared by faculty of Education and evaluated by two subject experts is placed before Academic Council for consideration. Annexure-28 [Page No. 127] <br> Resolution: Academic Council approved the proposal of Ph.D. Course work for Ph.D. in Dept. of Education. |
|  | 17-13.2 | Adoption of MOOCs through SWAYAM Platform at Central University of Rajasthan. <br> As per the directions received from UGC, University needs to adopt Various MOOCs through SWAYAM Platform. Also, each Faculty members/Department/ School is required to choose at least one MOOCs in the forthcoming Academic Session from the available list of courses as per the link provided by UGC. The Courses Chosen by the University are also need to be intimated to UGC. <br> Further, the University needs to upload the link for the TV Channels and Radio Jingles on the University website to popularize the MOOCs among students and faculty members. <br> The matter was placed before Academic Council for consideration. <br> Resolution: Academic Council approved the Adoption of MOOCs through SWAYAM Platform at Central University of Rajasthan and uploading the link for the TV Channels and Radio Jingles on the University website to popularize the MOOCs among students and faculty members. |
|  | 17-13.3 | To start undergraduate programmes and Integrated Dual Degree in Engineering from Academic Session 2018. <br> School of Engineering and Technology has proposed to start B.Tech Programme in |


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|  |  | Computer Science and Engineering, Electrical and Electronics Engineering and Bioengineering with an intake of 30 for each undergraduate programme and Integrated Dual Degree (IDD) in Computer Science with an Intake of 10 from Academic Session 2018. <br> In this regard, Course Structure duly recommended by a Committee through brainstorming session held on May 8, 2018 for the above said undergraduate engineering programmes and Integrated Dual Degree programme is placed before Academic Council for Consideration and approval. Annexure-29 [Page No. 128-159] <br> Resolution: Academic Council approved the starting of Undergraduate Programmes and Integrated Dual Degree in Engineering from Academic Session 2019-20, with an intake of 30 seats for each programme. University is asked to also explore the possibility to start these programmes from Academic Session 2018-19. |
|  | 17-13.4 | Approval for Dr. Srinivasa Gopalan Sampathkumar as Co-supervisor for Mr. Shubham Parashar, PhD Scholar, Dept. of Pharmacy. <br> Looking at the requirement of the research work and with the intent to ensure quality output, Board of Studies, Dept. of Pharmacy has assigned Dr. Srinivasa Gopalan Sampathkumar, Staff Scientist-V, National Institute of Immunology as Co-Supervisor for Mr. Shubham Parashar, PhD scholar, Dept. of Pharmacy along with Dr. Kaisar Raza, Assistant Professor, Dept. of Pharmacy as Supervisor. <br> This was placed for the Academic Council for ratification. <br> Resolution: School Board recommended outside Experts can be considered as Guide/Co-Guide with the condition that the External Guide should get approval as recognized Guide as per CURaj norms. |
|  | 17-13.5 | Course Structure for Int. M.Sc. - 5 Yr. Programme. <br> Revised Course Structure for Int. M.Sc.-5 Yr. programme for the first two semesters is placed before Academic Council for Consideration and approval. <br> Annexure-30 [Page No. 160-161] <br> Resolution: The recommendation of the Committee to revise the Course Structure of Integrated M.Sc. 5 Year programme was considered and revised structure as recommended by the committee for first two semesters is approved. |
|  | 17-13.6 | Revised syllabi/new course syllabi offered by the School of Social Sciences. <br> Revised syllabi/new course syllabi of following programs offered by the School of Social Sciences as approved in its School Board is placed before Academic Council for consideration and approval: <br> Annexure-31[Page No. 162-174] <br> 1. Integrated M.Sc. Economics <br> 2. M. A. Economics <br> 3. M.Sc B Ed. Economics <br> 4. PG Diploma in cultural informatics-New Course Syllabus <br> 5. M.A/ MSc Digital Society <br> 6. M.A Public Policy <br> 7. Masters of Social Work <br> 8. Ph.D. Course Work Curriculum in Social Work <br> Resolution: Academic Council approved the revised syllabi/new course syllabi of above mentioned programmes as proposed. For integrated programme as already resolved at 17-3.5. |
|  | 17-13.7 | Appropriate Grade Conversion between IIIT-Bangalore and Central University of Rajasthan <br> IIIT-Bangalore follows the Four 4 Point Grade Scale System and Central University of Rajasthan follows 10 Points Grade System. Coordinator, Digital Society Progarmme has submitted that the first Semester Students of M.Sc/M.A in Digital Society Programme will |


| Item <br> No. | Particulars |  |
| :---: | :---: | :---: |
|  |  | be given the opportunity to study in IIIT-Bangalore. The COE of the Central University may be authorized for appropriate conversion of the Grade received from IIIT-Bangalore in sync with Grading System of Central University of Rajasthan. <br> It was placed before Academic Council for consideration and approval. <br> Resolution: Academic council approved the conversion of grade between IIITBangalore and Central University of Rajasthan and authorized Controller of Examination for the same. |
|  | 17-13.7 | Registration of Research Scholar for Academic Session 2016-17 <br> Registration of Research Scholar for Academic Session 2016-17 is placed before Academic Council for approval. <br> Annexure-32 [Page No. 175] <br> Resolution: Academic Council approved the Registration of Research Scholar of Academic Session 2016-17. |
|  | 17-13.8 | To start a course of Studies on India's Intellectual Tradition <br> Professor Chandarkala Padia external member suggested that University should start course of Studies on India's Intellectual Tradition. <br> Resolution: Academic council welcomed the proposal and resolved to start a course on India Intellectual Tradition as an open elective course. A three member committee with Prof. Neeraj Gupta as Chairman and two more members to be opted by him may design the course structure and syllabus etc. |

# CENTRAL UNIVERSITY OF RAJASTHAN FIFTH CONVOCATION 

$02^{\text {nd }}$ November, 2018 Friday, 11.00 AM

## 1. Academic Procession (Starts at 10.55 AM)

1.1 Assemblance of the Members of the Academic Procession

The Chancellor, The Chief Guest, The Vice-Chancellor, the Registrar, the Controller of Examinations, the Finance Officer, the Deans of Schools and the members of the University Authorities shall assemble at 10:55 AM and shall walk in procession in the following order to the Convocation Hall:

The Controller of Examinations with the Convocation Flag

## Members of the authorities

The Academic Council
The Executive Council
The Boards of Schools
The Deans of Faculties
The Finance Officer
The Registrar
The Chief Guest
The Vice Chancellor
The Chancellor
Anchor: "The Academic Procession is entering the auditorium. All are requested to rise and keep standing till the dignitaries take their seats."
1.2 The Academic Procession enters the auditorium with the Army Band in front playing light music.
1.3 The Chief Guest, the Chancellor, the Vice Chancellor and the Registrar, shall take their seats in front row reserved for them. The Controller of Examinations, the Deans, the Finance Officer and the members of the University Authorities shall take their seats in next row(s) reserved for them.
2. Announcement Regarding National Anthem

Anchor: All present in the auditorium to please rise for the National
Anthem.
2.1 National Anthem is played by the Army Band.

Anchor: Audience to be seated.
3. Opening of Convocation

Anchor: "I request the Registrar to seek the permission to begin the Convocation Ceremony."
3.1 The Registrar will request permission of the Chancellor to declare the convocation open in following words:

Registrar "I request the Chancellor to grant permission to begin the Convocation Proceedings".

The Chancellor will grant permission in the following words:
Chancellor "Permission Granted".
3.2 The Registrar will then announce:

Registrar "Now the Convocation Ceremony Begins".

Anchor: "I request the Vice Chancellor to present the report."
4. Presentation of Report by the Vice Chancellor Prof. Arun K Pujari.

Anchor: "Thank You sir.
Anchor: Now I request the Chancellor for Elicitation of promises from the New Graduates
5. Elicitation of Promises from the New Graduates

## Chancellor The Chancellor while addressing the graduates for degrees shall say:

"Will all the candidates for the degrees of the Central University of Rajasthan kindly stand?"

All the candidates shall then rise. Chancellor shall put to the candidates standing, the following questions, to which they shall answer, 'I do Promise" after each question.

Chancellor: "Do you solemnly and sincerely promise and declare that, if admitted to the degrees for which you have qualified, you will, in your daily life and conversation, conduct yourselves as become members of the University?" (Appear on the screen)

Answer: "I do Promise"
Chancellor: "Do you solemnly and sincerely promise and declare that, to the utmost of your opportunity and ability, you will use your power for the promotion of true learning and in the service of your fellowmen?""
(Appear on the screen)
Answer: "I do Promise"
Chancellor: "Do you solemnly and sincerely promise that you will faithfully and diligently fulfill the duties of the profession to which you will eventually belong and that you will, on all occasions, maintain its purity and reputation?"
(Appear on the screen)
Answer: "I do Promise"
Chancellor will then say
Chancellor "All the candidates may now resume their seats."
Anchor: "Thank You Sir."

Anchor: I request the Chancellor to grant permission for "Presentation of
Degrees"

## 6. Presentation of Degrees

## Chancellor will say: "Let the candidates for the degrees be presented by the Deans"

The Deans will present the degree recipients for the award of degrees in the following order:

Anchor: "I now invite the Dean, Ar. Ritu B. Rai, School of Architecture to present the degree recipients.
6.1 Ar. Ritu B. Rai, Dean, School of Architecture will present the degree recipients:
6.1.1 The Dean, Ar. Ritu B. Rai, presents the degree recipients of M. Arch. (Sustainable Architecture):

- "Chancellor Sir, I present to you degree recipients of M. Arch. (Sustainable Architecture). The list is placed on record"

Anchor: "The degree recipients for M.Arch. (Sustainable Architecture) to please rise."
(The names of the degree recipients appear on the screen)
The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.1.2 The Dean, Ar. Ritu B. Rai, presents the degree recipients of Bachelor of Vocation (Interior Design):

- "Chancellor Sir, I present to you degree recipients of Bachelor of Vocation (Interior Design). The list is placed on record"


## Anchor: "The degree recipients for Bachelor of Vocation (Interior Design) to please rise." <br> (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.

The Dean, Ar. Ritu B. Rai now prays:
Pursuant to the decision of the Executive Council to accept the recommendation made by the Academic Council to confer the degree, I pray that these candidates may be admitted to the respective degrees. I also pray that the candidates who have been permitted to receive their degrees 'in absentia' may also be admitted to the respective degrees.

Chancellor will grant the request in the following words: -
'In my capacity as the Chancellor of this University, I hereby grant the request made by the Dean to confer upon the
graduates M.Arch. and B.Voc. degrees in Person and in Absentia'.

Anchor: "The degree recipients may please take their seats." (The degree recipients now sit down.)

Anchor: "I now invite the Dean, Prof. Vipin Kumar, School of Chemical Sciences and Pharmacy to present the degree recipients.
6.2 Prof. Vipin Kumar, Dean, School of Chemical Sciences and Pharmacy will present the degree recipients:
6.2.1 The Dean, Prof. Vipin Kumar presents the degree recipients of Doctor of Philosophy in the following words:

- "Chancellor Sir, I present to you degree recipients of Doctor of Philosophy, under the School of Chemical Sciences and Pharmacy. The list is placed on record."

Anchor: "The degree recipients for Doctor of Philosophy under the School of Chemical Sciences and Pharmacy to please rise" (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.2.2. The Dean, Prof. Vipin Kumar presents the degree recipients of M.Sc. Chemistry in the following words:

- "Chancellor Sir, I present to you degree recipients of M.Sc. Chemistry. The list is placed on record"

Anchor: "The degree recipients for M.Sc. Chemistry to please rise." (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.2.3 The Dean, Prof. Vipin Kumar presents the degree recipients of 5 years Integrated M.Sc. Chemistry in the following words:

- "Chancellor Sir, I present to you degree recipients of 5 years Integrated M.Sc. Chemistry, under the School of Chemical Sciences and Pharmacy. The list is placed on record"

Anchor: "The degree recipients for 5 years Integrated M.Sc. Chemistry under the School of Chemical Sciences and Pharmacy to please rise"
(The names of the degree recipients appear on the screen)
The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.2.4 The Dean, Prof. Vipin Kumar presents the degree recipients of 3 years Integrated M.Sc. B.Ed. Chemistry in the following words:

- "Chancellor Sir, I present to you degree recipients of 3 years Integrated M.Sc. B.Ed. Chemistry, under the School of Chemical Sciences and Pharmacy. The list is placed on record"

Anchor: "The degree recipients for 3 years Integrated M.Sc. B.Ed. Chemistry under the School of Chemical Sciences and Pharmacy to please rise"
(The names of the degree recipients appear on the screen)
The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.2.5. The Dean, Prof. Vipin Kumar, will now present the degree recipients of M. Pharm (Pharmaceutical Chemistry):

- "Chancellor Sir, I present to you degree recipients of M. Pharm (Pharmaceutical Chemistry). The list is placed on record"

Anchor: "The degree recipients for M. Pharm (Pharmaceutical Chemistry) to please rise"
(The names of the degree recipients appear on the screen)
The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.2.6. The Dean, Prof. Vipin Kumar, presents the degree recipients of B.Sc. in following words:

- "Chancellor Sir, I present to you degree recipients of Bachelor of Science. The list is placed on record"

Anchor: "The degree recipients for Bachelor of Science to please rise" (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.

The Dean, Prof. Vipin Kumar now prays:

Pursuant to the decision of the Executive Council to accept the recommendation made by the Academic Council to confer the degree, I pray that these candidates may be admitted to the respective degrees. I also pray that the candidates who have been permitted to receive their degrees 'in absentia' may also be admitted to the respective degrees.

Chancellor will grant the request in the following words:
'In my capacity as the Chancellor of this University, I hereby grant the request made by the Dean to confer upon the graduates Ph.D., M.Sc. Chemistry, 5 years Integrated M.Sc. Chemistry, 3 years Integrated M.Sc. B.Ed. Chemistry, M.Pharm and B.Sc. in Person and in Absentia'".

Anchor: "The degree recipients may please take their seats." (The degree recipients now sit down.)

Anchor: "I now invite the Dean, Dr. Praveen Sahu, School of Commerce and Management to present the degree recipients.
6.3 Dr. Praveen Sahu, Dean, School of Commerce and Management will present the degree recipients:
6.3.1. The Dean, Dr. Praveen Sahu presents the degree recipients of Doctor of Philosophy in the following words:

- "Chancellor Sir, I present to you degree recipients of Doctor of Philosophy. The list is placed on record."

Anchor: "The degree recipients for Doctor of Philosophy to please rise." (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.3.2. Dr. Praveen Sahu, Dean, School of Commerce and Management will present the degree recipients:
6.3.3. The Dean, Dr. Praveen Sahu presents the degree recipients of MBA in the following words:

- "Chancellor Sir, I present to you degree recipients of MBA. The list is placed on record."

Anchor: "The degree recipients for MBA to please rise." (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.3.4. The Dean, Dr. Praveen Sahu, will now present the degree recipients of M.Com. :

- "Chancellor Sir, I present to you degree recipients of M.Com. The list is placed on record."

Anchor: "The degree recipients for M.Com. to please rise." (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.

The Dean, Dr. Praveen Sahu now prays:

Pursuant to the decision of the Executive Council to accept the recommendation made by the Academic Council to confer the degree, I pray that these candidates may be admitted to the respective degrees. I also pray that the candidates who have been permitted to receive their degrees 'in absentia' may also be admitted to the respective degrees.

Chancellor will grant the request in the following words: -
'In my capacity as the Chancellor of this University, I hereby grant the request made by the Dean to confer upon the graduates Ph.D., MBA and M.Com. degrees in Person and in Absentia'.

Anchor: "The degree recipients may please take their seats."
(The degree recipients now sit down.)
Anchor: "I now invite the Dean, Dr. L.K. Sharma, School of Earth Sciences to present the degree recipients.
6.4 Dr. L.K. Sharma, Dean, School of Earth Sciences, will present the degree recipients:
6.4.1. The Dean, Dr. L.K. Sharma presents the degree recipients of M.Sc. Environmental Science in the following words:

- "Chancellor Sir, I present to you degree recipients of M.Sc. Environmental Science. The list is placed on record"

Anchor: "The degree recipients for M.Sc. Environmental Science to please rise."
(The names of the degree recipients appear on the screen)
The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.4.2. The Dean, Dr. L.K. Sharma presents the degree recipients of 5 years Integrated M.Sc. Environmental Science in the following words:

- "Chancellor Sir, I present to you degree recipients of 5 years Integrated M.Sc. Environmental Science. The list is placed on record"

Anchor: "The degree recipients for 5 years Integrated M.Sc. Environmental Science to please rise."
(The names of the degree recipients appear on the screen)
The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.4.3. The Dean, Dr. L.K. Sharma presents the degree recipients of M.Sc. Atmospheric Science in the following words:

- "Chancellor Sir, I present to you degree recipients of M.Sc. Atmospheric Science. The list is placed on record"

Anchor: "The degree recipients for M.Sc. Atmospheric Science to please rise."
(The names of the degree recipients appear on the screen)
The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.4.4. The Dean, Dr. L.K. Sharma, presents the degree recipients of B.Sc. in following words:

- "Chancellor Sir, I present to you degree recipients of Bachelor of Science. The list is placed on record"

Anchor: "The degree recipients for Bachelor of Science to please rise" (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.

The Dean, Dr. L.K. Sharma now prays:
Pursuant to the decision of the Executive Council to accept the recommendation made by the Academic Council to confer the degree, I pray that these candidates may be admitted to the respective degrees. I also pray that the candidates who have been permitted to receive their degrees 'in absentia' may also be admitted to the respective degrees.

Chancellor will grant the request in the following words: -
'In my capacity as the Chancellor of this University, I hereby grant the request made by the Dean to confer upon the graduates M.Sc. Environmental Science, 5 years Integrated M.Sc. Environmental Science, M.Sc. Atmospheric Science and B.Sc. degrees in Person and in Absentia'.

Anchor: "The degree recipients may please take their seats." (The degree recipients now sit down.)

Anchor: 'I now invite the Dean, Prof. Manish Dev Shrimali, School of Engineering \& Technology to present the degree recipients.
6.5 Prof. Manish Dev Shrimali, Dean, School of Engineering \& Technology will present the degree recipients:
6.5.1 The Dean, Prof. Manish Dev Shrimali, presents the degree recipients of M.Tech. Computer Science \& Engineering in the following words:

- "Chancellor Sir, I present to you degree recipients of M.Tech. Computer Science \& Engineering. The list is placed on record."

Anchor: "The degree recipients for M.Tech. Computer Science \& Engineering to please rise."
(The names of the degree recipients appear on the screen)
The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.

The Dean, Prof. Manish Dev Shrimali now prays:

Pursuant to the decision of the Executive Council to accept the recommendation made by the Academic Council to confer the degree, I pray that these candidates may be admitted to the respective degrees. I also pray that the candidates who have been permitted to receive their degrees 'in absentia' may also be admitted to the respective degrees.

Chancellor will grant the request in the following words:
'In my capacity as the Chancellor of this University, I hereby grant the request made by the Dean to confer upon the graduates M.Tech. Computer Science \& Engineering degree in Person and in Absentia'.

Anchor: "The degree recipients may please take their seats." (The degree recipients now sit down.)

Anchor: "I now invite the Dean, Dr. Ajit Patra, School of Physical Sciences to present the degree recipients.
6.6. Dr. Ajit Patra, Dean, School of Physical Sciences, will now present the degree recipients
6.6.1. The Dean, Dr. Ajit Patra, presents the degree recipients of M.Sc. Physics in the following words:

- "Chancellor Sir, I present to you degree recipients of M.Sc. Physics. The list is placed on record"

Anchor: "The degree recipients for M.Sc. Physics to please rise" (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.6.2. The Dean, Dr. Ajit Patra, presents the degree recipients of 5 years Integrated M.Sc. Physics in the following words:

- "Chancellor Sir, I present to you degree recipients of 5 years Integrated M.Sc. Physics. The list is placed on record"

Anchor: "The degree recipients for 5 years Integrated M.Sc. Physics to please rise" (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.6.3. The Dean, Dr. Ajit Patra, presents the degree recipients of 3 years Integrated M.Sc. B.Ed. Physics in the following words:

- "Chancellor Sir, I present to you degree recipients of 3 years Integrated M.Sc. B.Ed. Physics. The list is placed on record"

Anchor: "The degree recipients for 3 years Integrated M.Sc. B.Ed. Physics to please rise" (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.6.4. The Dean, Dr. Ajit Patra, presents the degree recipients of B.Sc. in following words:

- "Chancellor Sir, I present to you degree recipients of Bachelor of Science. The list is placed on record"

Anchor: "The degree recipients for Bachelor of Science to please rise" (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.

The Dean, Dr. Ajit Patra now prays:
Pursuant to the decision of the Executive Council to accept the recommendation made by the Academic Council to confer the degree, I pray that these candidates may be admitted to the respective degrees. I also pray that the candidates who have
been permitted to receive their degrees 'in absentia' may also be admitted to the respective degrees.

Chancellor will grant the request in the following words: -
'In my capacity as the Chancellor of this University, I hereby grant the request made by the Dean to confer upon the graduates M.Sc. Physics, 5 years Integrated M.Sc. Physics, 3 years Integrated M.Sc. B.Ed. Physics and B.Sc. degrees in Person and in Absentia".

Anchor: "The degree recipients may please take their seats." (The degree recipients now sit down.)

Anchor: "I now invite the Dean, Prof. Lakshmi Aiyar, School of Humanities and Languages to present the degree recipients.
6.7 Prof. Lakshmi Aiyar, Dean, School of Humanities and Languages will present the degree recipients:
6.7.1. The Dean, Prof. Lakshmi Aiyar presents the degree recipients of Doctor of Philosophy in the following words:

- "Chancellor Sir, I present to you degree recipients of Doctor of Philosophy, under the School of Humanities and Languages. The list is placed on record."

Anchor: "The degree recipients for Doctor of Philosophy under the School of Humanities and Languages to please rise" (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.7.2. The Dean, Prof. Lakshmi Aiyar presents the degree recipients of M.A. English in the following words:

- "Chancellor Sir, I present to you degree recipients of M.A. English. The list is placed on record."

Anchor: "The degree recipients for M.A. English to please rise."
(The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.7.3. The Dean, Prof. Lakshmi Aiyar, will now present the degree recipients of M.A. Hindi:

- "Chancellor Sir, I present to you degree recipients of M.A. Hindi. The list is placed on record."

Anchor: "The degree recipients for M.A. Hindi to please rise." (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.

The Dean, Prof. Lakshmi Aiyar now prays:
Pursuant to the decision of the Executive Council to accept the recommendation made by the Academic Council to confer the degree, I pray that these candidates may be admitted to the respective degrees. I also pray that the candidates who have been permitted to receive their degrees 'in absentia' may also be admitted to the respective degrees.

Chancellor will grant the request in the following words: -
'In my capacity as the Chancellor of this University, I hereby grant the request made by the Dean to confer upon the graduates Ph.D., M.A. in English and M.A. in Hindi degrees in Person and in Absentia".

Anchor: "The degree recipients may please take their seats." (The degree recipients now sit down.)

Anchor: "I now invite the Dean, Prof. Pradeep Verma, School of Life Sciences to present the degree recipients.

### 6.8 Prof. Pradeep Verma, Dean, School of Life Sciences will present the degree recipients:

6.8.1. The Dean, Prof. Pradeep Verma presents the degree recipients of Doctor of Philosophy in the following words:

- "Chancellor Sir, I present to you degree recipients of Doctor of Philosophy under the School of Life Sciences. The list is placed on record."

Anchor: "The degree recipients for Doctor of Philosophy to please rise." (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.8.2. The Dean, Prof. Pradeep Verma presents the degree recipients of M.Sc. Biotechnology in the following words:

- "Chancellor Sir, I present to you degree recipients of M.Sc. Biotechnology. The list is placed on record."

Anchor: "The degree recipients for M.Sc. Biotechnology to please rise." (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.8.3. The Dean, Prof. Pradeep Verma presents the degree recipients of 5 years Integrated M.Sc. Biotechnology in the following words:

- "Chancellor Sir, I present to you degree recipients of 5 years Integrated M.Sc. Biotechnology. The list is placed on record."

Anchor: "The degree recipients for 5 years Integrated M.Sc. Biotechnology to please rise."
(The names of the degree recipients appear on the screen)
The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.8.4. The Dean, Prof. Pradeep Verma, will now present the degree recipients of M.Sc. Biochemistry:

- "Chancellor Sir, I present to you degree recipients of M.Sc. Biochemistry. The list is placed on record."

Anchor: "The degree recipients for M.Sc. Biochemistry to please rise." (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.8.5. The Dean, Prof. Pradeep Verma, will now present the degree recipients of 5 years Integrated M.Sc. Biochemistry:

- "Chancellor Sir, I present to you degree recipients of 5 years Integrated M.Sc. Biochemistry. The list is placed on record."

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Anchor: "The degree recipients for 5 years Integrated M.Sc. Biochemistry to please rise."
(The names of the degree recipients appear on the screen)
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The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.8.6. The Dean, Prof. Pradeep Verma, will now present the degree recipients of M.Sc. Microbiology:

- "Chancellor Sir, I present to you degree recipients of M.Sc. Microbiology. The list is placed on record."

Anchor: "The degree recipients for M.Sc. Microbiology to please rise." (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.8.7. The Dean, Prof. Pradeep Verma, will now present the degree recipients of 5 years Integrated M.Sc. Microbiology:

- "Chancellor Sir, I present to you degree recipients of 5 years Integrated M.Sc. Microbiology. The list is placed on record."

Anchor: "The degree recipients for 5 years Integrated M.Sc. Microbiology to please rise."
(The names of the degree recipients appear on the screen)
The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.8.8. The Dean, Prof. Pradeep Verma, presents the degree recipients of B.Sc. in following words:

## - "Chancellor Sir, I present to you degree recipients of Bachelor of Science. The list is placed on record."

Anchor: "The degree recipients for Bachelor of Science to please rise." (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.

The Dean, Prof. Pradeep Verma now prays:
Pursuant to the decision of the Executive Council to accept the recommendation made by the Academic Council to confer the degree, I pray that these candidates may be admitted to the respective degrees. I also pray that the candidates who have been permitted to receive their degrees 'in absentia' may also be admitted to the respective degrees.

Chancellor will grant the request in the following words: -
"In my capacity as the Chancellor of this University, I hereby grant the request made by the Dean to confer upon the graduates Ph.D., M.Sc. Biotechnology, 5 years Integrated M.Sc. Biotechnology, M.Sc. Biochemistry, 5 years Integrated M.Sc. Biochemistry, M.Sc. Microbiology, 5 years Integrated M.Sc. Microbiology and B.Sc. degrees in Person and in Absentia'.

Anchor: "The degree recipients may please take their seats." (The degree recipients now sit down.)

Anchor: "I now invite the Dean, Prof. D. C. Sharma, School of Mathematics, Statistics and Computational Sciences to present the degree recipients.
6.9 Prof. D. C. Sharma, Dean, School of Mathematics, Statistics and Computational Sciences will present the degree recipients:
6.9.1 Prof. D.C. Sharma presents the degree recipients of Doctor of Philosophy in following words:

- "Chancellor Sir, I present to you degree recipients of Doctor of Philosophy, under the School of Mathematics, Statistics and Computational Sciences. The list is placed on record."

Anchor: "The degree recipients for Doctor of Philosophy under the School of Mathematics, Statistics and Computational Sciences to please rise"
(The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.9.2 Prof. D.C. Sharma presents the degree recipients of M.Sc. Tech. Mathematics in following words:

- "Chancellor Sir, I present to you the degree recipients of M.Sc. Tech. Mathematics. The list is placed on record"

Anchor: "The degree recipients for M.Sc. Tech. Mathematics to please rise" (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.9.3. Prof. D.C. Sharma presents the degree recipients of M.Sc. Mathematics in following words:

- "Chancellor Sir, I present to you the degree recipients of M.Sc. Mathematics. The list is placed on record."

Anchor: "The degree recipients for M.Sc. Mathematics to please rise" (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.9.4. Prof. D.C. Sharma presents the degree recipients of 5 years Integrated M.Sc. Mathematics in following words:

- "Chancellor Sir, I present to you the degree recipients of 5 years Integrated M.Sc. Mathematics. The list is placed on record."


## Anchor: "The degree recipients for 5 years Integrated M.Sc. Mathematics to please rise" <br> (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.9.5. Prof. D.C. Sharma presents the degree recipients of 3 years Integrated M.Sc. B.Ed. Mathematics in following words:

- "Chancellor Sir, I present to you the degree recipients of 3 years Integrated M.Sc. B.Ed. Mathematics. The list is placed on record."

Anchor: "The degree recipients for 3 years Integrated M.Sc. B.Ed. Mathematics to please rise"
(The names of the degree recipients appear on the screen)
The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.9.6. The Dean, Prof. D.C. Sharma, will now present the degree recipients of M.Sc. Statistics in following words:

- "Chancellor Sir, I present to you degree recipients of M.Sc. Statistics. The list is placed on record."

Anchor: "The degree recipients for M.Sc. Statistics to please rise." (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.9.7. The Dean, Prof. D.C. Sharma, will now present the degree recipients of 5 years Integrated M.Sc. Statistics in following words:

- "Chancellor Sir, I present to you degree recipients of 5 years Integrated M.Sc. Statistics. The list is placed on record."

Anchor: "The degree recipients for 5 years Integrated M.Sc. Statistics to please rise."
(The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.9.8. The Dean, Prof. D.C. Sharma, will now present the degree recipients of M.Sc. Computer Science in following words:

- "Chancellor Sir, I present to you degree recipients of M.Sc. Computer Science. The list is placed on record."

Anchor: "The degree recipients for M.Sc. Computer Science to please rise"
(The names of the degree recipients appear on the screen)
The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.9.9. The Dean, Prof. D.C. Sharma, will now present the degree recipients of M.Sc. Computer Science (Big Data Analytics) in following words:

- "Chancellor Sir, I present to you degree recipients of M.Sc. Computer Science (Big Data Analytics). The list is placed on record"

Anchor: "The degree recipients for M.Sc. Computer Science (Big Data Analytics) to please rise"
(The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.9.10. The Dean, Prof. D.C. Sharma, will now present the degree recipients of 5 years Integrated M.Sc. Computer Science in following words:

- "Chancellor Sir, I present to you degree recipients of 5 years Integrated M.Sc. Computer Science. The list is placed on record."


## Anchor: "The degree recipients for 5 years Integrated M.Sc. Computer Science to please rise" <br> (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.9.11. The Dean, Prof. D.C. Sharma, presents the degree recipients of B.Sc. in following words:

- "Chancellor Sir, I present to you degree recipients of Bachelor of Science. The list is placed on record."


## Anchor: "The degree recipients for Bachelor of Science to please rise" (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.

The Dean, Prof. D C Sharma now prays:
Pursuant to the decision of the Executive Council to accept the recommendation made by the Academic Council to confer the degree, I pray that these candidates may be admitted to the respective degrees. I also pray that the candidates who have been permitted to receive their degrees 'in absentia' may also be admitted to the respective degrees.

Chancellor will grant the request in the following words:
"In my capacity as the Chancellor of this University, I hereby grant the request made by the Dean to confer upon the graduates Ph.D., M.Sc. Tech. Mathematics, M.Sc. Mathematics, 5 years Integrated M.Sc. Mathematics, 3 years Integrated M.Sc. B.Ed. Mathematics, M.Sc. Statistics, 5 years Integrated M.Sc. Statistics, M.Sc. Computer Science, M.Sc. Computer Science (Big Data Analytics), 5 years Integrated M.Sc. Computer Science and B.Sc. degrees in Person and in Absentia'.

Anchor: "The degree recipients may please take their seats." (The degree recipients now sit down.)

Anchor: "I now invite the Dean Prof. S. N. Ambedkar, School of Social Sciences to present the degree recipients.
6.10 Prof. S.N. Ambedkar, Dean, School of Social Sciences will present the degree recipients:
6.10.1 The Dean, Prof. S.N. Ambedkar presents the degree recipients of Doctor of Philosophy in the following words:
"Chancellor Sir, I present to you degree recipients of Doctor of Philosophy, under the School of Social Sciences. The list is placed on record."

Anchor: "The degree recipients for Doctor of Philosophy under the School of Social Sciences to please rise"
(The names of the degree recipients appear on the screen)
The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.10.2 The Dean, Prof. S.N. Ambedkar presents the degree recipients of M.A. Culture and Media Studies in the following words:

- "Chancellor Sir, I present to you degree recipients of M.A. Culture and Media Studies. The list is placed on record."

Anchor: "The degree recipients for M.A. Culture and Media Studies to please rise."
(The names of the degree recipients appear on the screen)
The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.10.3. The Dean, Prof. S.N. Ambedkar, will now present the degree recipients of M.A. Social Work:

- "Chancellor Sir, I present to you degree recipients of M.A. Social Work. The list is placed on record."

Anchor: "The degree recipients for M.A. Social Work to please rise." (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.10.4. The Dean, Prof. S.N. Ambedkar, will now present the degree recipients of M.A. Public Policy, Law \& Governance:

- "Chancellor Sir, I present to you degree recipients of M.A. Public Policy, Law \& Governance. The list is placed on record."

Anchor: "The degree recipients for M.A. Public Policy, Law \& Governance to please rise."
(The names of the degree recipients appear on the screen)
The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.10.5. The Dean, Prof. S.N. Ambedkar, will now present the degree recipients of M.A. Economics:

- "Chancellor Sir, I present to you degree recipients of M.A. Economics. The list is placed on record."

Anchor: "The degree recipients for M.A. Economics to please rise."
(The names of the degree recipients appear on the screen)
The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.10.6. The Dean, Prof. S.N. Ambedkar, will now present the degree recipients of 5 years Integrated M.Sc. Economics:

- "Chancellor Sir, I present to you degree recipients of 5 years Integrated M.Sc. Economics. The list is placed on record."

Anchor: "The degree recipients for 5 years Integrated M.Sc. Economics to please rise."
(The names of the degree recipients appear on the screen)
The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.10.7. The Dean, Prof. S.N. Ambedkar, will now present the degree recipients of 3 years Integrated M.Sc. B.Ed. Economics:

- "Chancellor Sir, I present to you degree recipients of 3 years Integrated M.Sc. B.Ed. Economics. The list is placed on record."

Anchor: "The degree recipients for 3 years Integrated M.Sc. B.Ed. Economics to please rise."
(The names of the degree recipients appear on the screen)
The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.
6.10.8. The Dean, Prof. S.N. Ambedkar, presents the degree recipients of B.Sc. in following words:

- "Chancellor Sir, I present to you degree recipients of Bachelor of Science. The list is placed on record."

Anchor: "The degree recipients for Bachelor of Science to please rise" (The names of the degree recipients appear on the screen)

The degree recipients will rise near their seats and will keep standing till the degree is conferred on them by the Chancellor.

The Dean, Prof. S.N. Ambedkar now prays:

Pursuant to the decision of the Executive Council to accept the recommendation made by the Academic Council to confer the degree, I pray that these candidates may be admitted to the respective degrees. I also pray that the candidates who have been permitted to receive their degrees 'in absentia' may also be admitted to the respective degrees.

Chancellor will grant the request in the following words: -
"In my capacity as the Chancellor of this University, I hereby grant the request made by the Dean to confer upon the graduates Ph.D., M.A. Culture and Media Studies, M.A. Social Work, M.A. Public Policy, Law \& Governance, M.A. Economics, 5 years Integrated M.Sc. Economics, 3 years Integrated M.Sc. B.Ed. Economics and B.Sc. degrees in Person and in Absentia".

Anchor: "The degree recipients may please take their seats." (The degree recipients now sit down.)

### 6.11 Presentation of Ph.D. degrees

Anchor: "I now request the Chancellor to present Ph.D. degrees.
Anchor: "The Ph.D. degree recipients to please move towards the dais to receive their Ph.D. degrees. "The Ph.D. degree recipients are..."

| S.No. | Name of Student | Department |
| :---: | :--- | :--- |
| 1. | Anju Yadav | Computer Science |
| 2. | Anuradha Agarwal | Management |
| 3. | Heena Inani | Chemistry |
| 4. | Ahamad Musfar PM | English |
| 5. | Ajeet Kumar Patel | Hindi |
| 6. | Richa Mathur | Management |
| 7. | Vinod Kumar Saroj | Public Policy, Law \& Governance |
| 8. | Nisikant Nayak | Public Policy, Law \& Governance |
| 9. | Akhilesh Kumar Sharma | Hindi |
| 10. | Shivani Sharma | Chemistry |
| 11. | Ankit Sharma | Biochemistry |
| 12. | Pakhuri Mehta | Pharmacy |

Anchor: "Thank You Sir."

Anchor: "The Ph.D. degree recipients may please take their seats." (The Ph.D. degree recipients now sit down.)
6.11.1 Presentation of University Gold Medal to the toppers in respective programmes and Endowment Medal by the Chief Guest

Anchor: Chief Guest Shri Bibek Debroy to present University Gold Medal to the toppers in respective programs and Endowment Medal.

Anchor: "The University Gold Medalists to please move towards the dais to receive their Gold Medal."
"The University Gold Medalists of Masters programme batch 2016-18 are............"

| S.No. | Name | Programme | Department |
| ---: | :--- | :--- | :--- |
| 1. | Sojo James | M.Arch. | Architecture |
| 2. | Shruti Panwar | M.Sc. Biochemistry | Biochemistry |
| 3. | Khushboo Rani | M.Sc. Biotechnology | Biotechnology |
| 4. | Kajol Yadav | M.Sc. Chemistry | Chemistry |
| 5. | Komal Jangid | M.Com | Commerce |
| 6. | Kiran Scaria | M.Sc. Computer Science | Computer Science |
| 7. | Tinamunam <br> Sahoo | M.Sc. CS (Big Data <br> Analytics) | Computer Science |
| 8. | Dasharath Singh | M.A. Culture and Media <br> Studies | Culture and Media <br> Studies |
| 9. | Isha Sharma | M.A. Economics | Economics |
| 10. | Nirmal Joseph | M.A. English | English |
| 11. | Siddhartha Sarkar | M.Sc. <br> Science | Environmental <br> Science |
| 12. | Pradeep Attri | M.Sc. Atmospheric Science | Atmospheric <br> Science |
| 13. | Tarachand <br> Kumawat | M.A. Hindi | Hindi |
| 14. | Kanika Runwal | MBA | Management |
| 15. | Priyanka | M.Sc. Microbiology | Microbiology |
| 16. | Harsha P J | M.Pharm | Pharmacy |
| 17. | Premashis Kumar | M.Sc. Physics | Physics |
| 18. | Deepika Kumari <br> Meena |  <br> Governance | Public Policy, Law <br> \& Governance |
| 19. | Hamzah Hassan <br> Motta | M.A. Social Work | Social Work |
| 20. | Mareeswaran M. | M.Sc. Statistics | Statistics |

"The University Gold Medalists of Vocational programme batch 2015-18 are............"

| S.No. | Name | Programme | Department |
| :--- | :--- | :--- | :--- |
| 1 | Monu Jangid | B.Voc. (Interior Design) | Architecture |
| 2 | Surbhi Maheshwari | B.Voc. (Interior Design) | Architecture |

"The University Gold Medalists of Integrated M.Sc. programme batch 2013-18 are ."

| S.No. | Name | Programme | Department |
| :--- | :--- | :--- | :--- |
| 1 | Ashita Gadwal | Integrated <br> Biotechnology | Biotechnology |
| 2 | Bal Krishna <br> Sharma | Integrated M.Sc. Chemistry | Chemistry |
| 3 | Vidhi | Integrated M.Sc. Computer <br> Science | Computer Science |
| 4 | Shobhana <br> Sikhawal | Integrated M.Sc. Economics | Economics |
| 5 | Rakhi Giri | Integrated <br> Environmental Science M.Sc. | Environmental <br> Science |
| 6 | Priyanka Gehlot | Integrated <br> Microbiology | Microbiology |
| 7 | Komal <br> Shekhawat | Integrated M.Sc. Statistics | Statistics |
| 8 | Bindu <br> Chaudhary | Integrated M.Sc. Mathematics | Mathematics |

## "The University Gold Medalists of Integrated M.Sc. B.Ed. programme batch 2015-18 are. <br> $\qquad$ ."

| S.No. | Name | Programme |  | Department |  |
| :--- | :--- | :--- | :--- | ---: | :--- |
| 1 | Jyoteshna Kharb | Integrated M.Sc. B.Ed. Chemistry | Chemistry |  |  |
| 2 | Chandan Kumari <br> Dubey | Integrated <br> Economics | M.Sc. | B.Ed. | Economics |
| 3 | Preeti Meena | Integrated <br> Mathematics | M.Sc. | B.Ed. | Mathematics |

(Anchor monitors the pace of movement of the candidates and calls names slowly one by one. Text is modified by the Anchor as per need and attendance of the recipients.)
(As the names announced, the respective Ph.D. degrees/ University gold medalists / Endowment Medal will go on the dais and receive the Ph.D. degrees/ University Gold Medal / Endowment Medal from the Chief Guest.)

## Anchor: Presentation of Endowment Medal

(A) CURAJ-Armstrong Gold Medal for excellence in Vocational Education, Certificate and a cheque of Rs. 11000/- each.

Anchor: I request Ms. Anjali Mata and Ms. Surbhi Maheshwari to come on stage and receive the awards.

| S.No. | Name | Programme | Department |
| :--- | :--- | :--- | :--- |
| 1 | Anjali Mata | B.Voc. | Architecture |
| 2 | Surbhi Maheshwari | B.Voc. | Architecture |

(B) CURAJ-Armstrong Silver Medal for excellence in Vocational Education, Certificate and a cheque of Rs. 5100/each.

Anchor: I request Ms. Hema Khorwal; Ms. Anamika Ajmera to come on stage and receive the awards.

| S.No. | Name | Programme | Department |
| :--- | :--- | :--- | :--- |
| 1 | Hema Khorwal | B.Voc. | Architecture |
| 2 | Anamika Ajmera | B.Voc. | Architecture |

Anchor: "Thank you Sir. On behalf of the University, I thank the Chief Guest for doing the honor.

### 6.12 Exhortation by the Chancellor:

Anchor: "All the degree recipients are requested to please stand up for the exhortation by the Chancellor."

## Chancellor will grant the request in the following words:

"By virtue of the powers vested in me as the Chancellor of the Central University of Rajasthan, I admit you to the respective degrees and I charge you that ever in your life and conversation you show yourselves worthy of the same".

Anchor: "The degree recipients may please take their seats."

Anchor: I now request the Controller of Examinations to present the Degree Award Register for signatures of the Chancellor.

## Chancellor signs the Degree Award Register.

Anchor: "Thank you Sir."
Anchor: I now request the Chief Guest Shri Bibek Debroy to deliver the
Convocation Address.

## 7. Convocation Address by the Chief Guest

Anchor: "Thank You Sir."

## 8. Presenting Chancellor's Award for Best Faculty.

Anchor: The University announces the institution of Chancellor's Award for Best Faculty. The award aims to recognize outstanding contribution of a faculty member towards research, teaching and community outreach. Its goal is to encourage and support younger members of faculty in becoming inspirational leaders in their areas of research and teaching.

Anchor: I now request the Chancellor to present Chancellor's Award for Best Faculty.

Anchor: The Chancellor's Award for Best Faculty goes to..

Anchor: $\qquad$ will come to the dais and receive Chancellor's Award for Best Faculty from the Chancellor.

Anchor: I now request the Chancellor Dr. K. Kasturirangan to deliver the Convocation Remarks.

## 9. Convocation Remarks by the Chancellor

Anchor: "Thank you Sir."

Anchor: As this Convocation Ceremony comes to close, I request Shri K.V.S. Kameswara Rao, the Registrar, to propose Vote of Thanks."
10. Vote of Thanks by the Registrar / Closure of Convocation Ceremony

## The Registrar proposes brief Vote of Thanks.

The Registrar then seeks the permission of the Chancellor by saying:

Registrar "Sir, I now request you to grant permission to close the convocation ceremony".

## Chancellor says:

"Permission granted"

The Registrar then, declares the Convocation Ceremony closed in the following words:-

Registrar "Now I declare the Convocation Ceremony "closed".
Anchor: I now request Vice Chancellor to present a memento to the Chancellor.

Vice Chancellor presents a memento to the Chancellor.
Anchor: I now request Vice Chancellor to present a memento to the Chief Guest.

Vice Chancellor presents a memento to the Chief Guest.

Anchor: I now request all to kindly stand up for the National Anthem.

## 11. National Anthem

Anchor: I request all in the auditorium to keep standing till the procession leaves the auditorium.
12. The Procession will leave the Auditorium.

Anchor: All University Gold Medalists are requested to stay back for the photo session with the Chancellor, Chief Guest and other dignitaries.

The procession will then leave the Convocation Hall in the same order as that in which it entered, the graduates and the audience standing.

## Central University of Rajasthan

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817
DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL
YEAR OF AWARD: 2018
Name of the Programme: M. Tech Computer Science \& Engineering
Name of School: School of Engineering \& Technology
Department : Computer Science \& Engineering

| SI.No. | Enrollment No. | Student Name | GPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2016 MTCSE009 | Yashna Bharti | 8.67 |  |
| 2 | 2016 MTCSE008 | Tulsi Swami | 8.50 |  |
| 3 | 2016 MTCSE005 | Komal | 8.13 |  |
| 4 | 2016 MTCSE006 | Lalit Kumar Chachlani | 8.08 |  |
| 5 | 2016 MTCSE004 | Gulshan Kumar Singh | 8.00 |  |
| 6 | 2016 MTCSE002 | Ashish Kumar | 7.71 |  |
| 7 | 2016 MTCSE001 | Abdul Malik Ansari | 7.63 |  |
| 8 | $2016 M T C S E 003$ | Shushan Kumar | 7.08 |  |

Prepared and Checked by:




Head of the Department

Controller of Examinations

## Central University of Rajasthan

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817

## DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCTL

## YEAR OF AWARD: 2018

Name of the Programme: M.A. Public Policy, Law \& Governance
Batch: 2016
Name of School: School of Social Sciences
Department : Public Policy, Law \& Governance

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2016MPPLG004 | Deepika Kumari Meena | 8.04 | Gold Medalist |
| 2 | 2016MPPLG009 | Swadesh Kumar | 7.96 |  |
| 3 | 2016MPPLG007 | Rahul Kumar | 7.92 |  |
| 4 | 2016MPPLG006 | Poonam Saini | 7.63 |  |
| 5 | 2016MPPLG002 | Avinash Mishra | 7.50 |  |
| 6 | 2016MPPLG001 | Ankur Pratap Singh | 7.38 |  |
| 7 | 2015MPPLG012 | Sandeep Kumar | 7.04 |  |

Prepared and Checked by:


Head of the Department

Controller of Examinations

# Central University of Rajasthan <br> Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817 <br> DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL <br> YEAR OF AWARD: 2018 

Name of the Programme: M.A. Culture \& Media Studies
Batch: 2016
Name of School: School of Social Sciences
Department : Culture \& Media Studies

| SI. No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2016 MACMS003 | Dasharath Singh | 8.25 | Gold Medalist |
| 2 | 2016 MACMS004 | Gunjan Jain | 8.25 |  |
| 3 | 2016 MACMS005 | M V Satyanarayan Reddy | 8.00 |  |
| 4 | $2016 M A C M S 007$ | Sangeeta Choudhary | 7.96 |  |
| 5 | $2016 M A C M S 001$ | Abhijeet Kumar | 7.21 |  |

Prepared and Checked by:-


$M \pm$
Weloulh"
Controller of Examinations

# Central University of Rajasthan <br> Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817 <br> DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL <br> YEAR OF AWARD: 2018 

Name of the Programme: M.A. Economics
Batch: 2016
Name of School : School of Social Sciences
Department : Economics


Prepared and Checked by:- 1


Head of the Department


# Central University of Rajasthan <br> Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817 <br> DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL. <br> YEAR OF AWARD: 2018 

Name of the Programme: Integrated M.Sc. Economics
Batch: 2013
Name of School : School of Social Sciences
Department : Economics

| SI. No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2013IMSBEC019 | Shobhba Sikhwal | 5.08 | Gold Medalist |
| 2 | 2013IMSBEC013 | Mansi Baheti | 4.88 |  |
| 3 | 2013IMSBEC011 | Keshav Soni | 4.64 |  |
| 4 | 2013IMSBEC021 | Shubham Soni | 3.77 |  |
| 5 | 2013IMSBEC002 | Ankit Sharma | 3.32 |  |

Prepared and Checked by:- Vip


Head of the Department



Controller of Examinations

# Central University of Rajasthan <br> Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817 <br> DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL <br> YEAR OF AWARD: 2018 

Name of the Programme: Integrated M.Sc. B.Ed. Economics
Name of School : School of Social Sciences
Department : Economics

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2015IMSBEC002 | Chandan Kumari Dubey | 7.91 | Gold Medalist |
| 2 | 2015IMSBEC004 | Mamta Kumari | 6.67 |  |

Prepared and Checked by:-


Head of the Department


Controller of Examinations

## Central University of Rajasthan

Bandarsindri, Jaipur - Ajmer Highway, NH-08, Dist. Ajmer 305817

DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

YEAR OF AWARD: 2018

Name of the Programme: B.Sc.
Batch: 2015

Name of School: School of Social Sciences
Department : Economics

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2015IMSEC001 | Aaradhya Dave | 8.92 |  |
| 2 | 2015 IMSEC006 | Anusuiya Sharma | 8.54 |  |
| 3 | 2015 IMSEC020 | Shuchismita Mishra | 7.99 |  |
| 4 | 2015 IMSEC010 | Gayathri B | 7.89 |  |
| 5 | 2015 IMSEC024 | Vemula Dhanusha | 7.78 |  |
| 6 | 2015 IMSEC011 | Haribala Muraleedharan | 7.68 |  |
| 7 | 2015 IMSEC012 | Jai D Tahilyani | 7.66 |  |
| 8 | 2015 IMSEC017 | Ranjan Sahani | 7.40 |  |
| 9 | 2015 IMSEC022 | Surendra Kumar | 7.28 |  |
| 10 | 2015 IMSEC014 | N Ashish | 7.13 |  |
| 11 | 2015 IMSEC008 | Deepanshu Lakhwan | 7.09 |  |
| 12 | 2015 IMSEC015 | Navneet Nischal | 6.84 |  |
| 13 | 2015 IMSEC021 | Sumit Kulhari | 6.84 |  |
| 14 | 2015 IMSEC002 | Aman Verma | 6.75 |  |
| 15 | 2015 IMSEC018 | Rupesh Lal Bhagat | 6.50 |  |
| 16 | 2014 IMSEC011 $®$ | Himanshu Gehlot | 3.48 | 7 Point Scale |

Prepared \& Checked by :



Head of the Department


Controller of Examinations

# Central University of Rajasthan <br> Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817 <br> DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL 

YEAR OF AWARD: 2018

Name of the Programme: M.A. Social Work
Batch: 2016
Name of School : School of Social Sciences
Department : Social Work

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2016 MSW008 | Hamzah Hassan Motta | 7.71 | Gold Medalist |
| 2 | 2016 MSW011 | Komal Babani | 7.63 |  |
| 3 | 2016 MSW019 | Ummushahla | 7.56 |  |
| 4 | 2016 MSW004 | Anoopraj | 7.44 |  |
| 5 | 2016 MSW002 | Anie James | 7.42 |  |
| 6 | 2016 MSW010 | Jayaprakash PR | 7.33 |  |
| 7 | 2016 MSW020 | Varsha | 7.25 |  |
| 8 | 2016 MSW005 | Ansum Mishra | 7.21 |  |
| 9 | 2016 MSW016 | Prerna Ojha | 7.13 |  |
| 10 | 2016 MSW009 | Iftikhar Hussain | 7.10 |  |
| 11 | 2016 MSW007 | Bipasa Kumari | 7.10 |  |
| 12 | 2016 MSW018 | Mukesh Sidh | 7.08 |  |
| 13 | 2016 MSW001 | Albin Sunny | 7.08 |  |
| 14 | 2016 MSW006 | Atul Purty | 7.00 |  |
| 15 | 2016 MSW012 | Nikhil Yadav | 6.92 |  |
| 16 | 2016 MSW013 | Om Prakash Choudhary | 6.52 |  |
| 17 | 2016 MSW014 | Pragati Kumari |  |  |

Prepared and Checked by:- $\mid$

Head of the Department $28 / 9 / 18$

# Central University of Rajasthan <br> Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817 <br> <br> DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL 

 <br> <br> DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL}

VEAR OF AWARD: 2018
Name of the Programme: M.A. Hindi
Batch: 2016
Name of School : School of Humanities and Languages
Department : Hindi

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2016 MAH015 | Tarachand Kumawat | 7.96 | Gold Medalist |
| 2 | 2016 MAH005 | Manohar Kanwar | 7.83 |  |
| 3 | 2016 MAH001 | Bhagavati Soni | 7.75 |  |
| 4 | 2016 MAH011 | Shiwani Choudhary | 7.75 |  |
| 5 | 2016 MAH008 | Preeti Pareek | 7.50 |  |
| 6 | 2016 MAH007 | Prakash Chand Verma | 7.38 |  |
| 7 | 2016 MAH012 | Suman Kumari | 7.29 |  |
| 8 | 2016 MAH006 | Naveen Kumar Joshi | 7.25 |  |
| 9 | 2016 MAH009 | Rakesh Kumar Kumawat | 7.25 |  |
| 10 | 2016 MAH010 | Sapna Das | 7.17 |  |
| 11 | 2016 MAH002 | Harendra Kumawat | 7.13 |  |
| 12 | 2016 MAH004 | Manju Kumari | 7.13 |  |
| 13 | 2016 MAH013 | Suraj Mal Kumhar | 7.13 |  |

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## Central University of Rajasthan

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817

## DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

YEAR OF AWARD: 2018

Name of the Programme: M.A. English
Batch: 2016
Name of School : School of Humanities and Languages
Department : English


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# Central University of Rajasthan 

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817

## DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

YEAR OF AWARD: 2018

Name of the Programme: MBA
Batch: 2016
Name of School: School of Commerce and Management
Department : Management

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2016 MBA010 | Kanika Runwal | 8.91 | Gold Medalist |
| 2 | 2016 MBA025 | Tanvi Jain | 8.84 |  |
| 3 | 2016 MBA002 | Akshay Soni | 8.59 |  |
| 4 | 2016 MBA013 | Khushboo Joshi | 8.50 |  |
| 5 | 2016 MBA022 | Pooja Lakhotiya | 8.50 |  |
| 6 | 2016 MBA004 | Arushi Garg | 8.47 |  |
| 7 | 2016 MBA027 | Vanshika Kanwar Parihar | 8.47 |  |
| 8 | 2016 MBA028 | Vishal Singh | 8.28 |  |
| 9 | 2016 MBA021 | Nupur Kumawat | 8.25 |  |
| 10 | 2016 MBA006 | Deepika Agarwal | 8.03 |  |
| 11 | 2016 MBA014 | Krishna | 8.00 |  |
| 12 | 2016 MBA003 | Amisha Das | 7.94 |  |
| 13 | 2016 MBA020 | Neha Jha | 7.84 |  |
| 14 | 2016 MBA017 | Nalinakshya Panda | 7.66 |  |
| 15 | 2016 MBA019 | Neha | 7.47 |  |
| 16 | 2016 MBAO07 | Devanshu Solanki | 7.44 |  |
| 17 | 2016 MBA001 | Abhijeet Bhaskar Gupta | 7.38 |  |
| 18 | 2016 MBA008 | Himanshu Mudgal | 7.28 |  |
| 19 | 2016 MBA009 | Kanhaiya Lal Tailor | 7.16 |  |
| 20 | 2016 MBA023 | Sandeep Shourabh | 7.13 |  |
| 21 | 2016 MBA015 | Lokesh Baswal | 7.13 |  |
| 22 | 2016 MBA018 | Narendra Meena | 7.09 |  |
| 23 | 2016 MBA011 | Karan Choudhary | 7.03 |  |
| 24 | 2016 MBA026 | Thota Lakshmaiah | 7.00 |  |
| 25 | 2016 MBA016 | Madhukar Jangir | 6.91 |  |
| 26 | 2016 MBA029 | Vishram Bairwa | 6.81 |  |
| 27 | 2016 MBA012 | Kavita | 6.56 |  |
| 28 | 2016 MBA005 | Avinash Jangid | 6.34 |  |
| 29 | 2016 MBA024 | Sushant Baudh |  |  |

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Name of the Programme: M.Com
Name of School: School of Commerce and Management
Department : Commerce

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 2016MCOM004 | Komal Jangid | 9.13 | Gold Medalist |
| 2 | 2016MCOM005 | Lata Paliwal | 8.67 |  |
| 3 | 2016MCOM010 | Parthvi Rastogi | 8.63 |  |
| 4 | 2016MCOM016 | Varsha Rustagi | 8.63 |  |
| 5 | 2016MCOM003 | Kiran Meena | 8.54 |  |
| 6 | 2016MCOM011 | Pragya Jain | 8.21 |  |
| 7 | 2016MCOM012 | Priyanka | 8.21 |  |
| 8 | 2016MCOM007 | Mantri Sai Naresh | 8.08 |  |
| 9 | 2016MCOM009 | Neetu Yadav | 8.00 |  |
| 10 | 2016MCOM008 | Navneet Singh | 7.71 |  |
| 11 | 2016MCOM013 | Rahul Kajla | 7.71 |  |
| 12 | 2016MCOM015 | Satyender Yadav | 7.67 |  |
| 13 | 2016MCOM014 | Sapna | 7.63 |  |
| 14 | 2016MCOM017 | Vikas Kumar | 7.58 |  |
| 15 | 2016MCOM002 | Arjun Khateek | 7.04 |  |
| 16 | 2016MCOM001 | Anusuya Naik | 6.92 |  |
| 17 | 2015MCOM004 ® | Bhanwar Singh | 6.79 |  |
| 18 | 2015MCOM017 ® | Sabindra Kumar | 5.21 |  |

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## Central University of Rajasthan

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817

## DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

## YEAR OF AWARD: 2018

Name of the Programme: M.Sc. Physics
Batch: 2016
Name of School: School of Physical Sciences
Department : Physics

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2016 MSPH005 | Premashis Kumar | 8.08 | Gold Medalist |
| 2 | 2016 MSPH009 | Sudipta Kumar Dash | 7.46 |  |
| 3 | 2016 MSPH003 | Gunjan Sharma | 7.42 |  |
| 4 | 2016 MSPH001 | Abhaya Prasada Mohapatra | 7.38 |  |
| 5 | 2016 MSPH008 | Sauvik Sen | 7.21 |  |
| 6 | 2016 MSPH002 | Abhishek Agrawal | 6.96 |  |
| 7 | $2016 M S P H 004$ | Pradeep Kumar | 6.96 |  |
| 8 | $2016 M S P H 007$ | Sandhya Singh | 6.71 |  |
| 9 | 2016 MSPH010 | Vinay Kumar | 6.71 |  |
| 10 | 2016 MSPH006 | Ram Kalyan | 6.58 |  |

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# Central University of Rajasthan <br> Bandarsindri, Jaipur - Ajmer Highway, NH-08, Dist. Ajmer 305817 

DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

YEAR OF AWARD: 2018

Name of the Programme: B.Sc.
Batch: 2015

Name of School : School of Physical Sciences
Department : Physics

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :--- | :--- |
| 1 | 2015 IMSPH013 | Pankaj Choudhary | 8.35 |  |
| 2 | 2015 IMSPH021 | Sandeep Jangir | 8.31 |  |
| 3 | 2015 IMSPH014 | Pawan Kumar Sharma | 7.70 |  |
| 4 | 2015 IMSPH023 | Shubham Rai | 7.58 |  |
| 5 | 2015 IMSPH010 | Navneet Kumar | 7.50 |  |
| 6 | 2015 IMSPH008 | Mahesh Kumar Didwariya | 7.49 |  |
| 7 | 2015 IMSPH001 | Ankit Patel | 7.30 |  |
| 8 | 2015 IMSPH005 | Kiran Choudhary | 7.23 |  |
| 9 | 2015 IMSPH017 | Pukhraj Sen | 7.10 |  |
| 10 | 2015 IMSPH009 | Manisha Meena | 7.04 |  |
| 11 | 2015 IMSPH006 | Koduri Vishnuvardhan | 6.63 |  |
| 12 | 2015 IMSPH019 | Rishi Pal | 6.22 |  |
| 13 | 2015 IMSPH007 | Mahaveer Parsad Tard | 6.00 |  |
| 14 | 2014 IMSPH017 ® | Ramwatar Meena | 3.18 | 7 Point Scale |

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# Central University of Rajasthan <br> Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817 <br> DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL <br> YEAR OF AWARD: 2018 

Name of the Programme: Integratd M.Sc. Physics
Batch: 2013
Name of School : School of Physical Sciences
Department : Physics

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2013IMSBPH011 | Hemant Kumar | 4.53 |  |
| 2 | 2013IMSBPH005 | Apoorv | 3.64 |  |
| 3 | 2013IMSBPH020 | Raveena | 3.73 |  |

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Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817

## DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

## YEAR OF AWARD: 2018

Name of the Programme: Integratd M.Sc. B.Ed. Physics
Batch: 2015
Name of School: School of Physical Sciences
Department : Physics

| SI.No. | Enroliment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2015IMSBPH022 | Vartika Khandelwal | 7.95 |  |
| 2 | 2015IMSBPH002 | Aswathi B Nair | 7.94 |  |
| 3 | 2015IMSBPH023 | Yagya Dev Bhardwaj | 7.88 |  |
| 4 | 2015IMSBPH010 | Komal Agnihotri | 7.81 |  |
| 5 | 2015IMSBPH003 | Athira Paul | 7.79 |  |
| 6 | 2015IMSBPH018 | Shambik Ghosh | 7.73 |  |
| 7 | 2015IMSBPH013 | Pinki Yadav | 7.65 |  |
| 8 | 2015IMSBPH001 | Arpan Bairagi | 7.54 |  |
| 9 | 2015IMSBPH009 | Kiran | 7.54 |  |
| 10 | 2015IMSBPH016 | Sapna | 7.37 |  |
| 11 | 2015IMSBPH008 | Jayanta Kumar Bera | 7.20 |  |
| 12 | 2015IMSBPH012 | Om Prakash Yadav | 7.18 |  |
| 13 | 2015IMSBPH020 | Suman Saini | 7.17 |  |
| 14 | 2015IMSBPH015 | Rohit Kumar | 7.14 |  |
| 15 | 2015IMSBPH006 | Deepika Singariya | 7.11 |  |
| 16 | 2015IMSBPH004 | Avinash Yadav | 7.04 |  |
| 17 | 2015IMSBPH019 | Shri Ram Yadav | 7.04 |  |
| 18 | 2015IMSBPH007 | Dhan Singh Meena | 6.72 |  |
| 19 | 2015IMSBPH017 | Seema | 6.64 |  |
| 20 | 2015IMSBPH005 | Balram Meena | 6.61 |  |
| 21 | 2015IMSBPH021 | Surendra Kumar Rathore | 6.19 |  |

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Name of the Programme: M.Sc. Environmental Science
Batch: 2016
Name of School: School of Earth Sciences
Department : Environmental Science

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2016 MSES009 | Siddhartha Sarkar | 8.64 | Gold Medalist |
| 2 | 2016 MSES002 | Amandeep Ruhela | 8.40 |  |
| 3 | 2016 MSES008 | Piyush Tripathi | 8.38 |  |
| 4 | 2016 MSES001 | A Krishnan | 8.24 |  |
| 5 | $2016 M S E S 003$ | Bhavna Choudhary | 8.17 |  |
| 6 | $2016 M S E S 005$ | Kanchan Lakra | 8.05 |  |
| 7 | $2016 M S E S 004$ | Deepak Kumar | 6.82 |  |

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## DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

YEAR OF AWARD: 2018

Name of the Programme: M.Sc. Atmospheric Science
Batch: 2016
Name of School : School of Earth Sciences
Department : Atmospheric Science

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2016 MSATS004 | Pradeep Attri | 8.09 | Gold Medalist |
| 2 | 2016 MSATS003 | Ganesan M | 7.77 |  |
| 3 | 2016 MSATS001 | Archana Tripathy | 7.75 |  |

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## Central University of Rajasthan

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817

## DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

YEAR OF AWARD: 2018

Name of the Programme: Integrated M.Sc. Environmental Science
Batch: 2013
Name of School : School of Earth Sciences
Department : Environmental Science

| SI.No. | Enroliment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2013 IMSES021 | Rakhi Giri | 5.24 | Gold Medalist |
| 2 | 2013 IMSES009 | Deepali Malik | 5.19 |  |
| 3 | 2013 IMSES016 | Medhavi Srivastava | 4.98 |  |
| 4 | 2013 IMSES011 | Dinesh Singh Bhati | 4.66 |  |
| 5 | 2013 IMSES006 | Archana Rajput | 4.44 |  |
| 6 | 2013 IMSES002 | Aayushi Gour | 4.41 |  |
| 7 | 2013 IMSES017 | Meena Choudhary | 4.08 |  |
| 8 | 2013 IMSES023 | Sahil Alwaria | 4.01 |  |

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# Central University of Rajasthan 

Bandarsindri, Jaipur - Ajmer Highway, NH-08, Dist. Ajmer 305817
DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

YEAR OF AWARD: 2018

Name of the Programme: B.Sc.
Batch: 2015

Name of School : School of Earth Sciences
Department : Enviornmental Science

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :--- |
| 1 | 2015 IMSES009 | Khyati Mynam | 7.21 |  |
| 2 | 2015 IMSES019 | Sakshi Tiwari | 6.98 |  |
| 3 | 2014 IMSES25 $®$ | Yogesh Jangir | 3.55 | 7 Point Scale |

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## Central University of Rajasthan

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817
DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL
YEAR OF AWARD: 2018
Name of the Programme: M.Arch. (Sustainable Architectutre)
Batch: 2016
Name of School : School of Architecture
Department : Architecture


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## Central University of Rajasthan

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distr. Ajmer 305817

## Eth Convocation

CURAJ-ARMSTRONG - AWARD FOR GIRL STUDENTS FOR EXCELLENCE IN VOCATIONAL EDUCATION

| S.No. | Enrolment No. | Names | Batch | Programme | Department | GPA | Signature of <br> Head In_Charge |
| :---: | :--- | :--- | :---: | :---: | :---: | :---: | :---: |
| 1 | 2015 ADID001 | Anjali Mata | 2015 <br> (JAN) | B.Voc. <br> (Interior Design) | Architecture | 5.41 |  |
| 2 | 2015 ADID007 | Hema Khorwal | 2015 <br> (JAN) | B.Voc. <br> (Interior Design) | Architecture | 4.48 |  |
| 3 | 2015 ADID047 | Surbhi <br> Maheshwari | 2015 <br> (JULY) | B.Voc. <br> (Interior Design) | Architecture | 8.66 |  |
| 4 | 2015 ADID028 | Anamika Ajmera | 2015 <br> (JULY) | B.Voc. <br> (Interior Design) | Architecture | 8.50 |  |

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## Central University of Rajasthan

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distr. Ajmer 305817

## DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

YEAR OF AWARD: 2018
Name of the Programme: B.Voc. (Interior Design)
Batch: Jan 2015
Name of School : School of Architecture
Department : Architecture

| SI. No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2015 ADID011 | Monu Jangid | 5.66 | Gold Medalist |
| 2 | 2015 ADID001 | Anjali Mata | 5.41 |  |
| 3 | 2015 ADID006 | Marish Jangid | 4.96 |  |
| 4 | 2015 ADID002 | Amit Goutam | 4.73 |  |
| 5 | 2015 ADID007 | Hema Khorwal | 4.48 |  |
| 6 | 2015 ADID016 | Priya Agarwal | 4.42 |  |
| 7 | 2015 ADID010 | Manvendra Singh Rathore | 4.29 |  |
| 8 | 2015 ADID018 | Rashmi Meena | 4.23 |  |

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## Central University of Rajasthan

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817
DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL
YEAR OF AWARD: 2018
Name of the Programme: B.Voc. (Interior Design)
Batch: July 2015
Name of School : School of Architecture
Department : Architecture

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2015 ADID047 | Surbhi Maheshwari | 8.66 | Gold Medalist |
| 2 | 2015 ADID028 | Anamika Ajmera | 8.50 |  |
| 3 | 2015ADID046 | Sonal Bairwa | 8.04 |  |
| 4 | 2015ADID037 | Kishore Kumar | 7.74 |  |
| 5 | 2015ADID025 | Aishwarya Dagra | 7.63 |  |
| 6 | 2015ADID034 | Hajari Lal | 7.56 |  |
| 7 | 2015 ADID027 | Ambika Jonwal | 7.54 |  |
| 8 | 2015 ADID043 | Rakesh Sharma | 7.53 |  |
| 9 | 2015ADID039 | Maya Devi | 7.53 |  |
| 10 | 2015 ADID042 | Pradeep Suthar | 7.49 |  |
| 11 | 2015 ADID036 | Jyoti Malakar | 7.46 |  |
| 12 | 2015ADID030 | Asmita Sharma | 7.42 |  |
| 13 | 2015 ADID029 | Ashish Kumar | 7.37 |  |
| 14 | 2015 ADID031 | Deepak | 7.33 |  |
| 15 | 2015 ADID038 | Krishan Kumar Sablaniya | 7.26 |  |
| 16 | 2015 ADID026 | Akshima Jain | 6.92 |  |
| 17 | 2015 ADID048 | Yogesh Solanki | 6.77 |  |
| 18 | 2015 ADID035 | Hrishikesh Pohiya | 6.76 |  |
| 19 | 2015ADID040 | Nirdosh Verma | 6.43 |  |

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## Central University of Rajasthan

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distr. Ajmer 305817

## DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

## YEAR OF AWARD: 2018

Name of the Programme: MiSc. CS (Big Data Analytics)
Name of School : School of Mathematics, Statistics and Computational Sciences
Department : Computer Science

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2016MSBDA018 | Tinamunam Sahoo | 8.08 | Gold Medalist |
| 2 | 2016 MSBDA016 | Sonu Kumar | 7.92 |  |
| 3 | $2016 M S B D A 001$ | Andlapoori Srinu | 7.71 |  |
| 4 | $2016 M S B D A 008$ | Kalpana | 7.71 |  |
| 5 | $2016 M S B D A 005$ | Avani Sharma | 7.67 |  |
| 6 | $2016 M S B D A 014$ | Rishabh Agrawal | 7.54 |  |
| 7 | 2016MSBDA004 | Arpit Sharma | 7.33 |  |
| 8 | 2016MSBDA007 | Garima Chaudhary | 7.17 |  |
| 9 | 2016MSBDDA010 | Mohit Kumar Jetwal | 6.92 |  |
| 10 | 2016MSBBDA009 | Madan Lat Jat | 6.83 |  |
| 11 | 2016MSBDA006 | Dinesh Godara | 6.42 |  |



# Central University of Rajasthan <br> Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817 <br> DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL. 

YEAR OF AWARD: 2018

Name of the Programme: M.Sc. Computer Science
Batch: 2016
Name of School : School of Mathematics, Statistics and Computational Sciences
Department : Computer Science

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2016 MSCS008 | Kiran Scaria | 9.57 | Gold Medalist |
| 2 | 2016 MSCS012 | Patel Rahulkumar Dahyabhai | 8.48 |  |
| 3 | 2016 MSCS010 | Mukesh Kumar Jangir | 7.73 |  |
| 4 | 2016 MSCS003 | Amanpreet Kaur | 7.29 |  |
| 5 | 2016 MSCS001 | Aishwarya Prakash | 7.05 |  |
| 6 | 2016 MSCS007 | Jubin Sharma | 6.81 |  |
| 7 | 2016 MSCS014 | Vishakha Kalal | 6.32 |  |



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# Central University of Rajasthan 

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817

## DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

## YEAR OF AWARD: 2018

Name of the Programme: Integrated M.Sc. Computer Science
Batch: 2013
Name of School : School of Mathematics, Statistics and Computational Sciences Department : Computer Science

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2013IMSCS024 | Vidhi Goel | 5.22 | Gold Medalist |
| 2 | 2013IMSCS001 | Amrit Raj | 5.16 |  |
| 3 | 2013IMSCS005 | Deepanjali Sharma | 4.92 |  |
| 4 | 2013IMSCS012 | Napur Somani | 4.88 |  |
| 5 | 2013IMSCS004 | Deepak Kumar | 4.57 |  |
| 6 | 2013IMSCS022 | Sunit Bhattacharya | 4.52 |  |
| 7 | 2013IMSCS003 | Anudeepti Sharma | 4.45 |  |
| 8 | 2013IMSCS014 | Prashitha | 4.43 |  |
| 9 | 2013IMSCS008 | Hitesh Choudhary | 4.38 |  |
| 10 | 2013IMSCS016 | Rishi Raj | 4.32 |  |
| 11 | 2013IMSCS017 | Shilpi Rai | 4.32 |  |
| 12 | 2013IMSCS009 | Laxmi Chandolia | 4.30 |  |
| 13 | 2013IMSCS002 | Anita Chaudhary | 4.07 |  |
| 14 | 2013IMSCS011 | Matil Sandu | 4.00 |  |
| 15 | 2013IMSCS006 | Ganesh Gurjar | 3.83 |  |
| 16 | 2013IMSCS010 | Mahima Rajput | 3.80 |  |

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Bandarsindri, Jaipur - Ajmer Highway, NH-08, Dist. Ajmer 305817
DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

YEAR OF AWARD: 2018

Name of the Programme: B.Sc.
Batch: 2015

Name of School : School of Mathematics, Statistics and Computational Sciences
Department : Computer Science

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2015 IMSCS025 | Vikas Choudhary | 8.87 |  |
| 2 | 2015 IMSCS014 | Priyanshu Kumari | 8.63 |  |
| 3 | 2015 IMSCS005 | Ipsita Patnaik | 8.51 |  |
| 4 | 2015 IMSCS012 | Pravin Choudhary | 8.49 |  |
| 5 | 2015 MSCS010 | Nitesh Sukhwani | 8.36 |  |
| 6 | 2015 IMSCS021 | Suman Saurav | 7.78 |  |
| 7 | 2015 IMSCS026 | Vivek Shukla | 7.73 |  |
| 8 | 2015 MSCS022 | Sunil Kumar Meena | 7.00 |  |
| 9 | 2015 MSCS009 | Manish Kumar Choumiyan | 6.95 |  |
| 10 | 2015 MSCS019 | Shyam Sundar Saini | 6.51 |  |
| 11 | 2015 MSCS024 | Varinder Kumar | 6.31 |  |
| 12 | 2015 MSCS016 | Rajendra Choudhary | 6.19 |  |
| 13 | 2014 IMSCS021 $®$ | Praveen Kumar Prashant | 4.10 | 7 Point Scale |
| 14 | 2014 IMSCS013 $®$ | Ganesh Narayan Parsoya | 3.73 | 7 Point Scale |

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## DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

YEAR OF AWARD: 2018

Name of the Programme: M.Sc. Statistics
Name of School : School of Mathematics, Statistics and Computational Sciences Department Statistics

| SI.No. | Enrollment No. | Student Name | GPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2016 MSTA005 | Mareeswaran M. | 7.58 | Gold Medalist |
| 2 | 2016 MSTA004 | Hemant Singh Gurjar | 7.04 |  |
| 3 | 2016 MSTA002 | Daliparthy Venkata Pavan Sasikanth | 6.83 |  |
| 4 | 2016 MSTA003 | Darshan Kailas Ahire | 6.83 |  |
| 5 | 2016MSTA008 | Shaik Shakeer | 6.50 |  |
| 6 | 2016 MSTA009 | Yamarthi Adi Jnana Manikantha | 6.38 |  |
| 7 | 2015MSTA003 | Deepti Soni | 7.04 |  |




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## Central University of Rajasthan

Bandarsindri, Jaipur - Ajmer Highway, NH-08, Dist. Ajmer 305817
DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL.

YEAR OF AWARD: 2018

Name of the Programme: B.Sc.
Batch: 2015

Name of School : School of Mathematics, Statistics and Computational Sciences
Department : Statistics

| SI.No. | Enrollment No. | Student Name | GPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2015 IMSST019 | Shradha Gupta | 9.00 |  |
| 2 | 2015 IMSST018 | Shivani Singh Soni | 8.27 |  |
| 3 | 2015 IMSST005 | Alok Kumar | 8.04 |  |
| 4 | 2015 IMSST024 | Yogesh Katariya | 7.81 |  |
| 5 | 2015 IMSST010 | Mohd. Saif Ali | 7.61 |  |
| 6 | 2015 IMSST003 | Chigurupati Abhijith | 7.21 |  |
| 7 | 2015 IMSST012 | Ramkaran Sain | 7.14 |  |
| 8 | 2015 MSST017 | Satnam Singh | 7.01 |  |
| 9 | 2015 MSST020 | Vikas Chahar | 6.93 |  |
| 10 | 2015 IMSST016 | Saryu | 6.49 |  |

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## Central University of Rajasthan

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817

## DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

## YEAR OF AWARD: 2018

Name of the Programme: Inegrated M.Sc. Statistics
Batch: 2013
Name of School : School of Mathematics, Statistics and Computational Sciences
Department : Statistics

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2013 IMSST012 | Komal Shekhawat | 5.35 | Gold Medalist |
| 2 | 2013IMSST023 | Urvashi Sharma | 5.16 |  |
| 3 | 2013 IMSST006 | Arpit Katiyar | 5.02 |  |
| 4 | 2013IMSST022 | Somya Jain | 4.84 |  |
| 5 | 2013 IMSST003 | Abhishek Anand | 4.81 |  |
| 6 | 2013IMSST015 | Pragya Gupta | 4.56 |  |
| 7 | 2013IMSST011 | Kapil | 4.39 |  |
| 8 | 2013IMSST019 | Sarita Vaishnav | 4.28 |  |
| 9 | 2013IMSST001 | Aarti Sahu | 4.23 |  |
| 10 | 2013IMSST024 | Utpala Chouhan | 4.14 |  |
| 11 | 2013IMSST009 | Hansraj Bagariya | 3.83 |  |
| 12 | 2013IMSST021 | Shruti Chalia | 3.81 |  |
| 13 | 2013 IMSST018 | Sangeeta Choudhary | 3.14 |  |



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## Central University of Rajasthan

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817

## DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

YEAR OF AWARD: 2018
Name of the Programme: Integrated M.Sc. B.Ed. Mathematics
Batch: 2015
Name of School : School of Mathematics, Statistics and Computational Sciences
Department : Mathematics

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :--- | :--- |
| 1 | 2015IMSBMT018 | Preeti Meena | 8.66 | GOLD MEDALISY |
| 2 | 2015IMSBMT008 | Kavita Kumari | 8.51 |  |
| 3 | 2015IMSBMT007 | Kavita Burdak | 8.40 |  |
| 4 | 2015IMSBMT015 | Nisha | 8.30 |  |
| 5 | 2015IMSBMT012 | Meethu Bidasar | 7.59 |  |
| 6 | 2015IMSBMT021 | Rupa Ram Kansaniya | 7.57 |  |
| 7 | 2015IMSBMT004 | Harendra | 7.53 |  |
| 8 | 2015IMSBMT013 | Mukesh Saini | 7.48 |  |
| 9 | 2015IMSBMT019 | Rajesh Kumar Kumawat | 7.43 |  |
| 10 | 2015IMSBMT003 | Gopal Singh Rawat | 7.43 |  |
| 11 | 2015IMSBMT014 | Neetu Meena | 7.32 |  |
| 12 | 2015IMSBMT016 | Neesha Saini | 7.08 |  |
| 13 | 2015IMSBMT011 | Meenu | 7.03 |  |
| 14 | 2015IMSBMT006 | Kapil Sankhla | 6.98 |  |
| 15 | 2015IMSBMT005 | Jitesh Jhuria | 6.94 |  |
| 16 | 2015IMSBMT020 | Ramniwas Thalor | 6.92 |  |
| 17 | 2015IMSBMT017 | Prashant Kumar | 6.83 |  |
| 18 | 2015IMSBMT023 | Vimala Meghwal | 6.76 |  |
| 19 | 2015IMSBMT022 | Vandana Kumari Jangir | 6.58 |  |
| 20 | 2015IMSBMT002 | Ankit | 6.45 |  |
| 21 | 2015IMSBMT010 | Manjeet Singh | 6.43 |  |
| 22 | 2015IMSBMT001 | Anil Kumar Kantiwal |  |  |

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Name of the Programme: M.Sc. Mathematics
Batch: 2016
Name of School : School of Mathematics, Statistics and Computational Sciences
Department : Mathematics

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2016 MSTM008 | Manoj Kumar | 8.01 |  |
| 2 | 2016 MSTM007 | Manish Kumar Yadav | 6.53 |  |
| 3 | 2015MSTM018 | Ranvver Sinwar | 7.07 |  |
| 4 | 2015MSTM022 | Shailendra Singh Chauhan | 6.60 |  |

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## Central University of Rajasthan

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817
DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

## YEAR OF AWARD: 2018

Name of the Programme: M.Sc. Tech Mathematics
Batch: 2015
Name of School:School of Mathematics, Statistics and Computational Sciences
Department : Mathematics

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | $2015 M S T M 007$ | Deepika Dhewa | 6.34 |  |

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Name of the Programme: Integrated M.Sc. Mathematics
Batch: 2013
Name of School : School of Mathematics, Statistics and Computational Sci Department : Mathematics

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2013IMSBMT007 | Bindu Choudhary | 5.52 | Gold Medalist |
| 2 | 2013IMSBMT001 | Akanksha | 4.13 |  |
| 3 | 2013IMSBMT025 | Tarun Dattatrey | 4.00 |  |
| 4 | 2013IMSBMT005 | Atul Jakhar | 3.89 |  |
| 5 | 2013IMSBMT008 | Devraj Meena | 3.76 |  |
| 6 | 2013IMSBMT024 | Suresh Godara | 3.59 |  |
| 7 | 2013IMSBMT003 | Ankit Singh | 3.36 |  |
| 8 | 2013IMSBMT009 | Ganesh Meghwanshi | 3.23 |  |

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DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

YEAR OF AWARD: 2018

Name of the Programme: B.Sc.
Batch: 2015

Name of School : School of Mathematics, Statistics and Computational Sciences
Department : Mathematics

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2015 IMSMT025 | Saurabh Bansal | 9.13 |  |
| 2 | 2015 IMSMT018 | Nitin Kumar Jha | 8.36 |  |
| 3 | 2015 IMSMT022 | Rahul Choudhary | 8.31 |  |
| 4 | 2015 IMSMT024 | Ravi Prakash Rar | 7.93 |  |
| 5 | 2015 IMSMT019 | Prashant Kumar Dattatrey | 7.78 |  |
| 6 | 2015 IMSMT004 | Amit Kumar Hinoniya | 7.62 |  |
| 7 | 2015 IMSMT028 | Utkarsh Mangal | 7.57 |  |
| 8 | 2015 IMSMT011 | Kamlesh Meena | 7.12 |  |
| 9 | 2015 IMSMT005 | Anooj Kumar | 7.10 |  |
| 10 | 2015 IMSMT017 | Mohit Yadav | 7.07 |  |
| 11 | 2015 IMSMT023 | Rajni Choudhary | 7.05 |  |
| 12 | 2015 IMSMT026 | Shankar Lal Choudhary | 6.64 |  |
| 13 | 2015 IMSMT010 | Jitendra Kumar Yadav | 6.63 |  |
| 14 | 2015 IMSMT013 | Kunwar Singh Gurjar | 6.27 |  |
| 15 | 2014 IMSMT010 ® | Jitendra Burdak | 4.17 | 7 Point Scale |
| 16 | 2014 IMSMT025 ® | Vikas Poonia | 3.33 | 7 Point Scale |
| 17 | 2013 IMSBMT006 ® | Bhim Singh | 3.28 | 7 Point Scale |
| 18 | 2013 IMSBMT019 ® | Rakesh Meena | 3.25 | 7 Point Scale |

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## Central University of Rajasthan

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817
DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL
YEAR OF AWARD: 2018
Name of the Programme: MiSc. Biochemistry
Batch: 2016
Name of School : School of Life Sciences
Department : Biochemistry

| SI. No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :--- |
| 1 | 2016 MSBC008 | Shruti Panwar | 8.69 | Gold Medalist |
| 2 | 2016 MSBC010 | Surbhi Dahiya | 8.41 |  |
| 3 | 2016 MSBC007 | Shruti Gupta | 8.38 |  |
| 4 | 2016 MSBC005 | Raj Nandani | 8.28 |  |
| 5 | 2016 MSBC003 | Hitaishi Sihag | 8.19 |  |
| 6 | $2016 M S B C 002$ | Diwakar Sharma | 8.03 |  |
| 7 | $2016 M S B C 009$ | Sumit Jamwal | 7.50 |  |
| 8 | $2016 M S B C 001$ | Anita | 6.16 |  |
| 9 | $2015 M S B C 017 ~ © ~$ | Rakish Kumar Dabariya | 6.29 |  |

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DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL
YEAR OF AWARD: 2018
Name of the Programme: Integrated M.Sc. Biochemistry
Batch: 2013
Name of School : School of Life Sciences
Department : Biochemistry

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :--- | :--- |
| 1 | 2013IMSBC025 | Vikramaditya Singh | 5.15 |  |
| 2 | 2013IMSBC004 | Divya Sharma | 4.99 |  |
| 3 | 2013IMSBC021 | Shashank Arora | 4.90 |  |
| 4 | 2013 IMSBC018 | Rahul Shobhawat | 4.86 |  |
| 5 | 2013 IMSBC011 | Nina Chatterjee | 4.79 |  |
| 6 | 2013IMSBC022 | Shivani Jain | 4.54 |  |
| 7 | 2013 IMSBC020 | Saroj Prajapat | 4.45 |  |
| 8 | 2013 IMSBC007 | Krishna Singh | 4.34 |  |
| 9 | 2013IMSBC001 | Akanksha Kotidar | 4.16 |  |
| 10 | 2013 IMSBC010 | Mukut Pratap | 3.91 |  |

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DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

## YEAR OF AWARD: 2018

Name of the Programme: B.Sc.
Batch: 2015

Name of School: School of Life Sciences
Department : Biochemistry

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2015IMSBC011 | Nikhil Sunny | 8.01 |  |
| 2 | 2015 IMSBC025 | Yashwant Singh Panwar | 7.72 |  |

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Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817

## DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

## YEAR OF AWARD: 2018

Name of the Programme: MiSc. Biotechnology
Batch: 2016
Name of School: School of Life Sciences
Department : Biotechnology

| SI.No | Enrollment No. | Student Name | GPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2016 MSBT004 | Khushboo Rani | 8.59 | Gold Medalist |
| 2 | 2016 MSBT002 | Anshika Bansal | 8.28 |  |
| 3 | 2016 MSBT003 | Deepti Yadav | 8.22 |  |
| 4 | 2016 MSBT001 | Ajay Kumar | 6.56 |  |
| 5 | 2015 MSBT013 $®$ | Pushpa Kumari | 6.14 |  |
| 6 | 2015 MSBT015 ® | Renu Kumari | 5.93 |  |
| 7 | 2015 MSBT010 ® | Monika | 5.88 |  |



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## Central University of Rajasthan

Bandarsindri, Jaipur - Ajmer Highway, NH-08, Dist. Ajmer 305817
DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCKL.

## YEAR OF AWARD: 2018

Name of the Programme: B.Sc.
Batch: 2015

Name of School : School of Life Sciences
Department : Biotechnology

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2015 IMSBT026 | Yesheswini Rajendran | 8.13 |  |
| 2 | 2015 IMSBT007 | Bodhisatwa Nandi | 7.98 |  |
| 3 | 2015 IMSBT009 | Garima Kushwaha | 7.97 |  |
| 4 | 2015 MSBT025 | Yashpal Singh | 6.16 |  |


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# Central University of Rajasthan <br> Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817 <br> DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL <br> <br> YEAR OF AWARD: 2018 

 <br> <br> YEAR OF AWARD: 2018}

Name of the Programme: Integrated M.Sc. Biotechnology
Batch: 2013
Name of School: School of Life Sciences
Department : Biotechnology

| SI.No | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2013IMSBT006 | Ashita Gadwal | 5.35 | Gold Medalist |
| 2 | 2013 IMSBT010 | Mahendra Singh | 5.33 |  |
| 3 | 2013IMSBT019 | Shubham Garg | 5.13 |  |
| 4 | 2013IMSBT005 | Apoorva Shrivastav | 4.58 |  |
| 5 | 2013IMSBT020 | Shubhi Jain | 4.39 |  |
| 6 | 2013IMSBT024 | Simangka Borsaikia | 4.39 |  |
| 7 | 2013IMSBT014 | Nida Hashami | 4.06 |  |
| 8 | 2013IMSBT017 | Shailesh Kumar | 4.04 |  |
| 9 | 2013IMSBT001 | Aishwarya Ajmera | 3.95 |  |
| 10 | 2013IMSBT011 | Muskan Sanskriti | 3.88 |  |
| 11 | 2013IMSBT013 | Neha Patni | 3.69 |  |
| 12 | 2013IMSBT004 | Anshu Kumari | 3.59 |  |
| 13 | 2013IMSBT003 | Annu Kumari | 3.38 |  |
| 14 | 2013 IMSBT025 | Suman Teli | 3.32 |  |



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Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distr. Ajmer 305817
DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

YEAR OF AWARD: 2018

Name of the Programme: M.Sc.Microbiology
Batch: 2016
Name of School : School of Life Sciences
Department : Microbiology

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2016 MSMB009 | Priyanka | 8.78 | Gold Medalist |
| 2 | $2016 M S M B 006$ | Pragati Dangayach | 8.66 |  |
| 3 | $2016 M S M B 001$ | Ajeena Mol A | 7.72 |  |
| 4 | $2016 M S M B 003$ | Himanshi Sharma | 7.59 |  |
| 5 | $2016 M S M B 010$ | Shweta Maurya | 7.38 |  |
| 6 | $2016 M S M B 002$ | Anjana Jharwal | 7.19 |  |
| 7 | $2016 M S M B 005$ | Monika | 7.00 |  |
| 8 | $2016 M S M B 004$ | Keshav Kumar Meghwanshi | 6.78 |  |
| 9 | $2016 M S M B 007$ | Prakash Pooniyan | 6.63 |  |
| 10 | $2016 M S M B 008$ | Prakriti Mahria | 6.38 |  |
| 11 | $2015 M S M B 020$ | Vikram Kumar | 6.36 |  |
| 12 | $2015 M S M B 018 ~ ®$ | Sumangala Kumari | 6.16 |  |
| 13 | $2014 M S M B 001 ®$ | Afajal Husain | 5.44 |  |

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Name of the Programme: Integrated M.Sc.Microbiology
Batch: 2013
Name of School : School of Life Sciences
Department : Microbiology

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2013IMSMB014 | Priyanka Gehlot | 5.50 | Gold Medalist |
| 2 | 2013IMSMB004 | Khushboo Mehta | 5.39 |  |
| 3 | 2013IMSMB012 | Nitesh Kansara | 4.93 |  |
| 4 | 2013IMSMB002 | Ashish Sahu | 4.89 |  |
| 5 | 2013IMSMB005 | Komal Jain | 4.87 |  |
| 6 | 2013IMSMB008 | Meenakshi Dhaka | 4.69 |  |
| 7 | 2013IMSMB017 | Saket Kashyap | 4.64 |  |
| 8 | 2013IMSMB003 | Harshvardhan | 4.55 |  |
| 9 | 2013IMSMB006 | Manoj Kumari | 4.36 |  |
| 10 | 2013IMSMB016 | Rupali Raj Agarwal | 4.21 |  |
| 11 | 2013IMSMB010 | Nassen Bano | 3.79 |  |



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# Central University of Rajasthan <br> Bandarsindri, Jaipur - Ajmer Highway, NH-08, Dist. Ajmer 305817 <br> DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL 

YEAR OF AWARD: 2018

Name of the Programme: B.Sc.
Batch: 2015

Name of School : School of Life Sciences
Department : Microbiology

| SI.No. | Enrollment No. | Student Name | GPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2015 IMSMB017 | Rubina Sheikh | 7.57 |  |
| 2 | 2013 IMSMB018 ® | Santosh Kumari | 3.20 | 7 Point Scale |

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YEAR OF AWARD: 2018
Name of the Programme: M.Pharm
Batch: 2016
Name of School : School of Chemical Sciences and Pharmacy
Department : Pharmacy

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2016 MPHARM004 | Marsha P J | 7.98 | Gold Medalist |
| 2 | 2016 MPHARM005 | Kunal Dadhich | 7.97 |  |
| 3 | 2016 MPHARM001 | Gajendra Singh Thakur | 7.10 |  |
| 4 | 2016 MPHARM006 | Sudhakar Rajoria | 7.09 |  |
| 5 | 2016 MPHARM003 | Goloo Giri | 6.88 |  |

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Name of the Programme: MiSc. Chemistry
Batch: 2016
Name of School : School of Chemical Sciences and Pharmacy
Department : Chemistry

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | $2016 M S C 004$ | Kajol Yadav | 8.22 | Gold Medalist |
| 2 | $2016 M S C 007$ | Rohit Thakur | 8.06 |  |
| 3 | $2016 M S C 006$ | Piyush Kumar Barnwal | 7.72 |  |
| 4 | $2016 M S C 002$ | Divyadeepika | 7.63 |  |
| 5 | $2016 M S C 005$ | Parveen Kumar | 7.44 |  |
| 6 | $2016 M S C 001$ | Ashok Kumar Raigar | 7.19 |  |
| 7 | $2015 M S C H 011 ~ ®$ | Dinesh Kumar Shersiya | 6.06 |  |

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YEAR OF AWARD: 2018

Name of the Programme: B.Sc.
Batch: 2015

Name of School: School of Chemical Sciences and Pharmacy
Department : Chemistry

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2015IMSCH001 | Aditi Saraswat | 8.94 |  |
| 2 | 2015 IMSCH022 | Turban Bera | 8.20 |  |
| 3 | 2015 IMSCH007 | Gunjan Sharma | 8.12 |  |
| 4 | 2015 IMSCH012 | Kuldeep Acharya | 8.03 |  |
| 5 | 2015 IMSCH017 | Ramprasad Choudhary | 7.98 |  |
| 6 | 2015 IMSCH013 | Mohit Kumar | 7.38 |  |

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 <br> <br> YEAR OF AWARD: 2018}

Name of the Programme: Integrated M.Sc. Chemistry
Batch: 2013
Name of School : School of Chemical Sciences and Pharmacy
Department : Chemistry

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2013IMSBCH004 | Bal Krishna Sharma | 5.08 | Gold Medalist |
| 2 | 2013 IMSBCH011 | Manish Kumar Verma | 5.05 |  |
| 3 | 2013 IMSBCH013 | Mukesh Dhaker | 4.56 |  |
| 4 | 2013 IMSBCH001 | Aditya Jarera | 4.51 |  |
| 5 | 2013 IMSBCH008 | Lata Sharma | 4.28 |  |
| 6 | 2013 IMSBCH023 | Srishti Gaur | 4.18 |  |

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Name of the Programme: Integrated M.Sc. B.Ed. Chemistry
Batch: 2015
Name of School : School of Chemical Sciences and Pharmacy
Department : Chemistry

| SI.No. | Enrollment No. | Student Name | CGPA | Remarks |
| :--- | :--- | :--- | :---: | :---: |
| 1 | 2015IMSBCH006 | Jyoteshna Kharb | 8.76 | Gold Medalist |
| 2 | 2015IMSBCH022 | Rohit Kumar Jain | 8.43 |  |
| 3 | 2015IMSBCH017 | Pooja Sharma | 8.22 |  |
| 4 | 2015IMSBCH025 | Vinay Kumar | 8.02 |  |
| 5 | 2015IMSBCH001 | Ankita Devra | 7.96 |  |
| 6 | 2015IMSBCH023 | Roopendra Singh Madhukar | 7.81 |  |
| 7 | 2015IMSBCH018 | Priyanka Gupta | 7.77 |  |
| 8 | 2015IMSBCH016 | Pooja Agrawal | 7.67 |  |
| 9 | 2015IMSBCH014 | Neetu Kanwar Rathore | 7.65 |  |
| 10 | 2015IMSBCH012 | Manish Murawtiya | 7.51 |  |
| 11 | 2015IMSBCH011 | Mahesh Kumar | 7.15 |  |
| 12 | 2015IMSBCH003 | Hemant Malawat | 7.12 |  |
| 13 | 2015IMSBCH007 | Jyoti Saini | 7.09 |  |
| 14 | 2015IMSBCH005 | Ihthisham K | 6.93 |  |
| 15 | 2015IMSBCH013 | Ambika Meena | 6.91 |  |
| 16 | 2015IMSBCH019 | Raj Kumar | 6.78 |  |
| 17 | 2015IMSBCH002 | Hansraj Gurjar | 6.58 |  |

Prepared and Checked by:--



## Central University of Rajasthan

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817
GOLD MEDALISTS'LIST FOR APPROVAL BY ACADEMIC COUNCIL

## 5th Convocation

Integrated M.Sc. B.Ed. Programme Batch - 2015

| S.No. | Enrolment No. | Names | Batch | Programme | Department | CGPA | Signature of Head It-Charge |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 20151 MSBCHO 5 | Jyoteshna Kharb < | 2015 | Integrated M.Sc. B.Ed. Chemistry | Chemistry | 8.76 | Mamas |
| 2 | 2015IMSBEC002 | Chandan Kumari Dubey - | 2015 | Integrated M,Sc. B.Ed. Economics | Economics | 7.91. | Ar |
| 3 | 20151MSBMT018 | Preeti Meena - | 2015 - | Integrated M.SC. B.Ed. Mathematics | Mathematics | 8.66 | $m$ |
| Prepared by:- |  |  |  |  |  |  |  |
| Checked by:- N/DN, |  |  |  |  |  |  |  |

# Central University of Rajasthan <br> Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817 

## GOLD MEDALISTS'LIST FOR APPROVAL BY ACADEMIC COUNCXL.

## 5th Convocation

Integrated M.Sc. Programme Batch-2013


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11.09 .2018

Controller of Examinations

## Central University of Rajasthan

 Bandarsindri, Jaipur-Ajmer Highway, NH-08, Distt. Ajmer 305817
## GOLD MEDALISTS'LIST FOR APPROVAL BY ACADEMIC COUNCIL

5th Convocation

| S.No. | Enrolment No. | Names | Batch | Programme | Department | CGPA | Signature of Head In-Charge |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2016MARCH003 | Sojo James | 2016 | M.Arch. - | Architecture | 8.90 | chelo |
| 2 | 2015ADID011 | Monu Jangid | $\begin{aligned} & 2015 \\ & \text { (JAN) } \end{aligned}$ | $\begin{gathered} \hline \text { B.Voc. } \\ \text { (Interior Design) } \end{gathered}$ | Architecture | 5.66 | $\mathrm{Ne}_{2}$ |
| 3 | 2015 ADID047 | Surbhi Maheshwari | $\begin{gathered} 2015 \\ \text { (JULY) } \end{gathered}$ | B.Voc. (Interior Design) | Architecture | 8.66 | Nu |
| 4 | 2016MSBC008 | Shruti Panwar - | 2016 | M.Sc. Biochemistry | Biochemistry , | 8.69 |  |
| 5 | 2016MSBT004 | Khushboo Rani - | 2016 | M.Sc. Biotechnology | Biotechnology | 8.59 | $\sqrt{4} h$ |
|  | 2016MSC004 | Kajol Yadav - | 2016 - | M.Sc. Chemistry | Chemistry - | 8.22 |  |
| 7 | 2016MCOM004 | Komal Jangid - | 2016 - | M.Com | Commerce | 9.13 | $O\left(\mathrm{H}^{2}, 1\right)^{\circ}$ |
| 8 | 2016MSCS008 | Kiran Scaria - | 2016 | M.Sc. Computer Science | Computer Science - | 9.57 | $\mathrm{NWH}^{-}$ |
| 9 | 2016MSBDA018 | Tinamunam Sahoo < | 2016 | M.Sc. CS (Big Data Analytics) | Computer Science | 8.08 | Ba |
| 10 | 2016MACMS003 | Dasharath Singh | 2016 - | M.A. Culture and Media Studies. | Culture and Media Studies | 8.25 | Arn |
| 11 | 2016MAE003 | Isha Sharma .- | 2016 - | M.A. Economics | Economics - | $7.75{ }^{-}$ | $A$ |
| 12 | 2016MAEN013 | Nirmal Joseph - | 2016 - | M.A. English | English,- | 8.00 | ongauro |
| 13 | 2016MSES009 | Siddhartha Sarkar , | 2016 | M.Sc. Environmental Science | Environmental Science | 8.64 | Xoomy |
| 14 | 2016MSATS004 | Pradeep Attri - | 2016 | M.Sc. <br> Atmospheric Science | Atmospheric Sciencé | 8.09 | $\frac{3 / 1 w}{n}$ |
| 15 | 2016MAH015 | Tarachand Kumawat | 2016 | M.A. Hindi | Hindi - | 7.96 | $\sin \|2\|$ |
| 16 | 2016MBA010 | Kanika Runwal | 2016 - | MBA - | Management | 8.91 |  |
| . 7 | 2016MSMB009 | Priyanka | 2016 | M.Sc. <br> Microbiology | Microbiology - | 8.78 | $x$ |
| 18 | 2016MPHARM004 | Harsha P J - | 2016 - | M.Pharm - | Pharmacy - | 7.98 |  |
| 19 | 2016MSPH005 | Premashis Kumar , | 2016 | M.Sc. Physics | Physics - | 8.08 | $\mathrm{Don}$ |
| 20 | 2016MPPLG004 | Deepika Kumari Meena < | 2016 - | M.A. Public Policy, Law \& Governance | Public Policy, Law \& Governance | 8.04 - |  |
| 21 | 2016MSW008 | Hamzah Hassan Motta - | 2016 , | M.A. Social Work | Social Work - | 7.71 | Bro |
| 22 | 2016MSTA005 | Mareeswaran M. | 2016 | M.Sc. Statistics | Statistics | 7.58 - |  |

Prepared by:

Welsunti 11.09 .2018<br>Controller of Examinations

## Central University of Rajasthan

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Dist. Ajmer- 305817

DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

YEAR OF AWARD: 2018

Doctor of Philosophy (Ph.D.)

Name of School : School of Life Sciences
Department : Biochemistry

| SI.No. | Enrollment No. | Student Name | Date of Viva-Voce |
| :--- | :--- | :--- | :---: |
| 1 | 2012 PHDBC01 | Ankit Sharma | $12 / 10 / 2018$ |



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# Central University of Rajasthan 

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DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL.
YEAR OF AWARD: 2018

Doctor of Philosophy (Ph.D.)

Name of School : School of Chemical Sciences and Pharmacy
Department : Chemistry

| SI.No. | Enrollment No. | Student Name | Date of Viva-Voce |
| :--- | :--- | :--- | :---: |
| 1 | 2012 PHDCH01 | Heena Inani | $19 / 02 / 2018$ |
| 2 | 2013 PHDCH07 | Shivani Sharma | $24 / 08 / 2018$ |

Prepared and Checked by:-


Head of the Department
Controller of Examinations

## Central University of Rajasthan

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Dist. Ajmer- 305817

DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

YEAR OF AWARD: 2018

Doctor of Philosophy (Ph.D.)

Name of School : School of Mathematics, Statistics and Computational Sciences Department : Computer Science

| SI.No. | Enrollment No. | Student Name | Date of Viva-Voce |
| :--- | :--- | :--- | :---: |
| 1 | 2012 PHDCS01 | Anju Yadav | $07 / 12 / 2017$ |




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Bandarsindri, Jaipur-Ajmer Highway, NH-08, Dist. Ajmer- 305817

DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

YEAR OF AWARD: 2018

Doctor of Philosophy (Ph.D.)

Name of School: School of Humanities and Languages
Department : English

| SI.No. | Enrollment No. | Student Name | Date of Viva-Voce |
| :--- | :--- | :--- | :---: |
| 1 | 2012 PHDEN01 | Ahamad Musfar PM | $20 / 02 / 2018$ |

Head of the Department

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## Central University of Rajasthan

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Dist. Ajmer- 305817 DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL

YEAR OF AWARD: 2018

Doctor of Philosophy (Ph.D.)

Name of School : School of Humanities and Languages
Department : Hindi

| SI.No. | Enrollment No. | Student Name | Date of Viva-Voce |
| :--- | :--- | :--- | :---: |
| 1 | 2013 PHDHINDI01 | Ajeet Kumar Patel | $04 / 04 / 2018$ |
| 2 | 2012 PHDHINDI01 | Akhilesh Kumar Sharma | $23 / 07 / 2018$ |



# Central University of Rajasthan 

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Dist. Ajmer- 305817

DEGREE AWARD LIST FOR APPROVAL BY ACADEMXC COUNCIL
YEAR OF AWARD: 2018

## Doctor of Philosophy (Ph.D.)

Name of School : School of Commerce and Management
Department : Management

| SI.No. | Enrollment No. | Student Name | Date of Viva-Voce |
| :--- | :--- | :--- | :---: |
| 1 | 2012 PHDMBA01 | Anuradha Agarwal | $23 / 02 / 2018$ |
| 2 | 2012 PHDMBA05 | Richa Mathur | $17 / 05 / 2018$ |



## Central University of Rajasthan

Bandarsindri, Jaipur-Ajmer Highway, NH-08, Dist. Ajmer- 305817

DEGREE AWARD LIST FOR APPROVAL BY ACADEMIC COUNCIL.
YEAR OF AWARD: 2018

Doctor of Philosophy (Ph.D.)

Name of School : School of Chemical Sciences and Pharmacy
Department : Pharmacy

| SI.No. | Enrollment No. | Student Name | Date of Viva-Voce |
| :--- | :--- | :--- | :---: |
| 1 | 2012PHDPHARM01 | Pakhuri Mehta | $03-10-18$ |



Head of the Department
Controller of Examinations

Central University of Rajasthan<br>Bandarsindri, Jaipur-Ajmer Highway, NH-08, Dist. Ajmer- 305817<br>DEGREE AWARD LIST FOR APPROVAL. BY ACADEMXC COUNCIL<br>YEAR OF AWARD: 2018<br>Doctor of Philosophy (Ph.D.)

Name of School : School of Social Sciences
Department : Public Policy, Law \& Governance

| SI.No. | Enrollment No. | Student Name | Date of Viva-Voce |
| :--- | :--- | :--- | :---: |
| 1 | 2014 PHDPPLG004 | Vinod Kumar Saroj | $24 / 05 / 2018$ |
| 2 | 2014 PHDPPLG002 | Nisikant Nayak | $25 / 07 / 2018$ |


elective courses prescribed for the programme as per approved scheme of examination and syllabus offered at the beginning of the programme.
21.3. The Board of Studies with approval of the School board and keeping in view the CBCS shall do the distribution of credits for different programmes. As a guideline following distribution will be considered:
a. Core Courses: $60 \%$ of total minimum credits for the Programme (These are courses that are essential for the Programme of study and may include foundational courses and general education courses)
b. Discipline Specific Electives: 20\% of total minimum credits for the Programme (These will be chosen by the students from the 'basket' of electives to be offered by the Department)
c. Generic Electives: 10\% (Electives from department / schools or other related schools as may be listed by the BoS of the respective schools)
d. Ability Enhancement Courses: 10\% (These may be courses directed towards enhancing life skills and/or employability skills and may be offered across all schools)
22. Ranking of Students and Award of Gold Medal
22.1. The first two ranks in every Programme of Studies shall be decided on the basis of Final Grade Point Average calculated for award of the certificate / degree.
22.2. One Student in each Programme of Studies shall be awarded the Gold Medal and Certificate of Merit, provide the student
a. should have first position with minimum $61 \%$ marks in aggregate of all courses i.e FGPA of 7 or mores and
b. should have passed all the Semesters of a Programme of Study without any break; and
c. should have passed all the Courses in a Programme of Study without any back log meaning thereby that he/she has not been awarded ' F ' or 'Dt' grade in any course; and
d. should have exhibited good conduct and character during the period of a Programme of Study. and
e. should not have faced any censure / punishment for any indiscipline during the programme of studies.

## 23. Examination and Other Fees

23.1. The CoE shall with approval of the Vice Chancellor, notify the fees payable by the students for various examinations, revaluation, transcripts, duplicate documents, and various certificates etc.
23.2. A student who has not paid the prescribed fees prior to examinations shall not ordinarily be eligible to appear in the examination.
23.3. The Vice-Chancellor may at his/her discretion, allow in certain cases of genuine hardship, an extension in the last date of payment of fees with or without finc. The result of such students shall, however, be withheld till all the dues are cleared.

## 24. Unfair Means

24.1. The University may deal with the cases of unfair-means or indiscipline as per
topic in a refereed Journal

- The scholar has made two paper presentations in conference/seminar.
- The scholar shall produce evidence in support of publication/ presentation in the form of a reprint or a letter of acceptance of the paper.
- Plagiarism Test. The scholar shall furnish the report generated by anti-plagiarism software, duly endorsed by the supervisor.

On the recommendation of DRC for submission of the thesis, the supervisor shall submit a panel of examiners (as specified below) and a synopsis (prepared by the candidate not exceeding 10 pages) along with DRC recommendation to the Dean (Research) for further processing. In order to expedite the process of evaluation, the panel will be placed to the Vice Chancellor for nominating the examiners. The process of obtaining the consent of the examiners shall be initiated at this stage, even before the submission of the thesis.

## SUBMISSION OF THESIS

## harse

A scholar shall submit five spizal bound copies of his/her thesis along with one in electronic form. The language of thesis shall be in English except in cases of research in Languages. The thesis must be prepared and bound as per the templates which will be available on the university's website.
A Ph.D. thesis must contain original contribution by the scholar; it may incorporate the text of any work which the candidate may have published on the subject. A scholar should not be allowed to submit in his/her thesis any work for which a Degree / Diploma has already been conferred upon him/her by this or any other university.
The supervisor shall satisfy himself/herself before submission of the thesis that it is a piece of research work characterized either by discovery of new facts or by fresh interpretation of facts or theories. In either case, it should provide evidence of the candidate's capacity for critical examination, original thinking and judgement. The thesis shall also be satisfactory as regards to clarity and correctness of language.
The Scholar shall furnish an undertaking that the thesis is free from plagiarism and Copy Rights. The Supervisor shall also certify, after verification using appropriate software, that the contents of the thesis are free of plagiarism and copyright regulations.
The thesis shall include a certificate from the supervisor with a declaration that the thesis incorporates the student's bonafide research and that the findings have not been submitted for award of any degree / diploma in this or any other university or institute of learning.
The application for submission of thesis shall be countersigned by the Head of the concerned department. The Head of the department through Dean of the School shall then forward the thesis to the Dean (Research) for further necessary action.

## PANEL OF EXAMINERS

Supervisors; (sole supervisor/joint supervisor/co-supervisor. if any) by default shall be examiners of the thesis.
In addition, there shall be two examiners appointed by the Vice Chancellor (as Chairman, Academic council) from panel of examiners submitted by the supervisor,
A Supervisor shall submit a panel of at least eight names of examiners not in the employment of CURAJ but from the concerned area of research along with their specialisations, preferably eminent Professors from reputed institutions, in the

# CENTRAL UNIVERSITY OF RAJASTHAN 

(Establisfied by an Act of Parfiament, the Central Universities Act 2009)
fittp://www.curaj.ac.in
School of Architecture
Department of Architecture
M.Arch. (Sustainable Architecture)

III Semester Exam
S. No.AA

Name of the Student:
Mother's Name:

Enrol.No.
2016MARCH016

Father's Name:

| S. No. | Course <br> Code | Course Title | Credits | Grade | Remarks |
| :---: | :--- | :--- | :---: | :---: | :--- |
| 1. |  |  |  |  |  |
| 2. |  |  |  |  |  |
| 3. |  |  |  |  |  |
| 4. |  |  |  |  |  |
| 5. |  |  | 2 | A | NPTEL Kharagpur |
| 6. | DSA(M*)-1 | IThdscape Architecture \& Site Planning Basic <br> Fundamentals |  |  |  |
| 7. |  |  |  |  |  |

Result: Completed the semester requirements

| CURRENT SEMESTER RECORD |  |  | CUMULATIVE SEMESTER RECORD |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Credits | Grade Points | SGPA | Credits | Grade Points | CGPA |
| 29 | 200 | 6.90 | 75 |  |  |

Note: Grades and grade points awarded on ten point scale.
*M stands for MOOC course
Month and Year of Exam: Nov-Dec, 2017
Result Declared on: 05/01/2018

Prepared by: $\qquad$
Checked by: $\qquad$ Controller of Examinations

# SSS 320: Syllabus for Elective Course: Governance and Social Accountability CURAJ and Public Affairs Centre 

Nature of the Course: Open Elective<br>Credit Hours (4 Credits)<br>Instructors: Faculty of CURAJ and Public Affairs Centre<br>Teaching Methods: Lectures, Workshops, Assignments<br>Evaluation Methods: Written Examination, Assignments, Classroom Participation


#### Abstract

About the Course: Central University of Rajasthan in collaboration with Public Affairs Centre (PAC)Bangalore intends to introduce this practical oriented syllabus to the students of the School of Social Sciences mainly the Department of PPLG, Economics and Social Works. This syllabus is designed to help the students to understand social accountability tools which are used by many Research Institutes, Think-tanks and NGOS and evaluation groups to critically examine the outcomes of programmatic interventions of the Governments at all levels- Districts, State and Central Government.


Objectives: The objective of the course is to help the students to get hands-on training of the advanced tools of social accountability which are in practice in social action research, policy research and economic analysis.

Course outline:

## Unit-I: Indian Government and Constitution

- Government: its structure and function. Judiciary, the executive and the legislature structure functions of the representative government from grass-roots levels to state and central Government.
- The constitution, appex institutions, statutory. Governor, information commissioner, lokayukta, opposition party leader, privileges and discretion of MP/MLA/MLCs.
- Public finance, sources of revenue, main expenditure heads, Budgetary Management and Reforms (revenue /fiscal deficit, loan burden, etc); understanding planning commission, Niti Ayog and process of policy formation.
- DPDC (District Planning Development Council) and its functions


## Unit-II: Social Accountability, Social Audit Social Compliance

- Social Accountability: The Concept, theory and practice; its political economy; role in global development debate. Social audit methods, process and principles.
- Social compliance in difference sectors of programming; Education, health care, rural-urban development, development of marginalised sections
- Participatory approaches, stakeholders engagement, Stakeholders analysis, Budget analysis, Gender Mapping,
Unit-III: Social Accountability of Government programme
- Participatory Governance: Opportunities and Threats; The last mile problem - Awareness, Advocacy and Action;
- Social Accountability Tools used for assessing Government Programme- the types (e.g., Citizen Report Cards, CRC+, Community Score Cards, Climate Change Score Cards, Community Led Environmental Impact Assessment, and so on; their usage; evidence from the field;
- Measuring Governance - Role of data and indices


## Unit-IV: Social Accountability in Industrial Sector

- The Global Reporting Initiative and Corporate Sustainability Reporting Guidelines. Social Accountability International's SA8000 standard. Accountability's AA1000 standard, (based on John Elkington's triple bottom line (3BL) reporting.
- ISO 14001 environmental management Standard Social Life Cycle Assessment UNEP Guidelines. Impact Assessment
- Corporate governance, Corporate social responsibility (CSR) and accountability, transparency
- Concept of ethical trade and fair trade, Standards, conventions and recommendations under International Labor Organization (on human rights, labour, environment), Accountability models and strategies at national, state, local levels.
Unit-V: Social Accountability for Civil Society Organizations
- Requisite, norms and standards for civil society organizations and Business house towards social accountability.
- Stakeholder, Budgeting, planning effective governance and financial management
- Internal procedure, administrative and programme expanses
- Social Accountability Standards (SAS), Fundamental documents, Trustees and Board members, meetings and resolutions, accounting policies, staff policies, appointment of independent auditor, ratio analysis, linking programme with finance, social accountability report


## Essential Reading Lists:

## Social Accountability

1. Paul, Samuel, 2002, Holding the State to Account: Citizen Monitoring in Action, Books for Change, Delhi.
2. Governance, Social Accountability and the Civil Society by Raza Ahmad (http://controlatugobierno.com/archivos/bibliografia/ahmad.pdf)

## Citizen Report Cards

1. Improving local governance and pro-poor service delivery: Citizen Report Card e-learning toolkit (www.citizenreportcard.com)
2. Citizen Report Card surveys: A note on the concept and methodology (Swarnim Wagle, Janmejay Singh and Parmesh Shah), 2004 (https://openknowledge.woridbank.org/handle/10986/11277)
3. How-to notes: Citizen Report Cards - monitoring citizen perspectives to improve service delivery (Sanjay Agarwal, David Post, Varsha Venugopal), 2013 (http://documents.worldbank.org/curated/en/2013/01/18114593/dealing-governance-corruption-risks-project-lending-citizen-report-cardsmonitoring-citizen-perspectives-improve-service-delivery)
4. Social Audit of Public Service Delivery in Karnataka (http://www.pacindia.org/reports/social-audit-of-public-service-deliverv-in-karnataka )
5. An Assessment of the Services of Bangalore Water Supply and Sewerage Board (using the Citizen Report Card approach) - http://pacindia.org/2018/02/08/bwssb2016/

## Community Score Cards

1. Note on Community Score Cards - https://siteresources.worldbank.org/INTPCENG/1143333. 1116505690049/20509286/comscorecardsnote.pdf
2. The role of Community Score Cards in improving service delivery http://siteresources.worldbank.org/EXTSOCIALDEVELOPMENT/Resources/244352. 1193949504055/4348035-1296838689014/7712311-1298494972121/Rapid-Feedback.pot

## Additional Reading Lists

1. Ablo, Emmanuel and Ritva, Reinikka (1993): "Do Budgets Matter? Evidence from public spending on education and health in Uganda", Policy Research Working Paper no.1926, World Bank Development Research Group, Washington, D.C.
2. Alyar, Yamini and Amitabh, Behar (2005): "Budget Work in India", Economic and Political Weekly, January 8.
3. Aiyar, Yamini and Vivek, Ram Kumar (2008): "Country Report: India", International Budget Partnership, Washington.
4. Ayyar, Vaidyantha, 2009, Public Policy Making in India, Pearson, New Delhi.
5. Barthwal, C.P. and Kumkum Kishore (eds.), 2003, Public Administration in India (Current Perspectives), A.P.H. Publishing Corporation, New Delhi.
6. Basu, D. D., 2004, Introduction to the Constitution of India; Prentice Hall: New Delhi.
7. Bhanu, Vinod (2007): "Recall of Parliamentarians: A Prospective Accountability", Economic and Political Weekly, December 12, Vol.42, No. 52.
8. Bhanu, Vinod (2008): "Recall of the Legislators: The Chattisgarh Experiment", Economic and Political Weekly, October 4, Vol.43, No. 40.
9. Brian, Wampler (2000): "A Guide to Participatory Budgeting", The World Bank,
10. CBGA (2012) Manual on Social Accountability: Concepts and Tools, New Delhi: Centre for Budget and Governance Accountability
11. Chandoke, N., 2003, 'The Civil and the Political in Civil Society', Carolyn M. Elliott (ed), Civil Society and Democracy: A Reader, Oxford University Press, New Delhi,
12. Court, Julius, Enqique Mendizabal, David Oborne and John Young, 2006, Policy Engagement: How Civil Society Can be More Effective, Overseas Development Institute.
13. de Renzio, Paolo and Warren Krafchik (2007): " Lessons from the Field: Impact of Civil Society Budget Analysis and Advocacy in Six Countries", International Budget Project, Washington, D.C.
14. Dehn, Jan, Ritva Reinikka and Jacob, Svensson (2003): "Survey Delivery Tools for Assessing Performance in Service Delivery", Public Services Research, World Bank
15. Diokno, Maria Socorro I. (1999): 'A Rights-Based Approach towards Budget Analysis', International Human Rights Internship Programme, October 1999.
16. Mathur, Kuldeep 92009) From Government to Governance: A Brief Survey of the Indie Experience, New Delhi: NBT
17. Fundar, International Human Rights Internship Programme and International Budget Project (2004): 'Dignity Counts', accessible at http://internationalbudget.org/wp-content/uploads/ Dignity-Counts-A-Guide-to-Using-Budget-Analysis-to-Advance-Human-Rights-English.pdf
18. Godbole, Madhav. "Good Governance: A Distant Dream," Economic and Political Weekly (Mar 13, 2004): 1103-1107
19. Goetz, A and Gaventa, J. (2001): "Bringing citizen voice and client focus into service delivery", Institute of Development Studies, Brighton.
20. Goetz, Anne Marie and Rob Jenkins (1999): "Accounts and Accountability: Theoretical Implications of the Right to Information Movement in India", Third World Quarterly, Vol. 20, No. 3.
21. Governance in India : M Lakshmikant (McGraw Hill)
22. History of Modern India: Bipin Chandra
23. India After Gandhi: Ramchandra Guha
24. Jain, R.B., 2001, Public Administration in India - 21st Century Challenges for Good Governance, Deep \& Deep Publications Pvt. Ltd., New Delhi.
25. Jain, S.P., (ed.), 1995, Panchayati Raj Institutions in India: An Appraisal. Hyderabad. NIRD, 1995. Mathur, Kuldeep and James Warner Bjorkman, 1994, Top Policy Makers in India: Cabinet Minister and Their Civil Service Advisors, Concept Publishers, New Delhi.
26. Karuna Vakati, Aakella and Sowmya Kidambi (2007): "Social Audits in Andhra Pradesh: A Process of Evolution", Economic and Political Weekly, 24 November
27. Kidambi, Soumya (2008): "Right to Know, Right to Live: Building a campaign for the right to information and accountability", The Center for Victims Torture.
28. Kohli, Atul (1991): "Democracy and Discontent: India's Growing Crisis of Governability", Cambridge University Press, Cambridge.
29. Krafchik, Warren, "Can Civil Society add value to budget decision making? A deseription of civil society budget work", International Budget Partnership, Washington. http://www.internationalbudget.org/...brary/civilsociety.pdf
30. Mander, Harsh, 2003, Corruption and the right to Information in Rajesh Tandon and Ranjita Mohanty (eds), Civil society and Governance Issues and Problems, Sage, New Delhi.
31. Mathur, Kuldeep and James Warner Bjorkman, 2009,Policy-Making in India: Who Speaks? Who Listens?,Ashok Gosain and Ashish Gosain for Har-Anand Publications Ltd., New Delhi
32. Mathur, Kuldeep, 2008, From Government to Governance: A Brief Survey of the Indian Experience, National Book Trust, New Delhi.
33. Norton, Andy and Diane Elson (2002): 'What's behind the budget? Politics, rights and accountability in the budget process', Overseas Development Institute, June 2002, p. 5
34. Posani, Bala and Yamini Aiyar (2009): "State of Accountability: Evolution, Practice and Emerging Questions in Public Accountability in India", Al Working Paper No. 2, Accountability Initiative, New Delhi.
35. Public Affairs Centre (2018) Public Affairs Index AI 2018, Bangalore (Read with other PAC publication)
36. Ram Kumar, Vivek (2008): "Our Money, Our Responsibility: A Citizen's Guide to Monitoring Government Expenditure", The International Budget Project, Washington.
37. Robinson, Marc (2006): "Budget Analysis and Policy Advocacy: The Role of Non-Governmen: Public Action", Working Paper No. 279, Institute of Development Studies, Brighton.
38. Tandon, Rajesh and Ranjita Mohanty, 2000, 'Civil Society and Governance: A Research Study in India', part of Global Comparative Research Study on Civil Society and Governance Coordinated by IDS, Sussex, U.K. at www.eldis.org/static/doc10892.htm-29k
39. Zimmermann, Klaus F., "Advising Policymakers through the Media," The Journal of Economic Education, Vol. 35, No. 4 (Fall, 2004): 395-406.


# School of Sports Sciences 

Department of Sports Biosciences


Proposed Syllabus for

## M.A. / M.Sc. in Sports Psychology

Central University of Rajasthan NH-8, Bandar Sindri, Kishangarh-305817 Dist. - Ajmer (Rajasthan)

## M.A. / M.Sc. Sports Psychology

SEMESTER I (Total credits: 24)
$\left.\begin{array}{|l|l|l|l|}\hline \text { Code } & \text { Title of Course } & \text { Type of Course } & \text { Credits } \\ \hline \text { MSSPY 101 } & \text { Human Anatomy and Physiology } & \text { Core } & 3 \\ \hline \text { MSSPY 102 } & \text { Biomolecules and Metabolism } & \text { Core } & 3 \\ \hline \text { MSSPY 103 } & \text { Kinesiology } & \text { Core } & 3 \\ \hline \text { MSSPY 104 } & \text { Psychological and Social Aspects of Sports } & \text { Core } & 3 \\ \hline \text { MSSPY 105 } & \text { Biomechanics and Motor Learning } & \text { Core } & 3 \\ \hline \text { MSSPY 106 } & \begin{array}{l}\text { Elective I } \\ \bullet \bullet \text { Elective from any other Department } \\ \bullet \bullet \text { Sports First Aid \& Emergencies } \\ \bullet \text { History of Physical Education and Sports } \\ \bullet \\ \\ \end{array} & \text { Elective } & 3 \\ \hline \text { MSSPY 107ological Aspects of Ageing }\end{array}\right)$

SEMESTER II (Total credits: 24)

| Code | Title of Course | Type of Course | Credits |
| :--- | :--- | :--- | :--- |
| MSSPY 201 | Principles and Methods of Sports Training | Core | 3 |
| MSSPY 202 | Exercise Physiology and Metabolism | Core | 3 |
| MSSPY 203 | Fatigue, Injuries and Rehabilitation | Core | 3 |
| MSSPY 204 | Food and Nutrition | Core | 3 |
| MSSPY 205 | Statistics for Sports Science | Core | 3 |
| MSSPY 206 | Elective II <br> $\bullet$ <br> Elective from any other Department <br>  <br> $\bullet \quad$ Kinanthropometry in Sports <br> $\bullet \quad$ Health Fitness and Wellness | Elective | 3 |
| MSSPY 207 | Laboratory III |  |  |
| MSSPY 208 | Laboratory IV |  |  |

SEMESTER III (Total credits: 24)

| Code | Title of Course | Type of Course | Credits |
| :--- | :--- | :--- | :--- |
| MSSPY 301 | Cognitive Psychology in Sports | Core | 3 |
| MSSPY 302 | Psychology of Athletes, Coaching and Officiating | Core | 3 |
| MSSPY 303 | Psychometric and Psycho Diagnostic in Sports | Core | 3 |
| MSSPY 304 | Team Cohesion Dynamics | Core | 3 |
| MSSPY 305 | Professional Practices in Sports Psychology | Core | 3 |
| MSSPY 306 | Elective III <br> $\bullet$ <br> Elective from any other Department <br> • Developmental Psychology and Motor Skill Acquisition <br> $\bullet$ <br> Yoga and Mental Health <br> Psychology of Women and Special Population | Elective | 3 |
| MSSPY 307 | Laboratory V |  |  |
| MSSPY 308 | Laboratory VI | Core | 3 |

SEMESTER IV (Total credits: 24)

| Code | Title of Course | Type of Course | Credits |
| :--- | :--- | :--- | :--- |
| MSSPY 401 | Research Methodology | Core | 3 |
| MSSPY 402 | Journal Club Presentation | Presentation | 3 |
| MSSPY 403 | Major Project | Tutorial/Laboratory | 18 |

Unit-I
Anatomy and Physiology of: Blood, Cardiovascular System: Heart and Blood vessels, Lymphatic System, Integumentary System and Respiratory System

Unit-II
Anatomy and Physiology of: Nervous System, Special Senses, Endocrine System, Skeletal System, Joints and Muscular System
Unit-III
Anatomy and Physiology of: Digestive System, Immune System, Urinary System, Fluid and Electrolyte Balance, Reproductive System, Pregnancy and Human Development

Recommended Books:
Human Anatomy and Physiology ( $10^{\text {th }}$ edition) by Elaine N Marieb, Katja N Hoehn.
Introduction to Human Body- The Essentials of Anatomy and Physiology by Gerard J. Tortora
Textbook of Anatomy with Coloured Atlas by Inderbir Singh
Textbook of Medical Physiology by Arthur C. Guyton
Principle of Human Anatomy ( $10^{\text {th }}$ Edition) by Gerard J. Tortora.

- Gray's Anatomy: Anatomical Basis of Clinical Practice by Standring, Susan. Borley, Neil R. Gray Henry Human Physiology by C.C. Chatterjee Chowdhary Medical Physiology by S K Chowdhary
- Netter's Atlas of Human Anatomy by Frank H. Netter


## MSSPY 102

Biomolecules and Metabolism

## Credit 3

Unit I
Foundation of Biochemistry, Properties of Water, Amino Acids, Peptides and Proteins, Structure and Function of Proteins, Enzymes, Sugars, Carbohydrates and Glycobiology, Nucleotides and Nucleic Acids, Fatty Acids, Structure and Functions of Lipids.

Unit II
Principles of Bioenergetics, Major Metabolic Pathways in Human and its Relevance with Exercise, Glycolysis, Gluconeogenesis, Pentose Phosphate Pathway, Citric Acid Cycle, Electron Transfer System in Mitochondria, Oxidative Phosphorylation

Unit III
Basic Concepts and Design of Metabolism, Metabolic Regulation of Glucose and Glycogen, Biosynthesis of Carbohydrates, Lipid Biosynthesis, Fatty Acids Catabolism, Amino Acids- Biosynthesis, Oxidation and Production of Urea, Metabolism of Lactate, Integration and Regulation of Metabolism

Recommended Books:
Principles of Biochemistry- Lehninger Nilson and Cox W.H. Freeman
Principles of Biochemistry- Donald Voet, CW Pratt, JG Voet (2012) Wiley, ISBN:1118092449.
Principles of Exercise Biochemistry Editor(s): Poortmans J.R. (Brussels) Karger Publishers
BiochemistryJM Berg, TL Tymoczko L Stryer W. H. Freeman and Company
West \& Todd Text book of Biochemistry. Mac Millan Company London
G.P. Talwar \& ID Singh Textbook of Biochemistry \& Human Biology - Prentice Hall of India, New Delhi.

Vasudevan Textbook of Biochemistry. Jaypee Brothers Medical publishers (P) Ltd;

- Jain J.L., Jain Sanjay, Jain Nitin, S Fundamentals of Biochemistry -. Chand and Company Ltd, New Delhi.
A.C. Dev. Comprehensive Viva and practical Biochemistry. New Central Book Agency Pvt. LTD.


## Unit-I

Meaning of Kinesiology, Aims and Objectives of Kinesiology, Role of Kinesiology in Sports; Anatomical Position, Principles of Plane and Axis, Various types of movements

Unit-II
Bones: Meaning and composition of bone, Kinds of bones (flat, long, short, irregular and sesamoid), Function of bones, Bone fracture and its types; General features of the following bones: Upper Extremities: Clavicle, Scapula, Radius and Ulna, Humorous; Lower Extremities: Femur, Patella, Tibia, Fibula, Pelvic Bones; Joints: Meaning and types of joints, Joint flexibility, Technique to
increase the flexibilities, Structure, function, fundamental movements around the joints; General features, structure and movements of the following joints: Shoulder Complex, Elbow Complex, Hip Complex, Knee joint, Spinal column and Pelvic griddle

Unit-III
Introduction to Muscular System: Muscles and Tendons, Classification of muscles, Structure of Skelton muscle, classification of muscles basis of the fiber arrangement, Physiology of muscle contraction, types of muscle contraction, Role of the muscle in the movement, Methods of the studying the action of the muscle. Origin, Insertion and action of major muscle groups of the Body; Nervous System: Overview of Nervous system, Neurons, Motor Unit and Receptors.

Recommended Books:
Clinical Mechanics and Kinesiology With Web Resource, Human Kinetics, by Janice Loudon, Robert Manske, Michael Reiman

- Biomechanics and Kinesiology of Exercise - 2013 by Michael Yessis

Cynthia C. Norkin, Pamela K. Levangie : Joint structure \& function- A comprehensive analysis 2nd edition, Brunnstrom - Clinical Kinesiology, F.A. Davis.
Rasch and Burk: Kinesiology and Applied Anatomy, Lee and Fabiger.
Shaw, D, Pedagogic Kinesiology, Khel Sahitya Kendra, 2007.
Thompson, C., Manual of Structural Kinesiology. (10th Ed.), St. Louis: Times Mirror/ Mosby College Publishing, 1995 Shaw, Dhanonjoy, Kinsiology and Biomechanics of Human Motion, Khel Sahitya Kendra, 1998
White and Punjabi - Biomechanics of Spine - Lippincott.
Kapandji: Physiology of Joints Vol. I, II \& III, W.B. Saunders.

- Luttgens K., Hamilton N.: Kinesiology - Scientific Basis of Human Motion 9th Edi

Basic Biomechanics 4th edition, susan J. Hall, MCGraw Hill.

Unit-I
Sports Psychology and role of Psychology in Sports, Methods of Psychology employed in Sports, Motor leaning and Performance, Importance of Sports Psychology for Athletes, Coaches and other related to Sports settings

Unit-II
Personality and its role in Sports, Attention and Perception in Sports; Motivation and Goal setting and its role in Sports, Emotions in Sports, Stress and Anxiety in Sports, Biofeedback techniques in Sports

Unit-III
Sociology of Sports, Social Factors and Socio-metric techniques in Sports, Group processes, Team cohesiveness and Leadership in sports, Effect of crowd behaviour in Sports, Economics and Politics in Sports

Recommended Books:
Weinberg \& Gould, Foundations of Sports and Exercise Psychology. Human Kinetics 2016.
Motor Learning and Performance 5th Edition With Web Study Guide From Principles to Application, Human Kinetics by Richard Schmidt, Tim Lee
Morgan and King: Introduction to Psychology - Tata McGraw Hill.
M.L. Kamlesh Psychology in Physical Education and Sports by Publisher Mehopolitan book co. Pvt. Ltd., Netaji Subash Marg, New Delhi 11002.
Sanjeev. P. Sahni Psychology and its application in sports by, Publisher D.V.S. publications, 100, Giri Nagar Kalkaji, New Delhi-110019
Agyajit Singh Psychology of coaching by, Friends Publications, \# 101 Ansari Raod Darya Ganj, New Delhi-110002
Jitendra Mohan Recent Advances in Sports psychology, By, Publisher, Friends Publications.
Fundamentals of Sociology of Sport and Physical Activity, Human Kinetics by Katherine M. Jamieson, Maureen M. Smith
Doing Exercise Psychology, Human Kinetics by Mark Andersen, Stephanie Hanrahan
Social Issues in Sport 3rd Edition, Human Kinetics by Ron Woods

## MSSPY 105

Biomechanics and Motor Learning
Credit 3

Unit-I
Role of Bio-Mechanics in the field of Sports Science, Principles of Biomechanics; Biomechanical Concepts: Motion, Newton's law of angular motion and linear motion and its relationships, Force, Centripetal and centrifugal forces, Equilibrium, Centre of gravity and Stability, Freely falling bodies and Projectile, Momentum, Impulse, Lever and its Classification, Work, power, energy: Relationship of work, power and energy, Friction, Spin, Impact, Elasticity, Rebound, Fluid mechanics, Air resistance and Water resistance

Unit-II
Determine the simultaneous-sequential nature of a variety of movement skills, Classify motor skills using the classification system presented, .Bio-Mechanical analysis of fundamental skills: Walking, Running, Jumping, Pulling, Pushing, Lifting, Lowering, Throwing.

Unit-III
Introduction to Gait Analysis, Mechanical Analysis of Sports Skills: Athletics (Running, Jumping, And Throwing), Swimming, Football, Basketball, Volleyball, Cricket; Technological Use and Advances in Biomechanics: Techniques and Tools for Measurement of Biomechanical Variables

Recommended Books:
Biomechanical Analysis of Fundamental Human Movements by Arthur Chapman, 2008, Human Kinetics Biomechanics of Sport and Exercise 3rd Edition With Web Resource and MaxTRAQ 2D Educational Software Access-Loose-Leaf Edition, Human Kinetics, By Peter McGinnis

- Biomechanics and Kinesiology of Exercise - 2013 by Michael Yessis

Cynthia C. Norkin, Pamela K. Levangie : Joint structure \& function- A comprehensive analysis 2nd edition, F.A. Davis Company Philadelphia Brunnstrom - Clinical Kinesiology, F.A. Davis. Rasch and Burk: Kinesiology and Applied Anatomy, Lee and Fabiger. White and Punjabi - Biomechanics of Spine - Lippincott. Kapandji: Physiology of Joints Vol. I, II \& III, W.B. Saunders.

- Luttgens K., Hamilton N.: Kinesiology - Scientific Basis of Human Motion 9th Edi Basic Biomechanics 4th edition, susan J. Hall, MCGraw Hill. Joseph Hamill, Kathleen M. Knutzen. Biomechanical Basis of Human Movement


## MSSPY 106

## Elective I

## Credit 3

## Sports First Aid \& Emergencies

Unit-I
Introduction to Sports First Aid: Athletic Health Care Team, Sport First Aid Game Plan , First Aid Equipment and Kit, Basic Life Support System: Recovery Position, Head to toe- survey, Artificial Ventilation; Basic Sport First Aid Skills : Anatomy and Sport Injury Terminology, Emergency Action Steps , Physical Assessment and First Aid Techniques, Moving Injured or Sick Athletes

## Unit II

Sport First Aid for Specific Injuries : Unconsciousness: ABC, CPR, AED, Respiratory Emergencies and Illnesses , Shock, Wounds and Bleeding, Head, Spine, and Nerve Injuries, Internal Organ Injuries, Upper Body Musculoskeletal Injuries, Lower Body Musculoskeletal Injuries, Facial and Scalp Injuries, Skin Problems

Unit-III
Disaster Preparedness and Management: Weather-Related Problems, Environmental Emergencies: Animal Bites and Stings, Allergies, First Aid Protocols, Practical Skills in using: Triangular Bandages, Broad fold, Thin fold, Slings, Collars, Cardiac Emergencies

## Recommended Books:

Sport First Aid-5th Edition by Melinda Flegel, Human Kinetics, 2014

- American Red Cross, First Aid/CPR/AED : PARTICIPANT'S MANUAL

Practical First Aid: British red cross in Association with donning kinder sley
John Morris: First Aid Training Manual, Everyday learning PVT. Ltd
Authorized Manual of St. John Ambulance (India): First Aid
Bradley R.A. Wilson. Timothy E. Glaros : Managing Health Promotion Programs Human Kinetics Publishers.

## History of Physical Education and Sports

Unit 1
What are Play, Game and Sports? Types of sports and recreational activities, Importance of free play and organizational games, Terminology: Sports Science and Physical Education, Health related and Motor performance related fitness, health and wellness (physical, mental, psychological, social and spiritual) and athletics, Sports carriers: Media, Management, Performance, Coaching and other related areas.

Unit-II
Philosophy its need in Sports and Physical Education, Idealism, Naturalism and Pragmatism in Physical Education, Physical Education in Ancient Greek, Rome, India and Modern India. History of Olympic Games, Asian Games, SAARC Games and SAF games, National Sports Awards, trends and problems in Sports Sciences and Physical Education in $21{ }^{\text {st }}$ Century.

Unit-III
Introduction to general Rules and Regulations of Selected Sports, Introduction to Playfields and Track Specifications, General organizational process of Sports Competitions

## Recommended Books:

Bucher, C.A.: Foundation of Physical Education, St. Louis: The C.V. Mosby company, 1983
History and Philosophy of Sport and Physical Activity, Human Kinetics by R. Scott Kretchmar, Mark Dyreson, Matthew Liewellyn, John Gleaves, 2017
Synder and Geoh: Professional preparation in Health Education, Physical Education and Recreation..
Barrow, H.M.: Man and Movement: Principles of Physical Education, Philadelphia Lea and Fabiger, 1977
Joseph, P.M.: Organisation of Physical Education, Kandivila,: Old students Association, T.I.P.E.
Kamlesh, M.L. and Sangral, M.S. : History and Principles of Physical Education, Prakash Brothers, 1983.
Wuest and Bucher: Foundations of Physical Education and Sports, B.I. Publications Pvt. Ltd., New Delhi.
William, H.F.: Physical Education and Sports in Changing Society, Surjeet Publication, Delhi

## Physiological Aspects of Aging

Unit-I
Growth and Biologic Maturation: Relevance to Athletic Performance; Muscle Development During Childhood and Adolescence, Relevance to Understanding Effects of Growth on Performance, Growth and Maturation: Methods of Monitoring

Unit-II
Theory of aging, Age related changes in different body systems, Cardiovascular Concerns in the Young Athlete, Trainability During Childhood, Aging and muscular strength, aging and joint flexibility

Unit-III
Exercise guideline for geriatric populations. Introduction to Masters Sports and the study of older athletes, Aging, performance, and the role of continued involvement, Psychosocial issues in Masters sport, model of lifespan physical activity, health, and performance

## Recommended Books:

Helge Hebestreit and Oded Bar-Or (2008) The young athlete. Blackwell Publishing Ltd
Joseph Baker, Sean Horton and Patricia Weir ( 2000 ) The masters athlete: understanding the role of exercise in optimizing aging. Routledge

## MSSPY 107 <br> Laboratory I <br> Credits-3

- Introduction to laboratory techniques- pipetting, calculations, introduction to equipment's, sterile techniques and lab safety.

How to Use microscopes.
To study Counting Chambers.
To determine the total Red Blood Corpuscles count.
To determine the total Leucocyte Count in blood.
To make a blood smear and to determine the Differential Leucocyte Count.
To measure the Haemoglobin concentration of blood.
To measure Blood Pressure of a subject in different positions
Assessment of Iron Status of athletes
Calculation of Energy expenditure
Measurement of blood glucose Cholesterol/HDL, Glycerol, Lactate, Triglycerides
Biochemical Assessment of Metabolites of athletes.
Biochemical Assessment of Enzymes of athletes.
Biochemical Assessment of Hormones of athletes.
Estimation of sugars, iron, phosphate, vitamin C and organic acids.
Estimation of protein concentration.

Credits-3

To analyse various planes and axes of the body.
To demonstrate the surface anatomy and muscle attachments of following bones: Clavicle, Scapula, Humerus, Radius, Ulna, Meta Carpals, Phalanges, Femur, Tibia , Fibula, Patella, Tarsals and metatarsals
To demonstrate the following joints including corresponding muscles and movements of Upper Extremity: Acromioclavicular joint, Sternoclavicular joint, Shoulder joint, Elbow joint, Proximal Radioulnar joint, Distal Radioulnar joint, Wrist joint, Radio carpal joint, Thumb joint
To demonstrate the following joints including corresponding muscles and movements of Lower Extremity: Pelvic Girdle, Knee joint, Ankle joint, Tarso- metatarsal joint

## SEMESTER-II

Unit-I
Scientific basis of Sports Training, Importance, Aim and Objectives of Sports Training; Characteristics of Sports Training; Biological Process in Training; Components of Physical Fitness (motor abilities) - Endurance, Strength, Speed, Flexibility, Coordination; Agility

## Unit-II

Principles of training - Overload, Specificity, Progression and Reversibility; Meaning and concept of Training load; Adaptation and Recovery, Super Compensation, Training Structure - Volume, Intensity, Frequency, Peaking, Errors in Training, Training, Adaptations to Resistance Training, Adaptations to Aerobic and Anaerobic Training

## Unit-III

Training plan; Need and importance in planning; Types of training plans - short term and long term plans; Training and Competition Cycles (training conception, macro, micro, meso); Periodization - Need, Types; Aims of various phases of Periodization (Preparatory, competition and transition); Competition -Types of Competition Preparation for competition; the number and frequency of competition. Training athletes with disability, Adapted games for Disabled; Special Olympics and Paralympics, General structure of Rules and Regulations of different sports/games

Recommended Books:
Physiology of Sport and Exercise 6th Edition with Web Study Guide-Loose-Leaf Edition by W. Larry Kenney, Jack
Wilmore, David Costill.
Periodization-6th Edition Theory and Methodology of Training by Tudor Bompa, Carlo Buzzichelli
Physiological Aspects of Sport Training and Performance With Web Resource-2nd Edition, Human Kinetics By JayHoffman Recovery for Performance in Sport by Institut National du Sport de l'Expertise et de la Performance INSEP, Human Kinetics, Christophe Hausswirth, A. Mujika.
Essentials of Sports Training and Conditioning by JB Learning, NASM
Singh, H: Science of Sports training, DVS Publication, New Delhi, 1991.
Matweyev, L.P.: Fundamentals of Sports training, publication Moscow, 1984
Harre, D: Principles of sports training, Sportverlag, Berlin, 1988.
Singh, H: Science of Sports training: General theory and methods, NIS, Patiala, 1984.
Scholisch, M: Circuit training, Sportverlag, Berlin.
Willmore, J.H.: Athletic training and physical fitness, Antro and Becon Inc, Sydney

## Credit 3

## Unit-I

Introduction to Exercise Physiology: Definitions of terminologies (Work, Power, speed, strength, efficiency etc.); Types of exercise (aerobic and anaerobic) and limiting factors, Exercise intensity and duration, Adaptations to exercise: Physiological and metabolic adaptations to training; Muscle hypertrophy and performance, General principles of training: Exercise response (Modality, Intensity, Duration, categories, response patterns and interpretation); Exercise training (Health and sports related fitness, Dose-response relationship, training principles, periodization); Metabolic training principles and adaptations (specificity, overload, rest/recovery/adaptation, progression, individualization, maintenance, retrogression, warm-up and cool down).

## Unit-II

Adaptation of Respiratory and Cardiovascular Systems to exercise: Respiratory responses during exercise at varying intensities, Cardiovascular responses to exercise

## Unit-III

Metabolic adaptation to exercise, Fluid balance and Thermoregulation: Energy Production; Aerobic metabolism during exercise (oxygen and carbon-di-oxide production, oxygen cost of breathing, RER, Estimation of calorie expenditure, MET, Field estimates of energy expenditure, efficiency and economy), Fluid balance and Thermoregulation: Exercise in environmental stress; Thermal balance; Heat exchange; Exercise in the heat; Cardiovascular demands of exercise in the heat; Exercise in cold; Cold induced injuries; Maintaining fluid balance.

Unit IV
Adaptation of skeletal muscle, endocrine and immune system in training: Bone development; Factors influencing bone health; Skeletal adaptation to exercise training and detraining; Special applications in osteoporosis; Female athletic triad; Skeletal
injuries. Skeletal muscle and neuromuscular system, Importance of muscle fibre types in athletes; Skeletal muscle force production; Fatigue and muscle soreness;; Neuromuscular aspects of movement; The nervous system (basic structure and activation of nerve cell, neural control of muscle contraction, reflex control of movement, volitional control of movement, flexibility); Physiological response to stretching; Application of training principles to flexibility; Adaptation to flexibility

Recommended Books:
Christopher B. Scott. (2010). A Primer for the Exercise and Nutrition Sciences: Thermodynamics, Bioenergetics, Metabolism. Humana Press.
Raven, P., Wasserman, D., Squires, W., \& Murray, T. (2012). Exercise Physiology: An Integrated approach. Nelson Education.
ACSM's Resources for Clinical Exercise Physiology: Musculoskeletal, Neuromuscular, Neoplastic, Immunologic and Hematologic Conditions by American College of Sports Medicine
Powers, S. (2014). Exercise physiology: Theory and application to fitness and performance. McGraw-Hill Higher Education.
Smith, D. L., \& Fernhall, B. (2011). Advanced cardiovascular exercise physiology. Human Kinetics.
Farrell, P. A., Joyner, M., \& Caiozzo, V. (2011). ACSM's advanced exercise physiology.
Cheung, S. (2010). Advanced environmental exercise physiology. Human Kinetics.
Hale, T. (2005). Exercise physiology: a thematic approach (Vol. 5). John Wiley \& Sons.
Ehrman, J. K., Kerrigan, D., \& Keteyian, S. (2017). Advanced Exercise Physiology: Essential Concepts and Applications. Human Kinetics.
McArdle, W. D., Katch, F. I., \& Katch, V. L. (2015). Exercise physiology: nutrition, energy, and human performance. 8th Edition, Lippincott Williams \& Wilkins.

MSSPY 203
Fatigue, Injuries and Rehabilitation
Credit 3
Unit-I
Concept of Overloading, Overtraining, Fatigue and Staleness, Symptoms and Causes of Fatigue, Types of Fatigue, Theories associated with Fatigue, Definition, Types, Symptoms, Findings, Underlying Mechanisms and Frequency of Overtraining and Overtraining Syndrome, Oxygen Debt Theory, recovery oxygen uptake or excess post-exercise oxygen consumption (EPOC), Implications of EPOC for Exercise and Recovery, Optimal Recovery From Steady-Rate Exercise and Non-Steady-Rate Exercise, Intermittent Exercise and Recovery

## Unit-II

Sports Injury- Meaning, Classification, Causes, Types, General guidelines for their Prevention, Recovery Time, Introduction and Management of common Sports Injuries (Fracture, Dislocation, Laceration, Abrasion, Sprain and Strain), How to avoid Sports Injuries, Role of Warm-up and Cool Down

Unit-III
Rehabilitation: Meaning, Concepts, Objective and scope of Rehabilitation, Principal of care and Rehabilitation
Therapeutic Modalities: Electrotherapeutic modalities (Shortwave Diathermy, Ultra Sound, T.E.N.S), Heat and Cold, Soft tissue Massage, Aquatic Rehabilitation Exercise, Therapeutic Exercise, Therapeutic Nutrition, Psychological Rehabilitation

Recommended Books:
Shaun Phillips (2015) Fatigue in Sport and Exercise. Routledge, NY
Therapeutic Modalities for Musculoskeletal Injuries 4th Edition, Human Kinetics by Craig Denegar, Ethan Saliba, Susan Saliba, 2016
Essentials of Athletic injury management 10th edition by William E. Prentice, Human Kinetics.
Clinical Sports Medicine Fifth Edition by Peter Brukner, Karim Khan, McGraw-Hill Education Australia, 2016
Principles and Practice of Therapeutic Massage by Sinha, Jaypee Publishers
Textbook of Electrotherapy by Singh Jagmohan, Jaypee Publishers
Manfred Lehmann, Carl Foster, Uwe Gastmann, Hans Keizer and Jtirgen M. Steinacker(Eds) (1997) Overload, Performance Incompetence and Regeneration In sport. Kluwer Academic / Plenum Publishers, N.

## MSSPY 204 <br> Food and Nutrition <br> Credit 3

Unit-I
Nutrients: Functions and Recommended Intakes, Healthy Eating and Balanced Diet, Fuel Sources for Muscle and Exercise Metabolism, Energy: Food Energy and Expenditure, Gastric Emptying, Digestion, and Absorption.

Unit-II
Nutritional Role and Recommendations for following: Carbohydrate, Fat, Protein and Amino Acids, Water Requirements and Fluid Balance, Vitamins and Minerals, Nutrition Supplements.

Unit-III
Nutrition and Training Adaptations, Nutrition and Immune Function in Athletes, Body Composition and Weight Management, Eating Disorders in Athletes, Personalized Nutrition, Menu Planning (Meal Timing and Spacing)

Sport Nutrition 3rd Edition by Asker Jeukendrup, Michael Gleeson, Human Kinetics, 2018.
Nutrition for Sport, Exercise, and Health by Marie Spano, Laura Kruskall, D. Travis Thomas, Human Kinetics.
Physiology of Sport and Exercise 6th Edition with Web Study Guide-Loose-Leaf Edition by W. Larry Kenney, Jack Wilmore, David Costill.
Exercise Physiology: Nutrition, Energy and Human Performance 8th Edition by William D. McArdle, Frank I. Katch, Victor L. Katch

- Nancy Clark's Sports Nutrition Guidebook by Nancy Clark, Human Kinetics
- NSCA's Guide to Sport and Exercise Nutrition by National Strength Conditioning Association, Human Kinetics Fundamental of Foods, Nutrition \& Diet Therapy $5^{\text {th }}$ edition by S.R. Mudambi, M.V. Rajagopal, New Age International Limited, New Delhi.
Applied Nutrition. By R. Rajlaxmi, IBH Publications, New Delhi.
Nutritional Supplements in Sports, Exercise and Health: An A to Z Guide by Linda M. Castell, Smantha J. Stear, Louise M. Burke, Routledge.

MSSPY 205
Statistics for Sports Science
Credit 3
Unit-I
Introduction to Biostatistics, Frequency Distribution, Variable and Attribute, Line-diagram, Bar-diagram, Pie chart, Histogram, Mean, Median and Mode.

Unit-II
Variance, Standard deviation; Standard error of mean, Null hypothesis, Level of significance and Probability; Regression and correlation.

Unit-III
Student‘s t-test, Fisher's t-test, Chi-square test, Analysis of Variance (ANOVA), ANCOVA, Introduction and Application of Statistical Software

Recommended Books:
A Text book of Biostatistics, by A.K.Sharma, Discovery publishing house
Introduction to Biostatistics, By Dr. Pranab Kumar Banerjee, S. Chand Publishers
Research Methodology: Methods and Techniques Book by C. R. Kothari
Dutta N.K. Fundamentals of Bio-Statistics. 2002; Kanishka Publishers, New Delhi.
Gupta S.P. Statistical Methods. 2004; S. Chand \& Sons, New Delhi
Ruud H. Koning and James H. Albert (2008) Statistical thinking in sports. Chapman \& Hall/CRC
MSSPY 206

## Elective II

Credit 3

## Kinanthropometry in Sports

Unit-I
Introduction, scope and general consideration, i.e. Application of anthropometric data in sports, Body proportions and indices, Sports specific body proportions and indices, Body mass index and its importance in sports'

## Unit-II

Anthropometric Measurements and Procedures, Equipment for anthropometric measurements, Gross Body Measurements and procedures, Length of Body Parts, Measurements and procedures, Diameters of Body Parts, Measurements and procedures, Circumferences of Body Parts, Measurements and procedures, Skinfold Thickness, Measurements and procedures.

Unit-III
Physiological Maturation: Decimal Age and concept of Physiological maturity in sports. Assessment of skeletal maturity of athletes, Body Composition: Anthropometric determination, Importance in sports and various methods to estimate body composition, Somatotyping: Introduction, Definition of Somatotyping and Classification

## Recommended Books:

Sports Anthropemetry by H.S. Sodhi, ANOVA Publication.
Physique and Selection of Sportsmen by H.S. Sodhi and L.S. Sidhu.
Kinanthropometry by S.P. Singh and P. Malhotra, Luna Publication, Patiala.
Kinanthropometry by Roger Eston and Thomas Reilly, E \& F.N. SPON, London.
Skeletal Maturity by S.P. Singh, L.S. Sidhu, and J. Singh, Human Biology Publication Society, Punjabi University, Patiala. Genetic and Anthropological Studies of Olympic Athletes by De Garray, Louis Levine \& Cater, Academic Press, London.

## Health Fitness and Wellness

Unit-I
Introduction to Health: Concept of health, Lifestyle and Disease, Ageing
Unit-II
Physical Activities \& Fitness: Concept to Fitness, Exercise and its Principles, Health Education Recreation \& Dance
Unit-III
Healthy Life Style Approach: Concept of Wellness, Wellbeing, Stress Management
Recommended Books:
"Fitness and Wellness" : Warner W. K Hoeger and Sharvon A. Hoegor
"Fitness \& Wellness concepts": Charles B. Corbina \& Ruth Lindsey
"Lifetime Fitness \& Wellness - A personal choice": Melvin H. Williams
Oxford Textbook of Public Health, Helen Liepman.
Sunderlal, Aadarsh, Pankaj, 2007, Textbook of Community Medicine, CBS Publishers \& Distributors.
Kirch, Wilhelm, 2008, Encyclopedia of Public Health, Volume 1 \& 2, Kluwer Academic Publishers.
Mary -Jane Schneider and Henrey Schneider, 2006 (2nd edition), Introduction to Public Health, Jones and BartlettPublishers.

## Adaptations to Exercise and Training

Unit-I
Cardiovascular Adaptations to Endurance and Strength Training, Hypertrophy and Cardiomyopathy in Young and Older Athletes, Heart rate training zone, Effects Of High Altitude, Sudden Cardiac Death and Exercise in Healthy Adults

Unit-II
Respiratory System Adaptations to Endurance and Strength Training, Ventilatory response to exercise and its use in sports, Ventilatory threshold, Effects Of Exercise, response to steady- state exercise, Exercise-Induced Bronchoconstriction, Control of Breathing during exercise; The Respiratory System under Stress, respiratory systems adaptation to long-term exercise, Adaptations to systematic Training, Effects Of High Altitude

## Unit-III

Muscular Mechanisms in Aerobic Endurance Training; Neural Mechanisms in Aerobic Endurance Training, Muscle Molecular Mechanisms in Strength Training, Muscle Property Changes in Strength Training, Neural Mechanisms in Strength Training. Initial responses of the neuromuscular systems to exercise; Training Adaptation of the Neuromuscular System

Recommended Books:
Roy J. Shephard and Henry S. Miller, Jr. (1999) Exercise and the Heart in Health and Disease. Marcel Dekker
Shephard, R.J. and Astrand, P.-0. (1992) Endurance in sport. Blackwell Science Ltd, USA
McArdle, W.D., Katch, F.I., Katch, V.L. (2006) Essentials of Exercise Physiology. Lippincott Williams and Wilkins, USA.
Victor F. Froelicher, Jonathan Myers (2006) Exercise and the heart. Elsevier Inc.
Christopher B. Cooper and Thomas W. Storer (2004) Exercise testing and interpretation- A practical approach. Cambridge University Press.
K. Wasserman, J Hansen, D Sue, W Stringer, B Whipp, eds (2004) Principles of Exercise Testing and Interpretation, 4th edn.. Lippincott Williams \& Wilkins, Philadelphia, USA.
Christopher Bell. Cardiovascular Physiology in Exercise and Sport . 1st Edition. 2008; Churchill Livingstone
Michael G. Levitzky. Pulmonary Physiology, 8e. 2013; Lange. The McGraw-Hill Companies.
Denise L. Smith and Bo Fernhall (2011) Advanced cardiovascular exercise physiology. Human Kinetics
MSSPY 207
Laboratory III

## Credit 3

Techniques of taking various anthropometric measurements
To define and illustrate various body landmarks
Gross body measurements: Body weight $(\mathrm{Kg})$, Stature, sitting height, Height of interior superior Iliac spine, Subischial length. Diameters or Breadths (cms): Bicristal diameter (Shoulder Breadth), Transverse chest diameter, Antero-posterior chest diameter, Femur bicondylar diameter (knee breadth), Humerus Bicondylar diameter (elbow Breadth)
BMI Estimation with and without software
Assess Energy and Nutrient intake from Diet using suitable Software
Circumferences or Girths of body parts, Calf circumference, Thigh circumference, Waist circumference, Chestcircumference Skinfold measurement and Body Fat Percentage calculations
Training Program: Circuit Training Program, Interval Training Program, Ballistic Training Program, Fertlek Training Program

Aerobic Power Field Assessments: Cooper 1.5-Mile Run/Walk Test and 12-Minute Run/Walk Test, Rockport Fitness Walking Test

- High-Intensity Fitness Testing: Léger 20 m Shuttle Run Test, Yo-Yo Intermittent Recovery Test, 30-15 Intermittent Fitness Test, Sprinting Performance, Jumping Performance, Power Endurance, Anaerobic Cycling Power, Margaria-Kalamen StairClimb Test, BROCKPORT test system, AAHPER health related physical fitness test, Philips JCR test for General motor ability testing
Tests for: Speed, Agility, Balance, Coordination, Reaction time, Flexibility
Sports Skill Tests for: Soccer, Basketball, Hockey, Tennis


## SEMESTER III

MSSPY 301
Cognitive Psychology in Sport
Credit 3
Unit I
Information Processing System: Meaning, Definition and structure of Cognitive Processes: [Sensation, Perception, Imagination, Memory], Information processing, Decision making and Thought Process

Unit II
Attentional Process and Concentration: Definition of Attention and Concentration, Theories of Attention, Types of Attention, Role of Attention \& Concentration in Sports

Unit III
Intelligence and Sport : Meaning and Definition of Intelligence, Theories of Intelligence and Models (Charles Spearman - General Intelligence, Louis L. Thurstone - Primary Mental Abilities, Howard Gardner - Multiple Intelligences), Measurement of Intelligence

Unit IV
Cognitive Process and Sport: Multiple Intelligence and Emotional Intelligence, Factors affecting Intelligence, Intellectual capabilities in Sport, Importance of Sport Psychology and Cognitive processes in Physical Activity and Sports.

Recommended Books:
Weinberg \& Gould, Foundations of Sports and Exercise Psychology. Human Kinetics 2016.
Motor Learning and Performance 5th Edition With Web Study Guide From Principles to Application, Human Kinetics by
Richard Schmidt, Tim Lee
Morgan and King: Introduction to Psychology - Tata McGraw Hill.
M.L. Kamlesh Psychology in Physical Education and Sports by Publisher Mehopolitan book co. Pvt. Ltd., Netaji Subash Marg, New Delhi 11002.
Doing Exercise Psychology, Human Kinetics by Mark Andersen, Stephanie Hanrahan

## Credit 3

Unit I
Athletes and Coaching: Types of athletes and coaching approach, Types of coaches and officials, Levels of athletes, coaches and officials.

## Unit I

Coaching Styles: Philosophy of Coaching, The coaching process and the role of a Coach, Coaching as an Inter-personnel relationship, Coaching in it social context.

Unit III
Officials and Officiating: Psychology of Sport Officials (Psychological qualities of good Officials), Developing good Qualities in Officials, Psychological preparation for Officiating (Pre, During, Post Competition).

## Unit IV

Psychological Preparation: Psychological preparation of athletes (short term and long term) coaches and officials, Psychological skill training and Personnel development skills (communication skills, time management, conflict resolution), Psyching up and psyching down strategies for athletes, coaches and officials.

Recommended Books:
Berger, B.G., Pargman, D., \& Weinberg, R.S. (2006) Foundations of Exercise Psychology, 2nd Ed. Morgantown, WV: Fitness Information Technology.

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Gill, Diana L (2008) Psychological Dynamics of Sport & Exercise, 3rd ed. Human Kinetics Publishers, Inc Champaign IL.
Horn, Thelma (2008) Advances in Sport Psychology Human Kinetics Publishers, Inc Champaign IL.
Martens, Rainer (2014) Coaching Guide to Sport Psychology, 10th Ed.
Human Kinetics Publishers,Inc Champaign IL.
Murphy, Shane M (2005) Sport Psychology InterventionsHuman Kinetics Publishers, Inc Champaign IL.
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Unit I
Measurement and Evaluation in Sport Psychology: Meaning and Definition of Psychometrics and Psycho-diagnosis, Use of Sport Psychology measurement Tools, Administration, Scoring, Interpretation, Reporting and Providing Feedback, Norm and Criteria based measurement, Data-base Development

Unit II
Ethics in Psychological Measurement and Evaluation: Measurement and Assessment Limitations in Sport and Exercise Psychology, Use, Misuse and Disuse of Psychometrics.

Unit III
Criteria in Quantitative and Qualitative Psychological Measurement, Criteria for Testing : Completeness, Unambiguity, Consistency, Traceability, Practicability, Testability, Criteria for Qualitative Testing, Professional and Ethical Issues in Sport Psychology (Confidentiality, Record Keeping Ethical \& Confidentiality in Computer based service provision)

Unit IV
Test Construction in Sport Psychology, Different stages of Psycho-Diagnostics, Methods of Behavioural Assessment, Construction of a Psychological Test / Batteries (Personality, Motivation, Emotion, Health and Wellbeing )

Recommended Books:

- Nideffer, Robert M. (1987) Athlete's Guide to Mental Training, 2nd ed. Human Kinetics Publishers, Inc Champaign IL. Tenenbaum, Gershon (2001) The Practice of Sport Psychology Fitness Information Technology, INC, US Tenenbaum, Gershon and Marcy Driscoll (2005) Methods Of Research In Sport Sciences: Quantitative And Qualitative ApproachesMeyer \& Meyer Fachverlag Und Buchhandel Gmbh
Vealey, Robin.S (2005) Coaching for the Inner Edge Morgantown, WV: Fitness Information Technology Weinberg, R.S \& Gould, Daniel (2015) Foundations of Sport and Exercise Psychology, 6th Ed. Human Kinetics Publishers, Inc Champaign IL.

Unit I
Group and Team Dynamics: Difference Between Groups and Teams, Theories of Group, Development, Group Structure, Effective Team Climate, Maximizing Individual Performance in Team Sports, Group Cohesion: Define, Model, Tools for measuring cohesion, Relationship Between Cohesion and Performance, Strategies for Enhancing Cohesion, Guidelines for Building Team Cohesion

Unit II
Leadership: Define, Approaches, Leadership Training Interventions, Effective Leadership, The Art of Leadership
Communication: Define, Sending and receiving messages effectively, Recognizing Breakdowns, Improving Communication, Confrontation, Delivering Constructive Criticism

Unit III
Understanding the Coach- Athlete Relationship: Define, Importance, Recent conceptualizations, Youth Peer Relationships in Sport : Define, Guiding Theoretical Frameworks, Importance, Research on Sport-Based Peer Relationships

Recommended Books:
Foundations of Sports and Exercise Psychology: 6th edition, Robert S Weinberg, Daniel Gould.
Social psychology in sports: Sophia jowett, David Lavallee
Sports Psychology: concepts and applications: R.H. Cox
Imagery in Sports : Tony Morris, Michael Spital, P. Watt
Applying Sports Psychology: Four Perspectives - Jim Taylor, Gregory Scotwillson
Understanding Psychological Preparation For Sport: Theory and Practice of Elite Performers-Lew Hardy, Graham Jones, Danieal Gould
Coping with Sports injuries: Psychological strategies for rehabilitation: Jane Crossman

Unit I
Problem Athletes and Recovering Strategies: Problems and issues working with Individual and Team Sports, Athletes' Burn -out and Drop-out Problems and issues, Psychological Rehabilitation of Injured Athletes, Drug abuse and rehabilitation

Unit II
Coach and Coaching Dynamics: Coach-Athlete -Psychologist Relationship [Quality and Maintenance], Career Transition in Athletes and Retirement Issues, Developing Life Skills in Athletes

## Unit III

Mental Training and Sport: Need and Importance Mental Training in Sport for Athletes, Relaxation Techniques (PMR, Autogenic Training, Deep Breathing, Guide Imagery), Activation Techniques (Imagery, VMBR ), Concentration Training, Self-confidence and self-efficacy in sports

## Unit IV

Psychological Skill Training: Meaning and Definition Psychological Skill Training (PST methods: (Goal setting, self-talk, mental imagery and mental rehearsal, and relaxation), Monitoring PST in Performance Routine

## Recommended Books:

- Gill, Diana L (2008) Psychological Dynamics of Sport \& Exercise, 3rd ed. Human Kinetics Publishers, Inc Champaign IL.
- Horn, Thelma (2008) Advances in Sport Psychology Human Kinetics Publishers, Inc Champaign IL.
- Martens, Rainer (2014) Coaching Guide to Sport Psychology, 10th Ed. Human Kinetics Publishers,Inc Champaign IL.
- Murphy, Shane M (2005) Sport Psychology InterventionsHuman Kinetics Publishers, Inc Champaign IL.
- Anxiety, Stress and Coping: http://www.tandf.co.uk/journals/titles/10615806.html
- Journal of Personality and Social Psychology: http://www.apa.org/journals/psp.html

MSSPY 306
Elective III
Credit 3

## Developmental Psychology and Motor Skill Acquisition

Unit I
Stages of Development: Development during Infancy (Physical, Cognitive, Emotional and Social Changes), Development during Childhood (Physical, Cognitive, Emotional and Social Changes), Development during Adolescence (Physical, Cognitive, Emotional and Social Changes), Development during adulthood (Physical, Cognitive, Emotional and Social Changes), Role of Physical Activity and Sport during various stages of Development

Unit II
Motor Learning: Meaning and Definition of Motor Learning, Activity and Skill, Theories of Motor Learning (Adams Closed Loop Theory, Schmidt's Schema Theory), Motor Learning and Development relationship

Unit III
Motor Skill Acquisition: Principles of motor skill acquisition, Differentiation and classification of Motor Skills and Sport Skills, Developmental Considerations in Motor Skill Acquisition.

## Unit IV

Motor Learning and Performance: Stages of Motor Learning (Cognitive, Associative , Autonomus), Plateau effect in Motor Learning, Neuropsychological Approach in Motor Learning, Motor Learning in Sport

## Recommended Books:

- Anshel, M.H.(2002 ). Sport Psychology: From Theory to Practice. Scottsolale, AZ: Gorsuch Scarbrick.
- Burton, Damon, Thomas D. Raedeke (2008) Sport Psychology For Coaches Human Kinetics Publishers, Chaampaign Ilinois.
- Cox, Richard H (2006) Sport Psychology Concept and Application, 3rd ed Wm.C. Brown Publishers.
- Gill, Diana L (1986) Psychological Dynamics of Sport. Human Kinetics Publishers, Inc Champaign IL.
- Horn, Thelma (2008) Advances in Sport Psychology Human Kinetics Publishers, Inc Champaign IL.
- Kamlesh, M.L. (2011) Psychology in Physical Education and Sport, 3rd ed. Metropolitan Book Co.Pvt.Ltd Delhi.
- Nideffer, Robert M. (1987) Athlete's Guide to Mental Training, 2nd ed. Human Kinetics Publishers, Inc Champaign IL.
- Tenenbaum, Gershon (2001)The Practice of Sport Psychology Fitness Information Technology, INC,US
- Weinberg, R.S \& Gould, Daniel (2015) Foundations of Sport and Exercise Psychology, 6th Ed. Human Kinetics Publishers, Inc Champaign IL.


## Yoga and Mental Health

Unit I
Introduction to Psycho Physiology of Yoga: Introduction to Yoga and Mental Health (Psychological and Transcendental perspective, Meaning and characteristics of Mental Health, Psycho - Physiology of Traditional Yoga, Concept of Normality, Importance of Normality and Psychological Model

Unit II
Metaphysical Base of Yoga: Psychoanalysis of Freud and Psycho-synthesis of Yoga, Attitude formations through Yama and Niyam, Individual adjustment in the context of Yoga, Conflict : Concept, Types and the Yogic approach, Frustration : Concept and the Remedial measures in Yoga

## Unit III

Concept of Personality: Indian and western concept of personality, Indian approach to personality of Pancha Kosa, Attitude change though Yoga, Psychological approach of Freud, Mental Relaxation through Prayer

Unit IV
Therapeutic Applications of Yoga: Yoga Psychology, Relevance to Stress, Relevance to Anxiety, Relevance to Emotional Disorders, Yogic life style for Stress, Anxiety and Depression, Yoga Meditation : Metaphysical and Therapeutic Perspective , Concept of Health and Positive Health in Relation to Yogic way, Prayer : a cross cultural approach to Mental Health and beyond

## Recommended Books

Ajaya, S., Rama, S., and Ballentine, R. (1976). Yoga \& Psychotherapy: The evolution of Consciousness. Honesdale, PA: Himalayan Institute Press.
Aurobindo, S. (1955). A Practical Guide to Integral Yoga. Pondicherry: Sri Aurobindo Press.
Chidbhavananda, S. (2005). The BhagavadGita. Tiruchirappalli: Sri Ramakrishna Tapovanam.
Eliade, M. (1958). Yoga: Immortality and Freedom (W. R. Trask, Trans. 2nd ed.). New Jersey: Princeton University Press.
Farhi, D. (2003). Bringing Yoga to Life. New York: Harper Collins Press.
Forbes, B. (2011). Yoga for Emotional Balance. Boston: Shambala Press

## Psychology of Women and Special Population

Unit I
Gender Role: Meaning and Definition of Gender, Sex Differences and their importance, Socialization Process in Girls and Boys, Gender-Inequity and Gender Expectation in Sport

Unit II
Female Athletes and Sport: Female Athletes Triad: Problems caused by extreme exercise, Problems by high performance female athletes (Societal, Dietary, Menstrual, Emotional, Osteoporosis), Psycho physiological Issues

## Unit III

Female Athletes and Role Play: Role Conflict and Female Athletes, Gender role expectation, Gender Stereotypes (Past and Present), Expectation from Family, Friends and others

Unit IV
Sport and Special Populations: Minority \& High risk Athletes, Elite Athlete, Physically Challenged and Injured Athletes, Psychological perspective on athlete's with physical disabilities.

## Recommended Books

- Nideffer, Robert M. (1987) Athlete's Guide to Mental Training, 2nd ed. Human Kinetics Publishers, Inc Champaign IL. Papaioannou, A.G and Hackfort, Dieter (2014) Routledge Companion to Sport and Exercise Psychology. Routledge, Taylor \& Francis Group, London and New york.
Tenenbaum, Gershon and Marcy Driscoll (2005) Methods Of Research In Sport Sciences: Quantitative And Qualitative ApproachesMeyer \& Meyer Fachverlag Und Buchhandel Gmbh
Vealey, Robin.S (2005) Coaching for the Inner Edge Morgantown, WV: Fitness Information Technology
Williams, Jean M.(2014) Vikki Krane Applied Sport Psychology, Personal Growth in Peak Performance, 7thEd.
WM.C.Brown Publishers.

1. Memory experiments: Intelligence testing (Jalota, Ravens Progressive Matrices), Measurement of attention.
2. Test Construction and preparation of Batteries in personality/motivation/social facilitation.
3. Assessment of Types of Athletes: Strategies for relaxation and activation, Schedule of psychological Preparation for coaches and officials, Designing and implementing PST programme
4. Intervention strategies for individual sport athletes, Intervention strategies for team sport athletes
5. Measurement and analysis of motor skills, Hand eye co-ordination, Foot-Eye Coordination, Hand-Foot Eye Coordination.

## SEMESTER IV

MSSPY 401
Research Methodology

## Credit 3

## Unit-I

Introduction to Research in Physical Activity, Developing the Problem and Using the Literature, Presenting the Problem, Formulating the Method, Ethical Issues in Research and Scholarship

Unit-II
Types of Research: Socio Historical Process in Sport Studies, Philosophical Research in Physical Activity, Research Synthesis (Meta-Analysis), Surveys, Other Descriptive Research Methods, Physical Activity Epidemiology Research, Experimental and Quasi-Experimental Research, Qualitative Research, Mixed-Methods Research

Unit-III
Writing the Research Report: Completing the Research Process, Ways of Reporting Research
Introduction to review of literature, Evaluation of scientific literature; organizing literature - strategies, use of software; Metaanalysis, Writing review - structuring the review, quoting/paraphrasing, the citation referencing system

Recommended Books:
Research Methodology: Methods and Techniques by C. R. Kothari
ICMR. Ethical Guidelines for Biomedical Research on Human Subjects. 2006; ICMR, New Delhi.
Research Methods in Physical Activity- 7th Edition By Jerry Thomas, Jack Nelson, Stephen Silverman, Human Kinetics
Research Methods in Sport by Mark F Smith
Research Methods for Sports Performance Analysis By Peter O' Donoghue
Research Methods in Physical Education and Youth Sport 1st Edition by Kathleen Armour and Doune Macdonald
Ridley, D. The Literature Review a step-by-step guide for students. 2012; Sage Publications Limited, New Delhi

# School of Sports Sciences <br> Department of Sports Biosciences 



# Proposed Course Structure and Course Details 

## M.Sc. Sports Biochemistry

Central University of Rajasthan
NH-8, Bandar Sindri, Kishangarh-305817
Dist. - Ajmer (Rajasthan)

## M.Sc. Sports Biochemistry

SEMESTER I (Total credits: 24)

| Code | Title of Course | Type of Course | Credits |
| :--- | :--- | :--- | :--- |
| MSSB 101 | Human Anatomy and Physiology | Core | 3 |
| MSSB 102 | Biomolecules and Metabolism | Core | 3 |
| MSSB 103 | Kinesiology | Core | 3 |
| MSSB 104 | Psychological and Social Aspects of Sports | Core | 3 |
| MSSB 105 | Biomechanics and Motor Learning | Core | 3 |
| MSSB 106 | Elective I <br> $\bullet$ <br> $\bullet$ Elective from any other Department <br> - Sports First Aid and Emergencies <br> - History of Physical Education and Sports <br> $\bullet$ Physiological Aspects of Ageing | Elective | 3 |
| MSSB 107 | Laboratory I |  |  |
| MSSB 108 | Laboratory II | Core |  |

SEMESTER II (Total credits: 24)

| Code | Title of Course | Type of Course | Credits |
| :--- | :--- | :--- | :--- |
| MSSB 201 | Principles and Methods of Sports Training | Core | 3 |
| MSSB 202 | Performance Evaluation and Testing | Core | 3 |
| MSSB 203 | Fatigue, Injuries and Rehabilitation | Core | 3 |
| MSSB 204 | Food and Nutrition | Core | 3 |
| MSSB 205 | Statistics for Sports Science | Core | 3 |
| MSSB 206 | Elective II <br> $\bullet$ Elective from any other Department <br> $\bullet$ Kinanthropometry in Sports <br> $\bullet \quad$ Health Fitness and Wellness <br> $\bullet \quad$ Adaptations to Exercise and Training | Elective | 3 |
| MSSB 207 | Laboratory III |  |  |
| MSSB 208 | Laboratory IV | Core | 3 |

SEMESTER III (Total credits: 24)

| Code | Title of Course | Type of Course | Credits |
| :---: | :---: | :---: | :---: |
| MSSB 301 | Analytical Biochemistry for Sports | Core | 3 |
| MSSB 302 | Sports Performance and Nutritional Biochemistry | Core | 3 |
| MSSB 303 | Immunological Aspects of Sports Training | Core | 3 |
| MSSB 304 | Sports and Exercise Metabolism | Core | 3 |
| MSSB 305 | Biochemical Aspects of Health Issues in Sports | Core | 3 |
| MSSB 306 | Elective III <br> - Elective from any other Department <br> - Drugs and Doping in Sports <br> - Sports Genetics and Performance <br> - Exercise Immunology | Elective | 3 |
| MSSB 307 | Laboratory V | Core | 3 |
| MSSB 308 | Laboratory VI | Core | 3 |

SEMESTER IV (Total credits: 24)

| Code | Title of Course | Type of Course | Credits |
| :--- | :--- | :--- | :--- |
| MSSB 401 | Research Methodology | Core | 3 |
| MSSB 402 | Journal Club Presentation | Presentation | 3 |
| MSSB 403 | Major Project | Tutorial/Laboratory | 18 |

## SEMESTER-I

Unit-I
Anatomy and Physiology of: Blood, Cardiovascular System, Lymphatic System, Integumentary System and Respiratory System.
Unit-II
Anatomy and Physiology of: Nervous System, Special Senses, Endocrine System, Skeletal System, Joints and Muscular System.
Unit-III
Anatomy and Physiology of: Digestive System, Immune System, Urinary System, Fluid and Electrolyte Balance, Reproductive System, Pregnancy and Human Development.

Recommended Books:

- Human Anatomy and Physiology ( $10^{\text {th }}$ edition) by Elaine N Marieb, Katja N Hoehn.
- Introduction to Human Body- The Essentials of Anatomy and Physiology by Gerard J. Tortora.

Textbook of Anatomy with Coloured Atlas by Inderbir Singh.

- Textbook of Medical Physiology by Arthur C. Guyton.
- Principle of Human Anatomy ( $10^{\text {th }}$ Edition) by Gerard J. Tortora.
- Gray's Anatomy: Anatomical Basis of Clinical Practice by Standring, Susan. Borley, Neil R. Gray Henry.
- Human Physiology by C.C. Chatterjee.
_ Chowdhary Medical Physiology by S K Chowdhary.
- Netter's Atlas of Human Anatomy by Frank H. Netter.


## Credit 3

Unit-I
Foundation of Biochemistry, Properties of Water, Amino Acids, Peptides and Proteins, Structure and Function of Proteins, Enzymes, Sugars, Carbohydrates and Glycobiology, Nucleotides and Nucleic Acids, Fatty Acids, Structure and Functions of Lipids.

## Unit-II

Principles of Bioenergetics, Major Metabolic Pathways in Human and its Relevance with Exercise, Glycolysis, Gluconeogenesis, Pentose Phosphate Pathway, Citric Acid Cycle, Electron Transfer System in Mitochondria, Oxidative Phosphorylation.

## Unit-III

Basic Concepts and Design of Metabolism, Metabolic Regulation of Glucose and Glycogen, Biosynthesis of Carbohydrates, Lipid Biosynthesis, Fatty Acids Catabolism, Amino Acids- Biosynthesis, Oxidation and Production of Urea, Metabolism of Lactate, Integration and Regulation of Metabolism.

Recommended Books:
₹ Principles of Biochemistry- Lehninger Nilson and Cox W.H. Freeman.
₹ Principles of Biochemistry- Donald Voet, CW Pratt, JG Voet (2012) Wiley, ISBN:1118092449.
Principles of Exercise Biochemistry Editor(s): Poortmans J.R. (Brussels) Karger Publishers.
BiochemistryJM Berg, TL Tymoczko L Stryer W. H. Freeman and Company.
West \& Todd Text book of Biochemistry. Mac Millan Company London.
G.P. Talwar \& ID Singh Textbook of Biochemistry \& Human Biology - Prentice Hall of India, New Delhi.

Vasudevan Textbook of Biochemistry. Jaypee Brothers Medical publishers (P) Ltd.

- Jain J.L., Jain Sanjay, Jain Nitin, S Fundamentals of Biochemistry -. Chand and Company Ltd, New Delhi.
- A.C. Dev. Comprehensive Viva and practical Biochemistry. New Central Book Agency Pvt LTD.


## MSSB 103

Kinesiology
Credit 3

## Unit-I

Meaning of Kinesiology, Aims and Objectives of Kinesiology, Role of Kinesiology in Sports; Anatomical Position, Principl es of Plane and Axis, Various types of movements.

Unit-II
Bones: Meaning and composition of bone, Kinds of bones (flat, long, short, irregular and sesamoid), Function of bones, Bone fracture and its types; General features of the following bones: Upper Extremities: Clavicle, Scapula, Radius and Ulna, Humorous;
increase the flexibilities, Structure, function, fundamental movements around the joints; General features, structure and movements of the following joints: Shoulder Complex, Elbow Complex, Hip Complex, Knee joint, Spinal column and Pelvic girdle.

## Unit-III

Introduction to Muscular System: Muscles and Tendons, Classification of muscles, Structure of Skelton muscle, classification of muscles on basis of fibre arrangement, Physiology of muscle contraction, types of muscle contraction, Role of muscle in movement, Methods of studying the action of muscle. Origin, Insertion and action of major muscle groups of the Body; Nervous System: Overview of Nervous system, Neurons, Motor Unit and Receptors.

## Recommended Books:

- Clinical Mechanics and Kinesiology With Web Resource, Human Kinetics, by Janice Loudon, Robert Manske, Michael Reiman.
- Biomechanics and Kinesiology of Exercise - 2013 by Michael Yessis.

乙 Cynthia C. Norkin, Pamela K. Levangie : Joint structure \& function- A comprehensive analysis 2nd edition. Brunnstrom - Clinical Kinesiology, F.A. Davis. Rasch and Burk: Kinesiology and Applied Anatomy, Lee and Fabiger. Shaw, D,, Pedagogic Kinesiology, Khel Sahitya Kendra, 2007.
Thompson, C., Manual of Structural Kinesiology. (10th Ed.), St. Louis: Times Mirror/ Mosby College Publishing, 1995 Shaw, Dhanonjoy, Kinsiology and Biomechanics of Human Motion, Khel Sahitya Kendra, 1998. White and Punjabi - Biomechanics of Spine - Lippincott.

- Kapandji: Physiology of Joints Vol. I, II \& III, W.B. Saunders.
- Luttgens K., Hamilton N.: Kinesiology - Scientific Basis of Human Motion 9th Edi.
- Basic Biomechanics 4th edition, susan J. Hall, MCGraw Hill.


## Psychological and Social Aspects of Sports

## Credit 3

## Unit-I

Sports Psychology and role of Psychology in Sports, Methods of Psychology employed in Sports, Motor leaning and Performance, Importance of Sports Psychology for Athletes, Coaches and others related to Sports settings.

## Unit-II

Personality and its role in Sports, Attention and Perception in Sports; Motivation and Goal setting and its role in Sports, Emotions in Sports, Stress and Anxiety in Sports, Biofeedback techniques in Sports.

## Unit-III

Sociology of Sports, Social Factors and Socio-metric techniques in Sports, Group processes, Team cohesiveness and Leadership in sports, Effect of crowd behaviour in Sports, Economics and Politics in Sports.

Recommended Books:

- Weinberg \& Gould, Foundations of Sports and Exercise Psychology. Human Kinetics 2016.
- Motor Learning and Performance 5th Edition With Web Study Guide From Principles to Application, Human Kinetics by Richard Schmidt, Tim Lee.
乙 Morgan and King: Introduction to Psychology - Tata McGraw Hill.
- M.L. Kamlesh Psychology in Physical Education and Sports by Publisher Mehopolitan book co. Pvt. Ltd., Netaji Subash Marg, New Delhi 11002.
- Sanjeev. P. Sahni Psychology and its application in sports by D.V.S. publications, 100, Giri Nagar Kalkaji, New Delhi110019.

ב Agyajit Singh Psychology of coaching byFriends Publications, \# 101 Ansari Road Darya Ganj, New Delhi-110002. Jitendra Mohan Recent Advances in Sports psychology, By, Publisher, Friends Publications. Fundamentals of Sociology of Sport and Physical Activity, Human Kinetics by Katherine M. Jamieson, Maureen M. Smith. Doing Exercise Psychology, Human Kinetics by Mark Andersen, Stephanie Hanrahan.

- Social Issues in Sport 3rd Edition, Human Kinetics by Ron Woods.

MSSB 105
Biomechanics and Motor Learning

## Credit 3

Unit-I
Role of Bio-Mechanics in the Field of Sports Science, Principles of Biomechanics; Biomechanical Concepts: Motion, Newton's Law of Angular Motion and Linear Motion and its Relationships, Force, Centripetal and Centrifugal forces, Equilibrium, Centre of Gravity and Stability, Freely Falling Bodies and Projectile, Momentum, Impulse, Lever and its Classification, Work, Power, Energy: Relationship of Work, Power and Energy, Friction, Spin, Impact, Elasticity, Rebound, Fluid Mechanics, Air Resistance and Water Resistance.

Unit-II
Determine The Simultaneous-Sequential Nature of A Variety Of Movement Skills, Classify Motor Skills Using the Classification System Presented, Bio-Mechanical Analysis of Fundamental Skills: Walking, Running, Jumping, Pulling, Pushing, Lifting, Lowering, Throwing.

Unit-III
Introduction to Gait Analysis, Mechanical Analysis of Sports Skills: Athletics (Running, Jumping, and Throwing), Swimming, Football, Basketball, Volleyball, Cricket. Technological Use and Advances in Biomechanics: Techniques and Tools for Measurement of Biomechanical Variables.

## Recommended Books:

- Biomechanical Analysis of Fundamental Human Movements by Arthur Chapman, 2008, Human Kinetics.

こ Biomechanics of Sport and Exercise 3rd Edition With Web Resource and MaxTRAQ 2D Educational Software Access-Loose-Leaf Edition, Human Kinetics, By Peter McGinnis.

- Biomechanics and Kinesiology of Exercise - 2013 by Michael Yessis .
- Cynthia C. Norkin, Pamela K. Levangie : Joint structure \& function- A comprehensive analysis 2nd edition, F.A. Davis Company Philadelphia.
- Brunnstrom - Clinical Kinesiology, F.A. Davis.

च Rasch and Burk: Kinesiology and Applied Anatomy, Lee and Fabiger.
White and Punjabi - Biomechanics of Spine - Lippincott.
_ Kapandji: Physiology of Joints Vol. I, II \& III, W.B. Saunders.

- Luttgens K., Hamilton N.: Kinesiology - Scientific Basis of Human Motion 9th Edi.
- Basic Biomechanics 4th edition, susan J. Hall, MCGraw Hill.
_ Joseph Hamill, Kathleen M. Knutzen. Biomechanical Basis of Human Movement.


## MSSB 106

## Elective I

## Credit 3

## Sports First Aid \& Emergencies

Unit-I
Introduction to Sports First Aid: Athletic Health Care Team, Sport First Aid Game Plan, First Aid Equipment and Kit, Basic Life Support System: Recovery Position, Head to Toe- Survey, Artificial Ventilation; Basic Sport First Aid Skills : Anatomy and Sport Injury Terminology, Emergency Action Steps, Physical Assessment and First Aid Techniques, Moving Injured or Sick Athletes.

Unit II
Sport First Aid for Specific Injuries: Unconsciousness: ABC, CPR, AED, Respiratory Emergencies and Illnesses, Shock, Wounds and Bleeding, Head, Spine and Nerve Injuries, Internal Organ Injuries, Upper and Lower Body Musculoskeletal Injuries, Facial and Scalp Injuries Skin Problems.

Unit-III
Disaster Preparedness and Management: Weather-Related Problems, Environmental Emergencies: Animal Bites and Stings, Allergies, First Aid Protocols, Practical Skills in using: Triangular Bandages, Broad fold, Thin fold, Slings, Collars, Cardiac Emergencies.

## Recommended Books:

- Sport First Aid-5th Edition by Melinda Flegel, Human Kinetics, 2014.
- American Red Cross, First Aid/CPR/AED : Participant's Manual.
₹ Practical First Aid: British Red Cross in Association with donning kinder sley.
₹ John Morris: First Aid Training Manual, Everyday learning Pvt Ltd.
Authorized Manual of St. John Ambulance (India): First Aid.
乙 Bradley R.A. Wilson. Timothy E. Glaros: Managing Health Promotion Programs Human Kinetics Publishers.


## History of Physical Education and Sports

Unit-I
What are Play, Game and Sports? Types of sports and recreational activities, Importance of free play and organizational games, Terminology: Sports Science and Physical Education, Health Related and Motor performance Related Fitness, Health and Wellness (physical, mental, psychological, social and spiritual) and Athletics, Sports Carriers: Media, Management, Performance, Coaching and other Related Areas.

Unit-II

Philosophy and its need in Sports and Physical Education，Idealism，Naturalism and Pragmatism in Physical Education，Physical Education in Ancient Greek，Rome，India and Modern India．History of Olympic Games，Asian Games，SAARC Games and SAF Games，National Sports Awards，Trends and Problems in Sports Sciences and Physical Education in $21^{\text {st }}$ Century． Unit－III
Introduction to General Rules and Regulations of Selected Sports（Football，Field Hockey，Basketball，Volleyball，Cricket， Badminton，Tennis），Introduction to Playfields and Track Specifications，General Organizational Process of Sports Competitions．

## Recommended Books：

－Bucher，C．A．：Foundation of Physical Education，St．Louis：The C．V．Mosby company， 1983.
乙 History and Philosophy of Sport and Physical Activity，Human Kinetics by R．Scott Kretchmar，Mark Dyreson，Matthew Liewellyn，John Gleaves， 2017.
－Synder and Geoh：Professional preparation in Health Education，Physical Education and Recreation．．
₹ Barrow，H．M．：Man and Movement：Principles of Physical Education，Philadelphia Lea and Fabiger， 1977
Joseph，P．M．：Organisation of Physical Education，Kandivila，：Old students Association，T．I．P．E．
Kamlesh，M．L．and Sangral，M．S．：History and Principles of Physical Education，Prakash Brothers， 1983.
Wuest and Bucher：Foundations of Physical Education and Sports，B．I．Publications Pvt．Ltd．，New Delhi． William，H．F．：Physical Education and Sports in Changing Society，Surjeet Publication，Delhi．

## Physiological Aspects of Ageing

## Unit－I

Growth and Biological Maturation：Relevance to Athletic Performance；Muscle Development During Childhood and Adolescence，Relevance to Understanding Effects of Growth on Performance．

Unit－II
Theory of Ageing，Age Related Changes in Different Body Systems，Cardiovascular Concerns in the Young Athlete，Trainability During Childhood，Ageing and Muscular Strength，Aging and Joint Flexibility．

## Unit－III

Exercise Guideline For Geriatric Populations．Introduction to Masters Sports，Ageing and Performance，Role Of Continued Involvement，Psychosocial Issues in Masters Sport，Model of Lifespan Physical Activity，Health and Performance．

## Recommended Books：

こ Helge Hebestreit and Oded Bar－Or（2008）The young athlete．Blackwell Publishing Ltd．
＿Joseph Baker，Sean Horton and Patricia Weir（2000）The masters athlete：understanding the role of exercise in optimizing aging．Routledge．
－＂Fitness and Wellness＂：Warner W．K Hoeger and Sharvon A．Hoegor．
－＂Fitness \＆Wellness concepts＂：Charles B．Corbina \＆Ruth Lindsey．
乙＂Lifetime Fitness \＆Wellness－A personal choice＂：Melvin H．Williams．

MSSB 107

## Laboratory I

## Credits 3

| －Introduction to laboratory <br> －How to Use microscopes． |  |
| :---: | :---: |
| 乙 To study Counting Chambers． |  |
| －To determine the total Red Blood Corpuscles count． |  |
| To determine the total Leucocyte Count in blood． |  |
| To measure the Haemoglobin concentration of blood． |  |
| To measure Blood Pressure of a subject in different positions． |  |
|  | Calculation of Energy expenditure． |
| Measurement of blood glucose Cholesterol／HDL，Glycerol，Lactate，Triglycerides． |  |
| Biochemical Assessment of Enzymes |  |
|  | Biochemical Assessment of Hormones． |
|  |  |
|  | mation of sugars，iron，phosphate，vitamin C and organic acids． |
|  | Estimation of protein concentration． |

MSSB 108
Laboratory II
Credits 3
－To analyse various planes and axes of the body．
－To demonstrate the surface anatomy and muscle attachments of following bones：Clavicle，Scapula，Humerus，Radius，Ulna， Meta Carpals，Phalanges，Femur，Tibia，Fibula，Patella，Tarsals and Metatarsals．

乙 To demonstrate the following joints including corresponding muscles and movements of Upper Extremity: Acromioclavicular joint, Sternoclavicular joint, Shoulder joint, Elbow joint, Proximal Radioulnar joint, Distal Radioulnar joint, Wrist joint, Radio carpal joint, Thumb joint.

- To demonstrate the following joints including corresponding muscles and movements of Lower Extremity: Hip Joint, Knee Complex and Ankle joint.
- Demonstration and Estimation of Centre of Gravity of Human Body.
- Determination of Human Gait pattern.


## SEMESTER-II

## MSSB 201

Principles and Methods of Sports Training
Credit 3
Unit-I
Scientific basis of Sports Training, Importance, Aims and Objectives of Sports Training; Characteristics of Sports Training; Biological Process in Training; Components of Physical Fitness (motor abilities) - Endurance, Strength, Speed, Flexibility, Coordination; Agility.

## Unit-II

Principles of Sports Training- Overload, Specificity, Progression and Reversibility; Meaning and concept of Training load; Adaptation and Recovery, Super Compensation, Training Structure - Volume, Intensity, Frequency, Peaking, Errors in Training, Adaptations to Resistance Training, Adaptations to Aerobic and Anaerobic Training.

## Unit-III

Training plan; Need and importance in planning; Types of training plans- short term and long term plans; Training and Competition Cycles (training conception, macro, micro, meso); Periodization- Need, Types; Aims of various phases of Periodization (Preparatory, competition and transition); Competition-Types of Competition, Preparation for competition; the number and frequency of competition. Training athletes with disability, Adapted games for Disabled; Special Olympics and Paralympics.

## Recommended Books:

- Physiology of Sport and Exercise 6th Edition with Web Study Guide-Loose-Leaf Edition by W. Larry Kenney, Jack Wilmore, David Costill.
- Periodization-6th Edition Theory and Methodology of Training by Tudor Bompa, Carlo Buzzichelli.

च Physiological Aspects of Sport Training and Performance With Web Resource-2nd Edition, Human Kinetics By Jay Hoffman.

- Recovery for Performance in Sport by Institut National du Sport de l'Expertise et de la Performance INSEP, Human Kinetics, Christophe Hausswirth, A. Mujika.
- Essentials of Sports Training and Conditioning by JB Learning, NASM.

Singh, H: Science of Sports training, DVS Publication, New Delhi, 1991.
Matweyev, L.P.: Fundamentals of Sports training, publication Moscow, 1984.
Harre, D: Principles of sports training, Sportverlag, Berlin, 1988.
Singh, H: Science of Sports training: General theory and methods, NIS, Patiala, 1984.
Scholisch, M: Circuit training, Sportverlag, Berlin.
Willmore, J.H.: Athletic training and physical fitness, Antro and Becon Inc, Sydney.
MSSB 202
Performance Evaluation and Testing

## Credit 3

## Unit-I

Introduction to Test, Measurement, Evaluation and Research, Basic concepts in Tests: Evaluation, Validity, Reliability, Objectivity and Norms, Test Construction and its Organisation and Administration; Pre-test considerations: Risks associated and Safety considerations, ACSM guidelines for when to stop a Test, Pre-Exercise Test Evaluations: Calculation of HR MAX and $85 \%$ HR max depending on protocol, Population considerations: Children, Elderly, apparently Healthy.

Unit-II
Test Order: Equations used to estimate aerobic power from TM protocols, Equations used to estimate aerobic power from Cycle ergometer protocols (arm and leg), Calculations used to estimate aerobic power from other variables, Test protocols used for measuring the health and skill-related components of fitness, CV endurance field tests, VO2max testing, Norm tables, Maximal versus submaximal tests.

Unit-III
Modes of Testing, Muscular Strength, Endurance and Flexibility, Body composition and Anthropometry, Balance, Agility, Coordination, Reaction time and Anaerobic power, Physical Fitness Batteries, Specific Sports Skill Tests (Soccer, Basketball, Volleyball, Hockey, Badminton, Tennis and other Sports).

## Recommended Books:

- Advanced Fitness Assessment and Exercise Prescription 8th Edition with Online Video, Human Kinetics by Ann Gibson, Dale Wagner, Vivian Heyward, 2018.
- Laboratory Manual for Exercise Physiology 2nd Edition. With Web Study Guide, Human Kinetics by G. Gregory Haff, Charles Dumke, 2018.
- Measurement and Evaluation in Human Performance 5th Edition, Human Kinetics by James Morrow Jr., Dale Mood, James Disch, Minsoo Kang, 2016.
च Physiological Tests for Elite Athletes 2nd Edition by Australian Institute of Sport Rebecca Tanner, Christopher Gore, 2012.
- ACSM's Guidelines for Exercise Testing and Prescription, $10^{\text {th }}$ Edition by American College of Sports Medicine. Wolters Kluwer, 2017
- Text book of Applied Measurement Evaluation \& Sports Selection second edition: Dewinder K Kansal Sports \& Spiritual Science Publications
- Heyward, Vivian. Advanced Fitness Assessment and Exercise Prescription, 5th ed., Human Kinetics, 2006.
- ACSM's Guidelines for Exercise Testing and Prescription, 8th ed., Lippincott Williams and Wilkins, 2009.
- ACSM's Health-Related Physical Fitness Assessment Manual, 3rded, 2009.
- Ed. Durstine and Moore. ACSM's Exercise Management for Persons with Chronic Diseases and Disabilities, 2nd ed. Human Kinetics, 2003.


## MSSB 203

Fatigue, Injuries and Rehabilitation
Credit 3
Unit-I
Concept of Overloading, Overtraining, Fatigue and Staleness, Symptoms and Causes of Fatigue, Types of Fatigue, Theories associated with Fatigue, Definition, Types, Symptoms, Findings, Underlying Mechanisms and Frequency of Overtraining and Overtraining Syndrome, Oxygen Debt Theory, Recovery Oxygen Uptake or Excess Post-Exercise Oxygen Consumption (EPOC), Implications of EPOC for Exercise and Recovery, Optimal Recovery From Steady-Rate Exercise and Non-Steady-Rate Exercise, Intermittent Exercise and Recovery.

Unit-II
Sports Injury- Meaning, Classification, Causes, Types, General guidelines Prevention, Recovery Time, Introduction and Management of common Sports Injuries (Fracture, Dislocation, Laceration, Abrasion, Sprain and Strain), How to avoid Sports Injuries, Role of Warm-up and Cool Down.

## Unit-III

Rehabilitation: Meaning, Concepts, Objective and Scope of Rehabilitation, Principal of Care and Rehabilitation
Therapeutic Modalities: Electrotherapeutic Modalities (Shortwave Diathermy, Ultra Sound, T.E.N.S), Heat and Cold, Soft tissue Massage, Aquatic Rehabilitation Exercise, Therapeutic Exercise, Therapeutic Nutrition, Psychological Rehabilitation.

## Recommended Books:

= Shaun Phillips (2015) Fatigue in Sport and Exercise. Routledge, NY.

- Therapeutic Modalities for Musculoskeletal Injuries 4th Edition, Human Kinetics by Craig Denegar, Ethan Saliba, Susan Saliba, 2016.
च Essentials of Athletic injury management 10th edition by William E. Prentice, Human Kinetics.
= Clinical Sports Medicine Fifth Edition by Peter Brukner, Karim Khan, McGraw-Hill Education Australia, 2016. Principles and Practice of Therapeutic Massage by Sinha, Jaypee Publishers.
Textbook of Electrotherapy by Singh Jagmohan, Jaypee Publishers.
च Manfred Lehmann, Carl Foster, Uwe Gastmann, Hans Keizer and Jtirgen M. Steinacker(Eds) (1997) Overload, Performance Incompetence and Regeneration In sport. Kluwer Academic / Plenum Publishers, N.


## MSSB 204

 Food and NutritionUnit-I
Nutrients: Functions and Recommended Intakes, Healthy Eating and Balanced Diet, Fuel Sources for Muscle and Exercise Metabolism, Energy: Food Energy and Expenditure, Gastric Emptying, Digestion, and Absorption.

Unit-II
Nutritional Role and Recommendations for following: Carbohydrate, Fat, Protein and Amino Acids, Water Requirements and Fluid Balance, Vitamins and Minerals, Nutrition Supplements.

## Unit-III

Nutrition and Training Adaptations, Nutrition and Immune Function in Athletes, Body Composition and Weight Management, Eating Disorders in Athletes, Personalized Nutrition, Menu Planning (Meal Timing and Spacing).

## Recommended Books:

ב Sport Nutrition 3rd Edition by Asker Jeukendrup, Michael Gleeson, Human Kinetics, 2018.

- Nutrition for Sport, Exercise, and Health by Marie Spano, Laura Kruskall, D. Travis Thomas, Human Kinetics.
_ Physiology of Sport and Exercise 6th Edition with Web Study Guide-Loose-Leaf Edition by W. Larry Kenney, Jack Wilmore, David Costill.
- Exercise Physiology: Nutrition, Energy and Human Performance 8th Edition by William D. McArdle, Frank I. Katch, Victor L. Katch.
- Nancy Clark's Sports Nutrition Guidebook by Nancy Clark, Human Kinetics.
- NSCA's Guide to Sport and Exercise Nutrition by National Strength Conditioning Association, Human Kinetics.
- Fundamental of Foods, Nutrition \& Diet Therapy $5^{\text {th }}$ edition by S.R. Mudambi, M.V. Rajagopal, New Age International Limited, New Delhi.
- Applied Nutrition. By R. Rajlaxmi, IBH Publications, New Delhi.
- Nutritional Supplements in Sports, Exercise and Health: An A to Z Guide by Linda M. Castell, Smantha J. Stear, Louise M. Burke, Routledge.

MSSB 205
Statistics for Sports Science

## Credit 3

Unit-I
Introduction to Biostatistics, Frequency Distribution, Variable and Attribute, Line-diagram, Bar-diagram, Pie chart, Histogram, Mean, Median and Mode.

## Unit-II

Variance, Standard deviation; Standard error of mean, Null hypothesis, Level of significance and Probability; Regression and correlation.

Unit-III
Student's t-test, Fisher's t-test, Chi-square test, Analysis of Variance (ANOVA), ANCOVA, Introduction and Application of Statistical Software.

## Recommended Books:

च A Text book of Biostatistics, by A.K.Sharma, Discovery publishing house
Introduction to Biostatistics, By Dr. Pranab Kumar Banerjee, S. Chand Publishers
Research Methodology: Methods and Techniques Book by C. R. Kothari
Dutta N.K. Fundamentals of Bio-Statistics. 2002; Kanishka Publishers, New Delhi.
Gupta S.P. Statistical Methods. 2004; S. Chand \& Sons, New Delhi.
= Ruud H. Koning and James H. Albert (2008) Statistical thinking in sports. Chapman \& Hall/CRC.

## MSSB 206

## Elective II

## Credit 3

## Kinanthropometry in Sports

Unit-I
Introduction, scope and general consideration, i.e. Application of anthropometric data in sports, Body proportions and indices, Sports specific body proportions and indices, Body mass index and its importance in sports.

## Unit-II

Anthropometric Measurements and Procedures, Equipment for anthropometric measurements, Gross Body Measurements and procedures, Length of Body Parts, Measurements and procedures, Diameters of Body Parts, Measurements and procedures, Circumferences of Body Parts, Measurements and procedures, Skinfold Thickness, Measurements and procedures.

## Unit-III

Physiological Maturation: Decimal Age and concept of Physiological maturity in sports. Assessment of skeletal maturity of athletes, Body Composition: Anthropometric determination, Importance in sports and various methods to estimate body composition, Somatotyping: Introduction, Definition of Somatotyping and Classification.

## Recommended Books:

ב Sports Anthropemetry by H.S. Sodhi, ANOVA Publication.
Physique and Selection of Sportsmen by H.S. Sodhi and L.S. Sidhu.
Kinanthropometry by S.P. Singh and P. Malhotra, Luna Publication, Patiala.
Kinanthropometry by Roger Eston and Thomas Reilly, E \& F.N. SPON, London.
Skeletal Maturity by S.P. Singh, L.S. Sidhu, and J. Singh, Human Biology Publication Society, Punjabi University, Patiala. Genetic and Anthropological Studies of Olympic Athletes by De Garray, Louis Levine \& Cater, Academic Press, London.

## Health Fitness and Wellness

## Unit-I

Introduction to Health: Concept of health, Lifestyle and Disease, Ageing.

Unit-II
Physical Activities \& Fitness: Concept to Fitness, Exercise and its Principles, Health Education Recreation \& Dance.

## Unit-III

Healthy Life Style Approach: Concept of Wellness, Wellbeing, Stress Management.

Recommended Books:
_ "Fitness and Wellness" : Warner W. K Hoeger and Sharvon A. Hoegor
"Fitness \& Wellness concepts": Charles B. Corbina \& Ruth Lindsey
"Lifetime Fitness \& Wellness - A personal choice": Melvin H. Williams
Oxford Textbook of Public Health, Helen Liepman.
Sunderlal, Aadarsh, Pankaj, 2007, Textbook of Community Medicine, CBS Publishers \& Distributors.
Kirch, Wilhelm, 2008, Encyclopedia of Public Health, Volume 1 \& 2, Kluwer Academic Publishers.
Mary -Jane Schneider and Henrey Schneider, 2006 (2nd edition), Introduction to Public Health, Jones and Bartlett Publishers.

## Adaptations to Exercise and Training

## Unit-I

Cardiovascular Adaptations to Endurance and Strength Training, Hypertrophy and Cardiomyopathy in Young and Older Athletes, Heart rate training zone, Effects Of High Altitude, Sudden Cardiac Death and Exercise in Healthy Adults

Unit-II
Respiratory System Adaptations to Endurance and Strength Training, Ventilatory response to exercise and its use in sports, Ventilatory threshold, Effects Of Exercise, response to steady- state exercise, Exercise-Induced Bronchoconstriction, Control of Breathing during exercise; The Respiratory System under Stress, respiratory systems adaptation to long-term exercise, Adaptations to systematic Training, Effects Of High Altitude

## Unit-III

Muscular Mechanisms in Aerobic Endurance Training; Neural Mechanisms in Aerobic Endurance Training, Muscle Molecular Mechanisms in Strength Training, Muscle Property Changes in Strength Training, Neural Mechanisms in Strength Training. Initial responses of the neuromuscular systems to exercise; Training Adaptation of the Neuromuscular System

Recommended Books:

- Roy J. Shephard and Henry S. Miller, Jr. (1999) Exercise and the Heart in Health and Disease. Marcel Dekker.
- Shephard, R.J. and Astrand, P.-0. (1992) Endurance in sport. Blackwell Science Ltd, USA.

McArdle, W.D., Katch, F.I., Katch, V.L. (2006) Essentials of Exercise Physiology. Lippincott Williams and Wilkins, USA. Victor F. Froelicher, Jonathan Myers (2006) Exercise and the heart. Elsevier Inc.

- Christopher B. Cooper and Thomas W. Storer (2004) Exercise testing and interpretation- A practical approach. Cambridge University Press.
- K. Wasserman, J Hansen, D Sue, W Stringer, B Whipp, eds (2004) Principles of Exercise Testing and Interpretation, 4th edn.. Lippincott Williams \& Wilkins, Philadelphia, USA.
= Christopher Bell. Cardiovascular Physiology in Exercise and Sport . 1st Edition. 2008; Churchill Livingstone.
- Michael G. Levitzky. Pulmonary Physiology, 8e. 2013; Lange. The McGraw-Hill Companies.
- Denise L. Smith and Bo Fernhall (2011) Advanced cardiovascular exercise physiology. Human Kinetics.

[^1]= Circumferences or Girths of body parts, Calf circumference, Thigh circumference, Waist circumference, Chest circumference

- Skinfold measurement and Body Fat Percentage calculations

־ Training Program: Circuit Training Program, Interval Training Program, Ballistic Training Program, Fertlek Training Program.

## MSSB 208

Laboratory IV
Credit 3

- Aerobic Power Field Assessments: Cooper 1.5-Mile Run/Walk Test and 12-Minute Run/Walk Test, Rockport Fitness Walking Test.
- High-Intensity Fitness Testing: Léger 20 m Shuttle Run Test, Yo-Yo Intermittent Recovery Test, 30-15 Intermittent Fitness Test, Sprinting Performance, Jumping Performance, Power Endurance, Anaerobic Cycling Power, Margaria-Kalamen StairClimb Test, BROCKPORT test system, AAHPER health related physical fitness test, Philips JCR test for General motor ability testing.
च Tests for: Speed, Agility, Balance, Coordination, Reaction time, Flexibility.
- Sports Skill Tests for: Soccer, Basketball, Hockey, Tennis.


## SEMESTER III

MSSB 301
Analytical Biochemistry for Sport
Credit-3

## Unit I

Principles for Biochemical Monitoring of Training, Pre-analytical, Analytical and Post-Analytical Phases of Testing, Biochemical Assessment of Exercising Persons- Serum Iron, Ferritin, Transferrin, Electrolytes, Urate, Urea and Creatinine, Total Protein, Albumin, Total Bilirubin, Cholesterol and Triglycerides, Glucose, Metabolites, Enzymes, Hormones.

Unit II
Mechanisms of Various Sports Performance Enhancing Drugs, Biochemical Classes of World Antidoping Agency (WADA) prohibited compounds, Detection and Masking Methods for Common Doping Drugs.

## Unit III

Commonly Used Biochemical Techniques and Their Application in relation to Sports-Radioimmunoassay, Polymerase Chain Reaction, Recombinant DNA Technology, Electrophoresis, Centrifugation, Liquid and Gas Chromatography, Mass Spectrometry, Flow Cytometry, Iso-Electric Focusing, Immunoluminometric Assay.

## Recommended Books:

- Exercise, Sport, and Bio analytical Chemistry-Anthony C. Hackney (2016), Elsevier, ISBN: 978-0-12-809206-4.
- Principles of Exercise Biochemistry, Editor(s): Poortmans J.R. (Brussels), Karger Publishers, ISBN:978-3-8055-7607-9.
- Exercise Biochemistry- Vassilis Mougios (2006) Human Kinetics, ISBN: 13:978-0-7360-5638-0.
- Biochemistry Primer for exercise Science-Peter Tiidus, A. Russell Tupling, Michael Houston (2012) Human Kinetics, ISBN-13: 9780736096058.
- Biochemical monitoring of sport training- Atko Viru, Mehis Viru (2001) Human Kinetics, ISBN:07360-0348-7.
- The analytical Chemistry of Drug Monitoring in Athletes, Larry D Bowers (2009) The annual reviews of Analytical Chemistry, DOI: 10.1146/annurev-anchem-060908-15519.
- Principles and Techniques of Biochemistry and Molecular Biology by Wilson and Walker (2010) Cambridge University Press, ISBN: 978-0-521-73167-6.

MSSB 302
Sports Performance and Nutritional Biochemistry

## Credit-3

Unit I
The Biochemical Basis of Exercise and Sports, Biochemistry of Performance of Various Sporting Events- The Weightlifter, Sprinter, Middle Distance Events and The Endurance Athlete, Adaptation to Training, Effects of Detraining.

Unit II
Fundamentals of Nutritional Biochemistry, Various Classes of Nutrients and Their Role in Human Body, Basics of Energy Use in Body, Daily Energy Expenditure, Basic Metabolic Rate, Food Sources of Nutrients, Nutrient Digestion and Absorption, Nutrient Toxicities, Free Radicals and Anti-oxidants.

Unit III

Role of Nutrition in Sports Performance of Various Sports Events, Nutritional effect on Training Adaptation, Determining Energy Needs for Persons Involved in Various Exercise and Sports Activities, Proportion of Different Nutrients During Various Exercise/Sports, Hydration During Workouts, Dietary Recommendations for Different Sports.

Recommended Books:

- The Biochemical Basis of Sports Performance- Ronald J Maughan and Michael Gleeson (2010) Oxford University Press, ISBN:9780199208289.
- Biochemistry for Sports and Exercise Metabolism- Don MacLaren, James Morton, (2011) Wiley-Blackwell Publisher, ISBN-978-0-470-09185-2.
- Fundamentals of Human Nutrition- Catherine Heissler, Hilary Powers (2015) Churchill Livingstone Elsevier, ISBN:9780443069727.
- Nutrition Chemistry and Biology- by Julian F. Spallholz and Mallory Boylan (1998), CRC Press, ISBN 13: 9780849385049.
- Brooks, GA; Fahey, TD; Baldwin KM/Exercise physiology: human bioenergetics and its applications/Fourth Edition/2005.


## MSSB 303

Immunological Aspects of Sports Training
Credit-3

## Unit I

General Overview of Immune System, Innate and Adaptive immunity, Antigen and Antibody, B and T Cell immunity, Major Histocompatibility Complex and Antigen Presentation, Cell Mediated and Humoral Immune Response, Inflammation, Complement system, Cytokines, Chemokine, Hypersensitive reaction, Autoimmunity.

Unit II
Relevance of Immune Function to Athletes, Causes of Illness in Athletes, Intensive Training \& Effects on Immune Function, Allergy in Sports, Practical Guidelines on Minimising Infection Risk in Athletes.

## Unit III

Strategies to Limit Exercise Induced Immune Depression, Strategies to Support Immunity for Athletes, Immunological Aspects of Sport Nutrition, Clinical Implication of Exercise Immunology.

## Recommended Books

- Kuby Immunology- Judith A. Owen, Jenni Punt (2013) W. H. Freeman, ISBN: 1464137846.
- Basic Immunology-Abul Abbas, Andrew H. Lichtman, Shiv Pillai (2015) Elsevier, ISBN: 9780323390828.
- Immunology by Fathimunisa Begum (2014), PHI Learning Private Limited, ISBN-978-81-203-4983-4.
- Exercise immunology- Editors, Michael Gleeson, Nicolette Bishop, Neil Walsh, (2013) Routledge Publisher, ISBN13: 978-0415507264.
- Immunological aspects of sport nutrition. Immunology and Cell Biology, GLEESON, M., 2016., 94 (2), pp. 117-123.
- Immune function in sport and exercise Michael Gleeson J Appl Physiol 103: 693-699, 2007; doi:10.1152/japplphysiol.00008.2007.
- Clinical implications of exercise immunology, David C Nieman (2012), Journal of Sport and Health Science 1 (2012) 12e17.


## MSSB 304

Sports and Exercise Metabolism

## Credit-3

Unit I
Historical and Future Perspectives, Development of Exercise Metabolism (The Early Years, Classic Period), Energy Sources for Muscular Activity, Skeletal Muscle Structure and Function, Muscles in Action, Metabolic Functions of key Organs during Exercise.

Unit II
Anaerobic Metabolism During Exercise, Aerobic Metabolism During Exercise, Skeltal Muscle/Hepatic/Adipose tissue Metabolism during Exercise, Carbohydrate Metabolism During Exercise, Fat Metabolism During Exercise, Protein and AminoAcids Metabolism During Exercise.

Unit III
Inter-Organ Communication, Contraction Induced Modulators of Gene Expression in Skeletal Muscles, Molecular Level Adaptive Responses to Exercise, Metabolic Factors in Fatigue, Metabolic Adaptations to Endurance.

Recommended Books

- Biochemistry for Sports and Exercise Metabolism- Don MacLaren, James Morton, (2011) Wiley-Blackwell Publisher, ISBN 978-0-470-09185-2.
- The Biochemical Basis of Sports Performance- Ronald J Maughan and Michael Gleeson (2010) Oxford University Press, ISBN:9780199208289.
_ Exercise Metabolism- Mark Hargreaves, Lawrence L. Spriet (2006) Human Kinetics, ISBN:978-0-7360-4103-4.


## MSSB 305

Biochemical Aspects of Health Issues in Sports
Credits-3

## Unit I

Concept of Health and Disease, Lifestyle and Disease, Connection between Physical Activity and Health, Exercise and Its Benefits and hazards.

Unit II
Biochemical Basis of Health Hazards and Benefits of Physical Activity, Biochemical Basic of Health Problems in Athletics, Biomarkers in Sports and Exercise, Tracking Health, Performance, and Recovery in Athletes.

Unit III
Biochemical Basis of General Medical Issues For Athletes- Respiratory System (Asthma, Upper Respiratory Tract Infections), Cardiovascular System (Heart Problems, Sudden Cardiac Arrest, Anaemia), Gastrointestinal (Nausea, Vomiting and Diarrhoea), Neurological (Headache, Dizziness, Confusion, Loss Of Consciousness), Muscular System (Exercise Associated Muscle Cramps, Skeletal Muscle Diseases, Rhabdomyolysis), Overtraining Syndrome, Unusual Fatigue, Dry or Sticky Mouth, Eating Disorders, Sports Injuries, Sports Specific Health Issues.

## Recommended Books

- Functional Biochemistry in Health and Disease, Eric A. Newsholme and Tony R. Leech (2010) Willey-Blackwel, ISBN:978-0-471-931652.
- Elaine C. S. Fragala A. M. Luke Douglas J. Casa (2017) Biomarkers in Sports and Exercise: Tracking Health, Performance, And Recovery in Athletes. The Journal of Strength and Conditioning Research, 31(10)/2920-2937.
- Medical Conditions in the athlete, Katie Walsh and Micki Cuppett (2017) Human Kinetics, ISBN:978-1-4925-3350.
- Health and Elite Sports, Joe Baker, Parisa Safai, Jessica Fraser-Thomas (2015) Routledge, ISBN:978-0-415-70866-1.


## MSSB 306

## Elective III

## Credit 3

## Drugs and Doping in Sports

Unit I
The Evolution of Doping and Antidoping In Sports, Prevalence of Doping in Sports, Doping Control in Sports, Inadvertent Use of Prohibited Substances in Sports, Role of Athlete Support Personnel in Preventing Deliberate and Inadvertent Use of Prohibited Substances, WADA Rules and Regulations Regarding Inadvertent Use of Prohibited Substances.

Unit II
Different Methods and Chemicals of Doping and Masking, Anabolic Androgenic Steroids, Stimulants, Glucocorticoids, PeptideProtein Hormone, Beta-2 Agonists, Hormone and Metabolic Modulators, Narcotics, Beta Blockers, Manipulation of Blood and Blood Components, Chemical and Physical Manipulations, Gene Doping, Diuretics and Masking.

## Unit III

Substances and Methods Permitted in Sports, Sport Supplements and Herbal Preparations, Evolving Issues Concerning Drug Use in Sports, Athletic Testing, Analytical Procedures, And Adverse Analytical Findings, The Future of Performance Enhancing Substances in Sports, Antidoping Movement.

Recommended Books:

- Anthony C Hackey (2017) Doping, Performance-Enhancing Drugs, and Hormones in Sports ISBN:978-0-12-813442-9.

David R. Mottram, Neil Chester (2018) Drugs in Sports, Routledge, ISBN:1351838989.
Portefield, Jason (2008) Doping: athletes and drugs, Rosenn Publishing, New York, ISBN:1-4042-1917-5.

## Sports Genetics and Performance

## Unit I

Basic Genetic Concepts, Mendelian inheritance, population genetics, Human chromosome Karyotype, Chromosome Disorders, Genome Structure and Genetic Mapping, Mitochondrial Inheritance, The Genetic Code and Genetic Alterations, DNA Injuries and Repair, Monogenic and Polygenetic Diseases, Molecular Diagnostics.

Unit II
Ethics of Genetic Testing and Research in Sport, Current Challenges and Directions to the Future, Genetic Modifications in Sports, Ethical Considerations of Genetic Manipulation in Sport, Gene Therapy and Gene Doping.

Unit III
Connecting Sports and Genetics, The Genetics of Sports Injuries and Athletic Performance, Genetic Contributors to Hypertrophic Cardiomyopathy, Chronic Traumatic Encephalopathy, Different Classes of Performance Enhancing Genetic Variants.

Recommended Books:

- Bruce R. Korf and Mira B Irons (2012) Human Genetics and Genomics, Wiley-Blackwell.
- Manu L Kothari, Lopa A Mehta, Sadhana S roychoudhury, (2009) Principles of Genetics, Universities Press.
- Ricki Lewis (2017) Human Genetics the basics, Routledge, ISBN:978-1-138-66801-0
- Michael Posthum and Malcolm Collins (2016) Genetics and Sports, Karger Publisher.
- Elaine A. Ostrander, Heather J. Huson, and Gary K. OstranderGenetics of Athletic Performance (2009) Annu. Rev. Genomics Hum. Genet. 2009.10:407-29.
- Guilherme JPLF et al (2014) Genetics and sport performance: current challenges and directions to the future, Rev Bras Educ Fís Esporte, (São Paulo) 2014 Jan-Mar; 28(1):177-93.
- Lisa M. Guth and Stephen M. Roth (2013) Genetic influence on athletic performance, Curr Opin Pediatr. 2013 December; 25(6): 653-658. doi:10.1097/MOP.0b013e3283659087.
- Giuseppe Lippi, Umile Giuseppe Longo, Nicola Maffulli (2009) Genetics and sports, British Medical Bulletin 2010; 93: 27-47 DOI:10.1093/bmb/ldp007.
- Nicola Mafulli et al (2013) the genetics of sports injuries and athletic performance. Muscles, Ligaments and Tendons Journal, 3 (3): 173-189.


## Exercise Immunology

## Unit I

Immunological system and exercise : Exercise and innate and humoral immunity, Exercise induced change in Ig and antibody, exercise and cytokines.

Unit II
Sex Differences in Immune Function after Aerobic Exercise, Sex differences in immune variables and respiratory infection, Killer cell immunoglobulin-like receptors and exercise, Anti-inflammatory influence of exercise training- Physical activity, fitness, and chronic inflammation, C-Reactive Protein (CRP),

Unit III
Cytokines, Free radicals, Antioxidants, Effect of exercise on immunity, Physical activity - A stimulator and an inhibitor to the immune system. Exercise and upper respiratory tract infection

## Unit IV

Infection and exercise performance, Exercise and HIV infection, Exercise and Cancer, Exercise aging and immunity, Maintaining immune health, Importance of exercise immunology in health promotion.

## Recommended Books:

乙 Michael Gleeson, Nicolette Bishop, and Neil Walsh.(Eds) (2013) Exercise immunology. Routledge
_ Warren Levinson (2016) Review of Medical Microbiology and Immunology. Lange, Mc Graw Hill.

1. Isolation of genomic DNA from blood.
2. DNA amplification using Polymerage Chain Reaction.
3. Application of General Biochemistry techniques- Electrophoresis, Centrifugation.
4. Estimation of Total Antioxidant Capacity.
5. Estimation of Vitamin A or Vitamin C.
6. Estimation Total Bilirubin, Enzymes, Hormones.
7. Estimation of Glucose/ Lactate in Exercising Persons.
8. Estimation of Serum Iron, Serum Ferritin in Exercising Persons.
9. Estimation of Cholesterol, Triglycerides, HDL/LDL in Exercising Persons.
10. Estimation of Serum Albumin in Exercising Persons.
11. Isolation of Immunoglobin $G$ from serum/egg.

## SEMESTER-IV

Unit-I
Introduction to Research in Physical Activity, Developing the Problem and Using the Literature, Presenting the Problem, Formulating the Method, Ethical Issues in Research and Scholarship

Unit-II
Types of Research: Socio Historical Process in Sport Studies, Philosophical Research in Physical Activity, Research Synthesis (Meta-Analysis), Surveys, Other Descriptive Research Methods, Physical Activity Epidemiology Research, Experimental and Quasi-Experimental Research, Qualitative Research, Mixed-Methods Research

## Unit-III

Writing the Research Report: Completing the Research Process, Ways of Reporting Research
Introduction to review of literature, Evaluation of scientific literature; organizing literature - strategies, use of software; Metaanalysis, Writing review - structuring the review, quoting/paraphrasing, the citation referencing system

## Recommended Books:

च Research Methodology: Methods and Techniques by C. R. Kothari.

- ICMR. Ethical Guidelines for Biomedical Research on Human Subjects. 2006; ICMR, New Delhi.

Research Methods in Physical Activity- 7th Edition By Jerry Thomas, Jack Nelson, Stephen Silverman, Human Kinetics Research Methods in Sport by Mark F Smith.
Research Methods for Sports Performance Analysis By Peter O' Donoghue.
Research Methods in Physical Education and Youth Sport 1st Edition by Kathleen Armour and Doune Macdonald.
乙 Ridley, D. The Literature Review a step-by-step guide for students. 2012; Sage Publications Limited, New Delhi.

# School of Sports Sciences <br> Department of Sports Biosciences 



# Proposed Course Structure and Course Details M.Sc. Sports Nutrition 

Central University of Rajasthan NH-8, Bandar Sindri, Kishangarh-305817 Dist. Ajmer (Rajasthan)

SEMESTER I (Total credits: 24)

| Code | Title of Course | Type of Course | Credits |
| :--- | :--- | :--- | :--- |
| MSSN 101 | Human Anatomy and Physiology | Core | 3 |
| MSSN 102 | Biomolecules and Metabolism | Core | 3 |
| MSSN 103 | Kinesiology | Core | 3 |
| MSSN 104 | Psychological and Social Aspects of Sports | Core | 3 |
| MSSN 105 | Biomechanics and Motor Learning | Core | 3 |
| MSSN 106 | Elective I <br> - Elective from any other Department <br> - Sports First Aid and Emergencies <br> - History of Physical Education and Sports <br> $\bullet$ Physiological Aspects of Ageing | Elective | 3 |
| MSSN 107 | Laboratory I | Core | 3 |
| MSSN 108 | Laboratory II | Core | 3 |

SEMESTER II (Total credits: 24)

| Code | Title of Course | Type of Course | Credits |
| :--- | :--- | :--- | :--- |
| MSSN 201 | Principles and Methods of Sports Training | Core | 3 |
| MSSN 202 | Exercise Physiology and Metabolism | Core | 3 |
| MSSN 203 | Fatigue, Injuries and Rehabilitation | Core | 3 |
| MSSN 204 | Food and Nutrition | Core | 3 |
| MSSN 205 | Statistics for Sports Science | Core | 3 |
| MSSN 206 | Elective II <br> • Elective from any other Department <br> - Kinanthropometry in Sports <br> - Health Fitness and Wellness <br> $\bullet$ Adaptations to Exercise and Training | Elective | 3 |
| MSSN 207 | Laboratory III | Core | 3 |
| MSSN 208 | Laboratory IV | Core | 3 |

SEMESTER III (Total credits: 24)

| Code | Title of Course | Type of Course | Credits |
| :--- | :--- | :--- | :--- |
| MSSN 301 | Clinical Sports Nutrition | Core | 3 |
| MSSN 302 | Dietary Supplements and Ergogenic Aids | Core | 3 |
| MSSN 303 | Assessment of Health and Fitness of Athlete | Core | 3 |
| MSSN 304 | Nutritional and Exercise Biochemistry | Core | 3 |
| MSSN 305 | Sports Specific Nutrition | Core | 3 |
| MSSN 306 | Elective III <br> - Elective from any other Department <br> - Food Psychology and Counselling <br> - Sports Genetics and Performance <br> - Exercise Immunology | Elective | 3 |
| MSSN 307 | Laboratory V | Core |  |
| MSSN 308 | Laboratory VI | Core | 3 |

SEMESTER IV (Total credits: 24)

| Code | Title of Course | Type of Course | Credits |
| :--- | :--- | :--- | :--- |
| MSSN 401 | Research Methodology | Core | 3 |
| MSSN 402 | Journal Club Presentation | Presentation | 3 |
| MSSN 403 | Major Project | Tutorial/Laboratory | 18 |

Unit-I
Anatomy and Physiology of: Blood, Cardiovascular System, Lymphatic System, Integumentary System and Respiratory System.
Unit-II
Anatomy and Physiology of: Nervous System, Special Senses, Endocrine System, Skeletal System, Joints and Muscular System.

## Unit-III

Anatomy and Physiology of: Digestive System, Immune System, Urinary System, Fluid and Electrolyte Balance, Reproductive System, Pregnancy and Human Development.

## Recommended Books:

- Human Anatomy and Physiology ( $10^{\text {th }}$ edition) by Elaine N Marieb, Katja N Hoehn.
- Introduction to Human Body- The Essentials of Anatomy and Physiology by Gerard J. Tortora.
- Textbook of Anatomy with Coloured Atlas by Inderbir Singh.
- Textbook of Medical Physiology by Arthur C. Guyton.
- Principle of Human Anatomy ( $10^{\text {th }}$ Edition) by Gerard J. Tortora. Gray's Anatomy: Anatomical Basis of Clinical Practice by Standring, Susan. Borley, Neil R. Gray Henry.
- Human Physiology by C.C. Chatterjee.
- Chowdhary Medical Physiology by S K Chowdhary.
- Netter's Atlas of Human Anatomy by Frank H. Netter.


## Credit 3

Unit-I
Foundation of Biochemistry, Properties of Water, Amino Acids, Peptides and Proteins, Structure and Function of Proteins, Enzymes, Sugars, Carbohydrates and Glycobiology, Nucleotides and Nucleic Acids, Fatty Acids, Structure and Functions of Lipids.

Unit-II
Principles of Bioenergetics, Major Metabolic Pathways in Human and its Relevance with Exercise, Glycolysis, Gluconeogenesis, Pentose Phosphate Pathway, Citric Acid Cycle, Electron Transfer System in Mitochondria, Oxidative Phosphorylation.

## Unit-III

Basic Concepts and Design of Metabolism, Metabolic Regulation of Glucose and Glycogen, Biosynthesis of Carbohydrates, Lipid Biosynthesis, Fatty Acids Catabolism, Amino Acids- Biosynthesis, Oxidation and Production of Urea, Metabolism of Lactate, Integration and Regulation of Metabolism.

## Recommended Books:

- Principles of Biochemistry- Lehninger Nilson and Cox W.H. Freeman.
- Principles of Biochemistry- Donald Voet, CW Pratt, JG Voet (2012) Wiley, ISBN:1118092449.
- Principles of Exercise Biochemistry Editor(s): Poortmans J.R. (Brussels) Karger Publishers.
- Biochemistry JM Berg, TL Tymoczko L Stryer W. H. Freeman and Company.
- West \& Todd Text book of Biochemistry. Mac Millan Company London.
- G.P. Talwar \& ID Singh Textbook of Biochemistry \& Human Biology - Prentice Hall of India, New Delhi.
- Vasudevan Textbook of Biochemistry. Jaypee Brothers Medical publishers (P) Ltd.
- Jain J.L., Jain Sanjay, Jain Nitin, S Fundamentals of Biochemistry -. Chand and Company Ltd, New Delhi.
- A.C. Dev. Comprehensive Viva and practical Biochemistry. New Central Book Agency Pvt. LTD.


## MSSN 103

## Kinesiology

## Credit 3

Unit-I
Meaning of Kinesiology, Aims and Objectives of Kinesiology, Role of Kinesiology in Sports; Anatomical Position, Principles of Plane and Axis, Various types of movements.

Unit-II
Bones: Meaning and composition of bone, Kinds of bones (flat, long, short, irregular and sesamoid), Function of bones, Bone fracture and its types; General features of the following bones: Upper Extremities: Clavicle, Scapula, Radius and Ulna, Humorous; Lower Extremities: Femur, Patella, Tibia, Fibula, Pelvic Bones; Joints: Meaning and types of joints, Joint flexibility, Technique to increase the flexibilities, Structure, function, fundamental movements around the joints; General features, structure and movements of the following joints: Shoulder Complex, Elbow Complex, Hip Complex, Knee joint, Spinal column and Pelvic girdle.

Unit-III
Introduction to Muscular System: Muscles and Tendons, Classification of muscles, Structure of Skelton muscle, classification of muscles on the basis of fibre arrangement, Physiology of muscle contraction, types of muscle contraction, Role of muscle in the movement, Methods of studying the action of muscle. Origin, Insertion and action of major muscle groups of the body; Nervous System: Overview of Nervous system, Neurons, Motor Unit and Receptors.

## Recommended Books:

- Clinical Mechanics and Kinesiology With Web Resource, Human Kinetics, by Janice Loudon, Robert Manske, Michael Reiman.
- Biomechanics and Kinesiology of Exercise - 2013 by Michael Yessis.
- Cynthia C. Norkin, Pamela K. Levangie : Joint structure \& function- A comprehensive analysis 2nd edition.
- Brunnstrom - Clinical Kinesiology, F.A. Davis.
- Rasch and Burk: Kinesiology and Applied Anatomy, Lee and Fabiger.
- Shaw, D,, Pedagogic Kinesiology, Khel Sahitya Kendra, 2007.
- Thompson, C., Manual of Structural Kinesiology. (10th Ed.), St. Louis: Times Mirror/ Mosby College Publishing, 1995.
- Shaw, Dhanonjoy, Kinsiology and Biomechanics of Human Motion, Khel Sahitya Kendra, 1998.
- White and Punjabi - Biomechanics of Spine - Lippincott.
- Kapandji: Physiology of Joints Vol. I, II \& III, W.B. Saunders.
- Luttgens K., Hamilton N.: Kinesiology - Scientific Basis of Human Motion 9th Edi.
- Basic Biomechanics 4th edition, susan J. Hall, MCGraw Hill.


## Unit-I

Sports Psychology and role of Psychology in Sports, Methods of Psychology employed in Sports, Motor leaning and Performance, Importance of Sports Psychology for Athletes, Coaches and others related to Sports settings.

Unit-II
Personality and its role in Sports, Attention and Perception in Sports; Motivation and Goal setting and its role in Sports, Emotions in Sports, Stress and Anxiety in Sports, Biofeedback techniques in Sports.

Unit-III
Sociology of Sports, Social Factors and Socio-metric techniques in Sports, Group processes, Team cohesiveness and Leadership in Sports, Effect of crowd behaviour in Sports, Economics and Politics in Sports.

Recommended Books:

- Weinberg \& Gould, Foundations of Sports and Exercise Psychology. Human Kinetics 2016.
- Motor Learning and Performance 5th Edition With Web Study Guide From Principles to Application, Human Kinetics by Richard Schmidt, Tim Lee.
- Morgan and King: Introduction to Psychology - Tata McGraw Hill.
- M.L. Kamlesh Psychology in Physical Education and Sports by Publisher Mehopolitan book co. Pvt. Ltd., Netaji Subash Marg, New Delhi 11002.
- Sanjeev. P. Sahni Psychology and its application in sports by, Publisher D.V.S. publications, 100, Giri Nagar Kalkaji, New Delhi-110019.
- Agyajit Singh Psychology of Coaching, Friends Publications, \# 101 Ansari Road Darya Ganj, New Delhi-110002.
- Jitendra Mohan Recent Advances in Sports psychology, By, Publisher, Friends Publications.
- Fundamentals of Sociology of Sport and Physical Activity, Human Kinetics by Katherine M. Jamieson, Maureen M. Smith.
- Doing Exercise Psychology, Human Kinetics by Mark Andersen, Stephanie Hanrahan.
- Social Issues in Sport 3rd Edition, Human Kinetics by Ron Woods.


## MSSN 105

Biomechanics and Motor Learning

## Credit 3

Unit-I
Role of Bio-Mechanics in the field of Sports Science, Principles of Biomechanics; Biomechanical Concepts: Motion, Newton's law of Angular Motion and Linear Motion and its relationships, Force, Centripetal and Centrifugal forces, Equilibrium, Centre of Gravity and Stability, Freely falling bodies and Projectile, Momentum, Impulse, Lever and its Classification, Work, power, Energy: Relationship of Work, Power and Energy, Friction, Spin, Impact, Elasticity, Rebound, Fluid mechanics, Air resistance and Water Resistance.

Unit-II
Determine the simultaneous-sequential nature of a variety of movement skills, Classify motor skills using the classification system presented, Bio-Mechanical analysis of fundamental skills: Walking, Running, Jumping, Pulling, Pushing, Lifting, Lowering, Throwing.

Unit-III
Introduction to Gait Analysis. Mechanical Analysis of Sports Skills: Athletics (Running, Jumping and Throwing), Swimming, Football, Basketball, Volleyball, Cricket. Technological Use and Advances in Biomechanics: Techniques and Tools for Measurement of Biomechanical Variables.

Recommended Books:

- Biomechanical Analysis of Fundamental Human Movements by Arthur Chapman, 2008, Human Kinetics.
- Biomechanics of Sport and Exercise 3rd Edition With Web Resource and MaxTRAQ 2D Educational Software Access-Loose-Leaf Edition, Human Kinetics, By Peter McGinnis.
- Biomechanics and Kinesiology of Exercise - 2013 by Michael Yessis.
- Cynthia C. Norkin, Pamela K. Levangie : Joint structure \& function- A comprehensive analysis 2nd edition, F.A. Davis Company Philadelphia.
- Brunnstrom - Clinical Kinesiology, F.A. Davis.
- Rasch and Burk: Kinesiology and Applied Anatomy, Lee and Fabiger.
- White and Punjabi - Biomechanics of Spine - Lippincott.
- Kapandji: Physiology of Joints Vol. I, II \& III, W.B. Saunders.
- Luttgens K., Hamilton N.: Kinesiology - Scientific Basis of Human Motion 9th Edi.
- Basic Biomechanics 4th edition, susan J. Hall, MCGraw Hill.
- Joseph Hamill, Kathleen M. Knutzen. Biomechanical Basis of Human Movement.


## MSSN 106

## Elective I

## Credit 3

## Sports First Aid \& Emergencies

Unit-I
Introduction to Sports First Aid, Athletic Health Care Team, Sport First Aid Game Plan, First Aid Equipment and Kit, Basic Life Support System, Recovery Position, Head to toe- survey, Artificial Ventilation, Basic Sport First Aid Skills, Anatomy and Sport Injury Terminology, Emergency Action Steps , Physical Assessment and First Aid Techniques, Moving Injured or Sick Athletes.

Unit-II
Sport First Aid for Specific Injuries: Unconsciousness: ABC, CPR, AED, Respiratory Emergencies and Illnesses, Shock, Wounds and Bleeding, Head, Spine and Nerve Injuries, Internal Organ Injuries, Upper and Lower Body Musculoskeletal Injuries, Facial and Scalp Injuries, Skin Problems.

Unit-III
Disaster Preparedness and Management: Weather-Related Problems, Environmental Emergencies: Animal Bites and Stings, Allergies, First Aid Protocols, Practical Skills in using: Triangular Bandages, Broad fold, Thin fold, Slings, Collars, Cardiac Emergencies.

## Recommended Books:

- Sport First Aid-5th Edition by Melinda Flegel, Human Kinetics, 2014.
- American Red Cross, First Aid/CPR/AED : PARTICIPANT'S MANUAL.
- Practical First Aid: British Red Cross in Association with donning kinder sley.
- John Morris: First Aid Training Manual, Everyday learning PVT., Ltd.
- Authorized Manual of St. John Ambulance (India): First Aid.
- Bradley R.A. Wilson. Timothy E. Glaros: Managing Health Promotion Programs Human Kinetics Publishers.


## History of Physical Education and Sports

Unit-I
What are Play, Game and Sports? Types of sports and recreational activities, Importance of free play and organizational games, Terminology: Sports Science and Physical Education, Health related and Motor performance related fitness, Health and Wellness (Physical, Mental, Psychological, Social and Spiritual) and Athletics, Sports Carriers: Media, Management, Performance, Coaching and other related areas.

Unit-II
Philosophy and its need in Sports and Physical Education, Idealism, Naturalism and Pragmatism in Physical Education, Physical Education in Ancient Greek, Rome, India and Modern India. History of Olympic Games, Asian Games, SAARC Games and SAF Games, National Sports Awards, Trends and problems in Sports Sciences and Physical Education in $21{ }^{\text {st }}$ Century.

## Unit-III

Introduction to general Rules and Regulations of Selected Sports (Football, Field Hockey, Basketball, Volleyball, Cricket, Badminton, Tennis), Introduction to Playfields and Track Specifications, General organizational process of Sports Competitions.

Recommended Books:

- Bucher, C.A.: Foundation of Physical Education, St. Louis: The C.V. Mosby company, 1983.
- History and Philosophy of Sport and Physical Activity, Human Kinetics by R. Scott Kretchmar, Mark Dyreson, Matthew Liewellyn, John Gleaves, 2017.
- Synder and Geoh: Professional preparation in Health Education, Physical Education and Recreation.
- Barrow, H.M.: Man and Movement: Principles of Physical Education, Philadelphia Lea and Fabiger, 1977.
- Joseph, P.M.: Organisation of Physical Education, Kandivila,: Old students Association, T.I.P.E.
- Kamlesh, M.L. and Sangral, M.S. : History and Principles of Physical Education, Prakash Brothers, 1983.
- Wuest and Bucher: Foundations of Physical Education and Sports, B.I. Publications Pvt. Ltd., New Delhi.
- William, H.F.: Physical Education and Sports in Changing Society, Surjeet Publication, Delhi.


## Physiological Aspects of Ageing

Unit-I
Growth and Biological Maturation: Relevance to Athletic Performance; Muscle Development during Childhood and Adolescence, Relevance to Understanding Effects of Growth on Performance.

Unit-II
Theory of ageing, Age related changes in different body systems, Cardiovascular Concerns in the Young Athlete, Trainability During Childhood, Ageing and muscular strength, Ageing and joint flexibility.

Unit-III
Exercise guideline for Geriatric populations. Introduction to Masters Sports, Ageing and Performance, and the role of continued involvement, Psychosocial issues in Masters Sports, Model of lifespan physical activity, health and performance.

## Recommended Books:

- Helge Hebestreit and Oded Bar-Or (2008) The young athlete. Blackwell Publishing Ltd.
- Joseph Baker, Sean Horton and Patricia Weir (2000) The masters athlete: understanding the role of exercise in optimizing aging. Routledge.
- "Fitness and Wellness": Warner W. K Hoeger and Sharvon A. Hoegor.
- "Fitness \& Wellness concepts": Charles B. Corbina \& Ruth Lindsey.
- "Lifetime Fitness \& Wellness - A personal choice": Melvin H. Williams.


## MSSN 107

Laboratory I
Credits-3

- Introduction to laboratory techniques- pipetting, calculations, introduction to equipments, sterile techniques and lab safety.
- How to Use microscopes.
- To study Counting Chambers.
- To determine the total Red Blood Corpuscles count.
- To determine the total Leucocyte Count in blood.
- To measure the Haemoglobin concentration of blood.
- To measure Blood Pressure of a subject in different positions.
- Calculation of Energy expenditure.
- Measurement of blood glucose Cholesterol/HDL, Glycerol, Lactate, Triglycerides.
- Biochemical Assessment of Metabolites.
- Biochemical Assessment of Enzymes.
- Biochemical Assessment of Hormones.
- Estimation of sugars, iron, phosphate, vitamin C and organic acids.
- Estimation of protein concentration.


## Credits-3

- To analyse various planes and axes of the body.
- To demonstrate the surface anatomy and muscle attachments of following bones: Clavicle, Scapula, Humerus, Radius, Ulna, Meta Carpals, Phalanges, Femur, Tibia, Fibula, Patella, Tarsals and metatarsals.
- To demonstrate the following joints including corresponding muscles and movements of Upper Extremity: Acromioclavicular joint, Sternoclavicular joint, Shoulder joint, Elbow joint, Proximal Radioulnar joint, Distal Radioulnar joint, Wrist joint Thumb joint.
- To demonstrate the following joints including corresponding muscles and movements of Lower Extremity: Hip Joint, Knee complex, Ankle joint.
- Demonstration and Estimation of Centre of Gravity of Human Body.
- Determination of Human Gait pattern.


## SEMESTER-II

Unit-I
Scientific basis of Sports Training, Importance, Aims and Objectives of Sports Training; Characteristics of Sports Training; Biological Process in Training; Components of Physical Fitness (motor abilities) - Endurance, Strength, Speed, Flexibility, Coordination; Agility.

Unit-II
Principles of Sports Training - Overload, Specificity, Progression and Reversibility; Meaning and concept of Training load; Adaptation and Recovery, Super Compensation, Training Structure - Volume, Intensity, Frequency, Peaking, Errors in Training, Adaptations to Resistance Training, Adaptations to Aerobic and Anaerobic Training.

## Unit-III

Training plan; Need and importance in planning; Types of training plans - short term and long term plans; Training and Competition Cycles (training conception, macro, micro, meso); Periodization - Need, Types; Aims of various phases of Periodization (Preparatory, Competition and Transition); Competition -Types of Competition, Preparation for competition; the number and frequency of competition. Training athletes with disability, Adapted games for Disabled; Special Olympics and Paralympics.

Recommended Books:

- Physiology of Sport and Exercise 6th Edition with Web Study Guide-Loose-Leaf Edition by W. Larry Kenney, Jack Wilmore, David Costill.
- Periodization-6th Edition Theory and Methodology of Training by Tudor Bompa, Carlo Buzzichelli.
- Physiological Aspects of Sport Training and Performance With Web Resource-2nd Edition, Human Kinetics By Jay Hoffman.
- Recovery for Performance in Sport by Institut National du Sport de l'Expertise et de la Performance INSEP, Human Kinetics, Christophe Hausswirth, A. Mujika.
- Essentials of Sports Training and Conditioning by JB Learning, NASM.
- Singh, H: Science of Sports training, DVS Publication, New Delhi, 1991.
- Matweyev, L.P.: Fundamentals of Sports training, publication Moscow, 1984.
- Harre, D: Principles of sports training, Sportverlag, Berlin, 1988.
- Singh, H: Science of Sports training: General theory and methods, NIS, Patiala, 1984.
- Scholisch, M: Circuit training, Sportverlag, Berlin.
- Willmore, J.H.: Athletic training and physical fitness, Antro and Becon Inc, Sydney.


## Credit 3

## Unit-I

Introduction to Exercise Physiology: Definitions of terminologies (Work, Power, speed, strength, efficiency etc.); Types of exercise (aerobic and anaerobic) and limiting factors, Exercise intensity and duration, Adaptations to exercise: Physiological and metabolic adaptations to training; Muscle hypertrophy and performance.

Unit-II
Adaptation of Respiratory and Cardiovascular Systems to exercise: Respiratory responses during exercise at varying intensities, Cardiovascular responses to exercise. Fluid balance and Thermoregulation: Energy Production; Aerobic metabolism during exercise (oxygen and carbon-di-oxide production, oxygen cost of breathing, RER, Estimation of calorie expenditure, MET, Field estimates of energy expenditure, efficiency and economy), Exercise in environmental stress; Exercise in the heat; Cardiovascular demands of exercise in the heat; Exercise in cold; Cold induced injuries.

## Unit III

Adaptation of skeletal muscle, endocrine and immune system in training: Bone development; Factors influencing bone health; Special applications in osteoporosis; Female athletic triad; Skeletal injuries. Skeletal muscle and neuromuscular system, Importance of muscle fibre types in athletes; Skeletal muscle force production; Fatigue and muscle soreness;Physiological response to stretching; Application of training principles to flexibility; Adaptation to flexibility.

## Recommended Books:

- Christopher B. Scott. (2010). A Primer for the Exercise and Nutrition Sciences: Thermodynamics, Bioenergetics, Metabolism. Humana Press.
- Raven, P., Wasserman, D., Squires, W., \& Murray, T. (2012). Exercise Physiology: An Integrated approach. Nelson Education.
- ACSM's Resources for Clinical Exercise Physiology: Musculoskeletal, Neuromuscular, Neoplastic, Immunologic and Hematologic Conditions by American College of Sports Medicine.
- Powers, S. (2014). Exercise physiology: Theory and application to fitness and performance. McGraw-Hill Higher Education.
- Smith, D. L., \& Fernhall, B. (2011). Advanced cardiovascular exercise physiology. Human Kinetics.
- Farrell, P. A., Joyner, M., \& Caiozzo, V. (2011). ACSM's advanced exercise physiology.
- Cheung, S. (2010). Advanced environmental exercise physiology. Human Kinetics.
- Hale, T. (2005). Exercise physiology: a thematic approach (Vol. 5). John Wiley \& Sons.
- Ehrman, J. K., Kerrigan, D., \& Keteyian, S. (2017). Advanced Exercise Physiology: Essential Concepts and Applications. Human Kinetics.
- McArdle, W. D., Katch, F. I., \& Katch, V. L. (2015). Exercise physiology: nutrition, energy, and human performance. 8th Edition, Lippincott Williams \& Wilkins.

MSSN 203
Fatigue, Injuries and Rehabilitation

## Credit 3

Unit-I
Concept of Overloading, Overtraining, Fatigue and Staleness, Symptoms and Causes of Fatigue, Types of Fatigue, Theories associated with Fatigue, Definition, Types, Symptoms, Findings, Underlying Mechanisms and Frequency of Overtraining and Overtraining Syndrome, Oxygen Debt Theory, Recovery Oxygen Uptake or Excess Post-Exercise Oxygen Consumption (EPOC), Implications of EPOC for Exercise and Recovery, Optimal Recovery From Steady-Rate Exercise and Non-Steady-Rate Exercise, Intermittent Exercise and Recovery.

Unit-II
Sports Injury- Meaning, Classification, Causes, Types, General guidelines for their Prevention, Recovery Time, Introduction and Management of common Sports Injuries (Fracture, Dislocation, Laceration, Abrasion, Sprain and Strain), How to avoid Sports Injuries, Role of Warm-up and Cool Down.

## Unit-III

Rehabilitation: Meaning, Concepts, Objective and scope of Rehabilitation, Principal of care and Rehabilitation
Therapeutic Modalities: Electrotherapeutic modalities (Shortwave Diathermy, Ultra Sound, T.E.N.S), Heat and Cold, Soft tissue Massage, Aquatic Rehabilitation Exercise, Therapeutic Exercise, Therapeutic Nutrition, Psychological Rehabilitation.

Recommended Books:

- Shaun Phillips (2015) Fatigue in Sport and Exercise. Routledge, NY
- Therapeutic Modalities for Musculoskeletal Injuries 4th Edition, Human Kinetics by Craig Denegar, Ethan Saliba, Susan Saliba, 2016
- Essentials of Athletic injury management 10th edition by William E. Prentice, Human Kinetics.
- Clinical Sports Medicine Fifth Edition by Peter Brukner, Karim Khan, McGraw-Hill Education Australia, 2016
- Principles and Practice of Therapeutic Massage by Sinha, Jaypee Publishers
- Textbook of Electrotherapy by Singh Jagmohan, Jaypee Publishers
- Manfred Lehmann, Carl Foster, Uwe Gastmann, Hans Keizer and Jtirgen M. Steinacker(Eds) (1997) Overload, Performance Incompetence and Regeneration In sport. Kluwer Academic / Plenum Publishers, N.


## Credit 3

## Unit-I

Nutrients: Functions and Recommended Intakes, Healthy Eating and Balanced Diet, Fuel Sources for Muscle and Exercise Metabolism, Energy: Food Energy and Expenditure, Gastric Emptying, Digestion, and Absorption.

Unit-II
Nutritional Role and Recommendations for following: Carbohydrate, Fat, Protein and Amino Acids, Water Requirements and Fluid Balance, Vitamins and Minerals, Nutrition Supplements.

Unit-III
Nutrition and Training Adaptations, Nutrition and Immune Function in Athletes, Body Composition and Weight Management, Eating Disorders in Athletes, Personalized Nutrition, Menu Planning (Meal Timing and Spacing).

Recommended Books:

- Sport Nutrition 3rd Edition by Asker Jeukendrup, Michael Gleeson, Human Kinetics, 2018.
- Nutrition for Sport, Exercise, and Health by Marie Spano, Laura Kruskall, D. Travis Thomas, Human Kinetics.
- Physiology of Sport and Exercise 6th Edition with Web Study Guide-Loose-Leaf Edition by W. Larry Kenney, Jack Wilmore, David Costill.
- Exercise Physiology: Nutrition, Energy and Human Performance 8th Edition by William D. McArdle, Frank I. Katch, Victor L. Katch
- Nancy Clark's Sports Nutrition Guidebook by Nancy Clark, Human Kinetics
- NSCA's Guide to Sport and Exercise Nutrition by National Strength Conditioning Association, Human Kinetics
- Fundamental of Foods, Nutrition \& Diet Therapy $5{ }^{\text {th }}$ edition by S.R. Mudambi, M.V. Rajagopal, New Age International Limited, New Delhi.
- Applied Nutrition. By R. Rajlaxmi, IBH Publications, New Delhi.
- Nutritional Supplements in Sports, Exercise and Health: An A to Z Guide by Linda M. Castell, Smantha J. Stear, Louise M. Burke, Routledge.

MSSN 205
Statistics for Sports Science
Credit 3
Unit-I
Introduction to Biostatistics, Frequency Distribution, Variable and Attribute, Line-diagram, Bar-diagram, Pie chart, Histogram, Mean, Median and Mode.

Unit-II
Variance, Standard deviation; Standard error of mean, Null hypothesis, Level of significance and Probability; Regression and correlation.

Unit-III
Student‘s t-test, Fisher's t-test, Chi-square test, Analysis of Variance (ANOVA), ANCOVA, Introduction and Application of Statistical Software.

Recommended Books:

- A Text book of Biostatistics, by A.K.Sharma, Discovery publishing house.
- Introduction to Biostatistics, By Dr. Pranab Kumar Banerjee, S. Chand Publishers.
- Research Methodology: Methods and Techniques Book by C. R. Kothari.
- Dutta N.K. Fundamentals of Bio-Statistics. 2002; Kanishka Publishers, New Delhi.
- Gupta S.P. Statistical Methods. 2004; S. Chand \& Sons, New Delhi.
- Ruud H. Koning and James H. Albert ( 2008) Statistical thinking in sports. Chapman \& Hall/CRC.


## Credit 3

## Kinanthropometry in Sports

Unit-I
Introduction, scope and general consideration, i.e. Application of anthropometric data in sports, Body proportions and indices, Sports specific body proportions and indices, Body mass index and its importance in sports.

Unit-II
Anthropometric Measurements and Procedures, Equipment for anthropometric measurements, Gross Body Measurements and procedures, Length of Body Parts, Measurements and procedures, Diameters of Body Parts, Measurements and procedures, Circumferences of Body Parts, Measurements and procedures, Skinfold Thickness, Measurements and procedures.

Unit-III
Physiological Maturation: Decimal Age and concept of Physiological maturity in sports. Assessment of skeletal maturity of athletes, Body Composition: Anthropometric determination, Importance in sports and various methods to estimate body composition, Somatotyping: Introduction, Definition of Somatotyping and Classification.

Recommended Books:

- Sports Anthropemetry by H.S. Sodhi, ANOVA Publication.
- Physique and Selection of Sportsmen by H.S. Sodhi and L.S. Sidhu.
- Kinanthropometry by S.P. Singh and P. Malhotra, Luna Publication, Patiala.
- Kinanthropometry by Roger Eston and Thomas Reilly, E \& F.N. SPON, London.
- Skeletal Maturity by S.P. Singh, L.S. Sidhu, and J. Singh, Human Biology Publication Society, Punjabi University, Patiala.
- Genetic and Anthropological Studies of Olympic Athletes by De Garray, Louis Levine \& Cater, Academic Press, London.


## Health Fitness and Wellness

Unit-I
Introduction to Health: Concept of health, Lifestyle and Disease, Ageing.
Unit-II
Physical Activities \& Fitness: Concept to Fitness, Exercise and its Principles, Health Education Recreation \& Dance.
Unit-III
Healthy Life Style Approach: Concept of Wellness, Wellbeing, Stress Management.
Recommended Books:

- "Fitness and Wellness" : Warner W. K Hoeger and Sharvon A. Hoegor.
- "Fitness \& Wellness concepts": Charles B. Corbina \& Ruth Lindsey.
- "Lifetime Fitness \& Wellness - A personal choice": Melvin H. Williams
- Oxford Textbook of Public Health, Helen Liepman.
- Sunderlal, Aadarsh, Pankaj, 2007, Textbook of Community Medicine, CBS Publishers \& Distributors.
- Kirch, Wilhelm, 2008, Encyclopedia of Public Health, Volume 1 \& 2, Kluwer Academic Publishers.
- Mary -Jane Schneider and Henrey Schneider, 2006 (2nd edition), Introduction to Public Health, Jones and Bartlett Publishers.


## Adaptations to Exercise and Training

Unit-I
Cardiovascular Adaptations to Endurance and Strength Training, Hypertrophy and Cardiomyopathy in Young and Older Athletes, Heart rate training zone, Effects Of High Altitude, Sudden Cardiac Death and Exercise in Healthy Adults.

Unit-II
Respiratory System Adaptations to Endurance and Strength Training, Ventilatory response to exercise and its use in sports, Ventilatory threshold, Effects Of Exercise, response to steady- state exercise, Exercise-Induced Bronchoconstriction, Control of Breathing during exercise; The Respiratory System under Stress, respiratory systems adaptation to long-term exercise, Adaptations to systematic Training, Effects Of High Altitude.

## Unit-III

Muscular Mechanisms in Aerobic Endurance Training; Neural Mechanisms in Aerobic Endurance Training, Muscle Molecular Mechanisms in Strength Training, Muscle Property Changes in Strength Training, Neural Mechanisms in Strength Training. Initial responses of the neuromuscular systems to exercise; Training Adaptation of the Neuromuscular System.

Recommended Books:

- Roy J. Shephard and Henry S. Miller, Jr. (1999) Exercise and the Heart in Health and Disease. Marcel Dekker.
- Shephard, R.J. and Astrand, P.-0. (1992) Endurance in sport. Blackwell Science Ltd, USA.
- McArdle, W.D., Katch, F.I., Katch, V.L. (2006) Essentials of Exercise Physiology. Lippincott Williams and Wilkins, USA.
- Victor F. Froelicher, Jonathan Myers (2006) Exercise and the heart. Elsevier Inc.
- Christopher B. Cooper and Thomas W. Storer (2004) Exercise testing and interpretation- A practical approach. Cambridge University Press.
- K. Wasserman, J Hansen, D Sue, W Stringer, B Whipp, eds (2004) Principles of Exercise Testing and Interpretation, 4th edn.. Lippincott Williams \& Wilkins, Philadelphia, USA.
- Christopher Bell. Cardiovascular Physiology in Exercise and Sport . 1st Edition. 2008; Churchill Livingstone.
- Michael G. Levitzky. Pulmonary Physiology, 8e. 2013; Lange. The McGraw-Hill Companies.
- Denise L. Smith and Bo Fernhall (2011) Advanced cardiovascular exercise physiology. Human Kinetics.

MSSN 207
Laboratory III
Credit 3

- Techniques of taking various anthropometric measurements.
- To define and illustrate various body landmarks.
- Gross body measurements: Body weight (Kg), Stature, sitting height, Height of interior superior Iliac spine, Subischial length.
- Diameters or Breadths (cms): Bicristal diameter (Shoulder Breadth), Transverse chest diameter, Antero-posterior chest diameter, Femur bicondylar diameter (knee breadth), Humerus Bicondylar diameter (elbow Breadth).
- BMI Estimation with and without software.
- Assess Energy and Nutrient intake from Diet using suitable Software.
- Circumferences or Girths of body parts, Calf circumference, Thigh circumference, Waist circumference, Chest circumference
- Skinfold measurement and Body Fat Percentage calculations.
- Training Program: Circuit Training Program, Interval Training Program, Ballistic Training Program, Fertlek Training Program.

MSSN 208
Laboratory IV
Credit 3

- Aerobic Power Field Assessments: Cooper 1.5-Mile Run/Walk Test and 12-Minute Run/Walk Test, Rockport Fitness Walking Test.
- High-Intensity Fitness Testing: Léger 20 m Shuttle Run Test, Yo-Yo Intermittent Recovery Test, 30-15 Intermittent Fitness Test, Sprinting Performance, Jumping Performance, Power Endurance, Anaerobic Cycling Power, Margaria-Kalamen StairClimb Test, BROCKPORT test system, AAHPER health related physical fitness test, Philips JCR test for General motor ability testing.
- Tests for: Speed, Agility, Balance, Coordination, Reaction time, Flexibility.
- Sports Skill Tests for: Soccer, Basketball, Hockey, Tennis.


## SEMESTER III

Unit I
Athletes with Nutrition related disorders; Diabetes and Cardiovascular disease: Physiological effect of exercise; Physical activity prescription; insulin abuse; Effects of long-term physical activity; Acute effects of exercise; Exercise in the presence of Hyperinsulinemia and Hypoinsulinemia; Medical nutrition therapy (MNT); Dietary guidelines and Nutrient timing; type of carbohydrate and timing; Pre and post event carbohydrate loading and fluids; Insulin adjustments. Osteoporosis: Causes and consequences; Physiological effects of exercise; Pathophysiology; Medical Nutrition Therapy. Sports Anaemia: Causes and consequences; Physiological effects of exercise; Pathophysiology; MNT. Athletes with gastrointestinal disorders: food allergies and food intolerance; GI disturbance; Excessive flatulence; Abdominal distention; Intermittent diarrhoea; Constipation; Food related adverse reactions (FRAR); Physiological and dietary factors affecting gut comfort; Gut trainability; Lower GI tract conditions; Irritable Bowel Syndrome (IBS); Low FODMAP diet for IBS; Composition, food sources of FODMAP and pattern of consumption; Coeliac disease; Inflammatory bowel disease (IBD)-Diagnosis, Nutrition related concerns; MNT; Food allergy and Food intolerance: Diagnosis and MNT; nutritional intervention.

## Unit II

Nutrition for Special groups, Special Needs and Sports injuries; The Paralympic Athlete: Body composition assessment and management; Eating difficulties and behaviours, Dietary intakes and potential issues; Reported dietary intakes; Fibre timing of food intake and bowel control;Fluid intake; Medicine requiring Therapeutic Use Exemption (TUE) under WADA; Use of vitamin, mineral or sports supplement; Children and adolescent athletes: Growth and development; Nutritional issues; Eating habits and addiction; Nutritional requirements for growth and training; Female athletes: Vulnerability to nutrition assault and insufficiency; Differences in nutrient utilisation; Female athletic triad (FAT) ( eating disorder, menstrual irregularity and poor bone mineral density); energy availability and its association with FAT; Assessment for FAT; Dietary guidelines for FAT. Vegetarian athletes: Nutritional status and dietary considerations; Nutritional gaps currently identified and suitable dietary modification for fuelling during training, competitions and traveling.

## Unit III

Nutrition for extreme environmental conditions; Altitude: Altitude training and Physiology; Dietary recommendations at varied altitudes; Common Nutritional problems faced by athletes at high altitude. Cold and Heat: Effect of Cold/Hot environment on dietary habits and recommendations for training and competing in cold/Hot environments; Effects of exercising in the heat; Heat stress and injury; Strategic timing of water and electrolyte consumption during extreme climatic conditions; Guidelines for preventing food borne diseases; Strategies for Treating Diarrhea and Vomiting; Replacing fluid and electrolytes.

## Recommended Books:

- Burke, Louise, and Vicki Deakin. (2015). Clinical sports nutrition. McGraw-Hill.
- Broad, E. (Ed.). (2014). Sports Nutrition for Paralympic Athletes. CRC Press.
- Maughan, R. J., \& Shirreffs, S. M. (Eds.). (2013). Food, Nutrition and Sports Performance III. Routledge.
- Campbell, B. (Ed.). (2013). Sports nutrition: enhancing athletic performance. CRC Press.
- Larson-Meyer, D. E. (2007). Vegetarian sports nutrition. Human Kinetics.
- Marie Dunford. (2017) Nutrition for Sport and Exercise.
- LeMura, L. M., \& Von Duvillard, S. P. (Eds.). (2004). Clinical exercise physiology: application and physiological principles. Lippincott Williams \& Wilkins.
- Cheung, S. (2010). Advanced environmental exercise physiology. Human Kinetics.

Dietary Supplements and Ergogenic Aids
Credits 3
Unit I
Nutritional supplements: Evolution into ergogenic aids or drugs among athletes and government regulations. Dietary supplement: Definition and classifications; Ergogenic aids: Definitions and Classifications; Dietary Supplement Health and Education Act of 1994; Government Protections from Dietary Supplement Hazards and Risks; New Dietary Ingredients; FDA Regulatory Action: Ephedra Supplements and DMAA; FDA Regulatory Actions: Androstenedione, Piracetam, and ATD; Contaminated Supplements and Banned Ingredients; Anabolic Steroid Control Act and Designer Anabolic Steroid Control Act; Adverse Event Regulation and Legislation; Contamination or Adulteration. Doping control and Supplement testing: World anti-doping agency and National Antidoping agency (NADA), Formation, History and Standards; List of prohibited substances and Drugs; Analytical procedures and testing of samples from athletes; Drug abuse and athletic performance; Regulations on Dietary supplements: FSSAI and NADA.The Role of Nutritional Supplements Complementing Nutrient-Dense Diets: General versus Sport/Exercise-Specific Dietary benefits, Use of Nutritional Supplements in Sport and Exercise; Consequences of mega dosage in sports performance.

## Unit II

Macronutrient and Micronutrient Supplements; Protein Supplements: Whey, Casein, Egg Albumen, Soy Protein, Pea Protein \& Other Vegan Proteins/Protein Blends), Protein Bars, Protein shakes Amino Acid Supplements- BCAA, Glutamine, Arginine, Taurine. CHO Supplements: Carbo loading, Sports Drinks, Bars and Gels. Fat Supplements: Omega Fatty acids, Medium Chain TCG, Fish Oils. Vitamin Supplements: B-Complex Vitamins, Vitamin C, Vitamin D, Vitamin E Supplements, Multi-Vitamin

Supplements. Mineral Supplements: Calcium-Magnesium-, Iron Supplements, Chromium, Zinc.Antioxidants Supplements: Antioxidants Vitamins \& Mineral Supplements.

## Unit III

Botanical Ergogenic Supplements: Wheat Germ oil, Beetroot, Green Tea Extract, Tart Cherries, Caffeine, Curcumin, Phytosterols, Bio Flavonoids, Ashwagandha, Rhodiola, Shilajit, Ginseng, Grape Seed Extract, chyawanprash, Herbal Testosterone-Boosters (Eg. Tribulus Terristris, Nettle Root, Long Jack Root Etc), Bitter Orange (Citrus aurantium), Capsaicin, White Kidney Bean (Phaseolus vulgaris), Garcinia Cambogia (Hydroxycitric Acid), Guar Gum, and Psyllium, Glucomannan. Metabolite Ergogenic Supplements: Beta-Alanine, LCarnitine Co Enzyme Q 10, Creatinine, DHEA, NADH, Glycerol, Inosine, Melatonine, Gamma Oryzanol (Ferurates), FRAC, Glucosania, Alcohol, Adoptogens, Alkalinizers, Androstenedione, B HMB. Use of Nutritional Supplements in Sport and Exercise: Motivational Antecedents and behavioural Outcomes: Motivational Theories Applied to Supplement Use; Behavioural Effects of Selected Supplements Commonly Employed for Performance, Fitness, and Health.

Recommended Books:

- Antonio, J., \& Stout, J. R. (2002). Supplements for endurance athletes. Human Kinetics.
- Greenwood, M., Cooke, M. B., Ziegenfuss, T., Kalman, D. S., \& Antonio, J. (Eds.). (2015). Nutritional supplements in sports and exercise. Humana Press.
- Cooper, C. E. (2008). Drugs and ergogenic aids to improve sport performance. Essays in biochemistry, 44, 1-10.


## Assessment of Health and Fitness of Athletes

## Credits 3

## Unit I

Assessment of Physique; Kinanthropometry: Definition; Introduction; Body size and proportion; Somatotyping; Circumferences; Skinfold measurement sites and determining body composition; Applications. Body Composition and Performance: Factors that affect Body Composition; Assessment and Interpretation of Anthropometric and body composition data; Ideal Body Composition for Different Sports.Body Composition Assessment Techniques: Direct, Indirect and Doubly indirect (Under Water Weighing, Dexa, Whole Body Conductivity, Skin folds, Bioelectrical Impedance, Total Body Potassium, Near Infrared Interactance).

## Unit II

Dietary Assessment of Athletes: Different methods (food and fluid intake); Advantages and Disadvantages; Applications; Assessing food and fluid intake while traveling. Special issues with dietary assessment in sports: Diversity in intake; Training periodisation and food intake; Misreporting; Season and region specific dietary practices. Estimation of dietary intakes: Food data tables and software use; Evaluation of Nutrient Adequacy of Athletes' dietary intake; Methods for assessing food and fuel intake among athletes; Types of dietary assessment tools (Validity and reliability among athletes); Special concerns in assessing food intake among athletes; Translating the dietary intake data into analysis and determining nutritional information.

## Unit III

Assessment of Physical fitness: Functional tests; Cardiorespiratory and muscular assessment; Type of measurement and protocol for evaluation and interpretation of performance; Aerobic Power or VO2max; Anaerobic Threshold; Economy of Movement. Fitness assessment: Types of exercise, Components of physical fitness and its evaluation in health and performance. Activity Recording: Self-reporting of activities vs. Direct monitoring of activities. Biochemical and clinical assessment in sports:
Assessment of Lipids, Protein, Vitamin and Mineral Status.Clinical Assessment: Signs and symptoms of various nutritional deficiencies. Assessment of Hydration: Estimation of sweat loss and sweat rate; urine volume and indicators of dehydration (Water, Urine and Thirst).

Recommended Books:

- Driskell, J. A., \& Wolinsky, I. (Eds.). (2016). Nutritional assessment of athletes. CRC press.
- Eston, R., \& Reilly, T. (Eds.). (2013). Kinanthropometry and exercise physiology laboratory manual: tests, procedures and data: volume two: physiology. Routledge.
- ACSM's Health-Related Physical Fitness Assessment Manual.
- H Aile, L., Agher Jr, G. A., Ael, M., \& J Robertson, R. (2016). Perceived exertion laboratory manual. Springer New York.
- Heyward, V. H., \& Gibson, A. (2014). Advanced fitness assessment and exercise prescription 7th edition. Human kinetics.


## Nutritional and Exercise Biochemistry

## Credits 3

## Unit I

Enzyme chemistry and hormones in macronutrient metabolism and energy production; Enzymes: Structure; Composition; Nomenclature; Classification; Enzyme activity; Factors affecting enzyme activity; Role of co-enzymes; Enzyme kinetics; Enzyme inhibition; Drug and enzyme interactions; Regulation of enzyme activity; Enzymes of clinical significance. Hormone Chemistry: Regulatory system; Physiological function and nutrient interactions of Pituitary hormones; Thyroid and Parathyroid gland hormones; Pancreatic Hormones; Adrenal Glands; Sex Hormones; Pineal gland. General introduction on energy states and anabolism/catabolism: Phosphate energy (short) and oxidation-reduction reactions (long term) as energy sources; Role of glycolysis, gluconeogenesis, glycogenolysis, beta oxidation, Krebs cycle, HMP, ketone body formation, urea cycle and electron transport chain in energy (ATP) production; Biochemical changes during exercise performance; Biochemical characteristics of sub-cellular skeletal muscle during rest and activities.

Unit II
Nucleic Acids and Gene Expression; Biosynthesis and Degradation of Nucleotides: Purine \& Pyrimidine Metabolism; Bio Synthesis of Deoxy nucleotides. DNA \& RNA: Type; Structure; Metabolism; Transcription; Translation; Protein Biosynthesis and Turn Over. Gene Expression: Basic Mechanisms; Regulation; Nutrient Gene Expressions.

## Unit III

Free Radicals: Introduction; Reactive Oxygen Species; Reactive Nitrogen Species; Oxidative Stress; Antioxidant defences (Endogenous \& Exogenous). Immune Response: Introduction; Types; Immune dysfunction; Effect of Malnutrition. Aging: Theories; Damage to Mitochondria; Intervention in delaying aging; Genetic modules of aging, exercise and healthy aging, metabolic adaptation to exercise in aging. Inter Relationship between Nutrients: Energy and B Vitamins; Fats and Vitamin A, D, E, K; Vitamin A and Zn; Vitamin E and Se; Fe and Protein; Vitamin C and Fe; Vitamin D and Ca, P; B-Complex and Mn, Mg, Co. Drug Metabolism: Absorption; Metabolism; Excretion; Mechanism; Drugs as Anti Metabolites. Interaction between Nutrient and Drug: Interaction between Food and Drugs; Nutrient and Drugs; Effect on Nutritional Status; Cytochrome P450; Mono Oxidase Inhibitors.

## Recommended Books:

- Mougios, V. (2006). Exercise biochemistry. Human Kinetics.
- Poortmans, J.R. (2004). Principles of Exercise Biochemistry, 3rd edition, Karger Publishers.
- MacLaren, D., \& Morton, J. (2011). Biochemistry for sport and exercise metabolism. John Wiley \& Sons.
- Brody, T. (1998). Nutritional biochemistry. Academic press.
- Tiidus, P., Tupling, A. R., \& Houston, M. Biochemistry Primer for Exercise Science 4th Edition. Human Kinetics.


## MSSN 305 <br> Sports Specific Nutrition <br> Credits 3

Unit I
Nutrition for popular team sports (Hockey, Football, Volleyball, Kabaddi and Cricket): Playing position; Basic physiology of playing team sports; body composition; Determining position wise fuel need; Quantity and timing of nutrient intake; Current research on position-specific nutrition needs and fuel utilisation; Current literature suggestions on food intake and recovery strategies; Supplement usage and Dietary periodisation among the athletes; Case studies on team sports.

Unit II
Nutrition for Athletics and Endurance Sports (Long distance Swimming, Cycling and Marathon): Physiology; energy systems; Fuel utilisation; Body composition; Duration and intensity of event; Dietary and Hydration Strategies; nutrient requirements; Distribution of macronutrients in the diet; Guidelines for fuel during different phases of training and competition; Nutrient timing; Travel nutrition; Use of Supplements; Case studies of athletes. Nutrition for Racket sports (Badminton, Tennis, Squash): Game dynamics and fuel utilisation (energy and macronutrients \& micronutrients); Body composition; Energy demands of the game; Nutrient timing and dietary periodisation; Current research on racket sports; Tailored nutrition and Hydration guidelines pre, during and post training/competitions, Supplement/ ergogenic aids; Recovery strategies; Case studies on racket sports.

## Unit III

Nutrition for Strength and Combat sport (Wrestling, Weightlifting, Judo, Boxing, Taekwondo and Fencing): Game dynamics; Energy demands andFuel utilisation; Case studies of Indian players; Nutrient timing and dietary periodisation; Current research on strength \& combat sport; Weight management issues; Supplement or other ergogenic aids; Recovery strategies. Nutrition for Balance (Gymnastics, Golf)/Coordination sports (Archery, Shooting): Playing formats and Fuel utilisation (energy and macronutrients); Different energy demands of balance sport; Physique maintenance and weight management issues; nutrient timing and dietary periodisation; Current research on balance/Coordination sports; Tailored nutrition and hydration guidelines; Supplement/ergogenic aids; Recovery strategies. Case studies of Gymasts/archers /shooters. Nutrition for water sport (Rowing, Kayaking): Physiological and Biochemical changes; Research in relation to nutrition and dietary habits. Common nutritional problems; Nutrtional Guidelines; individual energy/macronutrient requirements; Nutrient timing; Dietary periodisation; Supplement usage.

## Recommended Books:

- Maughan, R. J. (Ed.). (2008). Nutrition in sport (Vol. 7). John Wiley \& Sons.
- Fink, H. H., \& Mikesky, A. E. (2017). Practical applications in sports nutrition. Jones \& Bartlett Learning.
- Eberle, S. G. (2013). Endurance Sports Nutrition, 3E. Human Kinetics.
- Ryan, M. (2012). Sports nutrition for endurance athletes. Velo Press.
- Campbell, B. (Ed.). (2013). Sports nutrition: enhancing athletic performance. CRC Press.
- Reaburn, P. R. (Ed.). (2014). Nutrition and Performance in Masters Athletes. CRC Press.
- Slater, G., \& Phillips, S. M. (2011). Nutrition guidelines for strength sports: sprinting, weightlifting, throwing events, and bodybuilding. Journal of sports sciences, 29(sup1), S67-S77.
- Christoph Zinner and Billy Sperlich. (2016). Marathon Running: Physiology, Psychology, Nutrition and Training Aspects.


## Food Psychology and Nutrition

Unit I
Important concepts in Food psychology; Effect of psychology on eating behaviour and food choices: Models of food choices; Neuropsychology and food choices; Food choices across life span. Biological and Learning Influences on Food Choice: Biological influences on energy intake; Food Neophobia in humans; Role of learning in development of food preferences; Mood, Emotions and Food choice; Food cravings and Addictions.Societal Influences on Food Choice: Marketing parameters and their Influence on consumer food choice; Role of context in food choice; Food acceptance and Food consumption; Impact of the media on food choice; Impact of advertising on food choice.

## Unit II

Concepts of Health Behaviour change psychology; Theories of behaviour change: Usefulness of theories in behaviour change; Health Belief Model; Theory of Reasoned Action/Theory of Planned Behaviour Self-Efficacy; The Trans theoretical Model; SelfDetermination Theory; Motivational Interviewing; Social Cognitive Theory; Dual-Process Models; Social Support/Social Networks; Diffusion of Innovations; Ethics of Behaviour Change. Behaviour modification strategies to influence eating habits and health outcomes: Impact of optimistic bias on dietary behaviour; Implementation intentions; Strategic Automatization of food choice; Use of the Stages of Change Model with dietary behaviours; Addictive behaviour assessment and strategies to overcome, General behavioural assessment and psychological testing tools.

Unit III
Nutrition counselling and education; Nutrition counselling: Definition; Requirement; Procedures to adopt; Role of a Sports Dietition and theories and strategies to be adopted in nutrition counselling. Computer applications and protocols for nutrition counselling: Counselling session for individual athlete, for team, for coaches and other supporting staff.
Models of health and nutrition education in sports persons: Definition; Tools useful for education; Strategies for effective nutrition education.

## Recommended Books:

- Shepherd, R., \& Raats, M. (Eds.). (2006). The psychology of food choice (Vol. 3). Cabi.
- Tenenbaum, G., \& Eklund, R. C. (Eds.). (2007). Handbook of sport psychology. John Wiley \& Sons.
- Luiselli, J. K., \& Reed, D. D. (Eds.). (2011). Behavioral sport psychology: Evidence-based approaches to performance enhancement. Springer Science \& Business Media.


## Sports Genetics and Performance

Unit I
Basic Genetic Concepts, Mendelian inheritance, population genetics, Human chromosome Karyotype, Chromosome Disorders, Genome Structure and Genetic Mapping, Mitochondrial Inheritance, The Genetic Code and Genetic Alterations, DNA Injuries and Repair, Monogenic and Polygenetic Diseases, Molecular Diagnostics.

Unit II
Ethics of Genetic Testing and Research in Sport, Current Challenges and Directions to the Future, Genetic Modifications in Sports, Ethical Considerations of Genetic Manipulation in Sport, Gene Therapy and Gene Doping.

## Unit III

Connecting Sports and Genetics, The Genetics of Sports Injuries and Athletic Performance, Genetic Contributors to Hypertrophic Cardiomyopathy, Chronic Traumatic Encephalopathy, Different Classes of Performance Enhancing Genetic Variants.

## Recommended Books:

- Bruce R. Korf and Mira B Irons (2012) Human Genetics and Genomics, Wiley-Blackwell.
- Manu L Kothari, Lopa A Mehta, Sadhana S roychoudhury, (2009) Principles of Genetics, Universities Press.
- Ricki Lewis (2017) Human Genetics the basics, Routledge, ISBN 978-1-138-66801-0.
- Michael Posthum and Malcolm Collins (2016) Genetics and Sports, Karger Publisher.
- Elaine A. Ostrander, Heather J. Huson, and Gary K. OstranderGenetics of Athletic Performance (2009) Annu. Rev. Genomics Hum. Genet. 2009.10:407-29.
- Lisa M. Guth and Stephen M. Roth (2013) Genetic influence on athletic performance, Curr Opin Pediatr. 2013 December; 25(6): 653-658. doi:10.1097/MOP.0b013e3283659087.
- Nicola Mafulli et al (2013) the genetics of sports injuries and athletic performance. Muscles, Ligaments and Tendons Journal, 3 (3): 173-189.


## Exercise Immunology

Unit I
Immunological system and exercise: Exercise and innate and humoral immunity, Exercise induced change in Ig and antibody, exercise and cytokines.

Unit II
Sex Differences in Immune Function after Aerobic Exercise, Sex differences in immune variables and respiratory infection, Killer cell immunoglobulin-like receptors and exercise, Anti-inflammatory influence of exercise training- Physical activity, fitness, and chronic inflammation, C-Reactive Protein (CRP).

Unit III
Cytokines, Free radicals, Antioxidants, Effect of exercise on immunity, Physical activity - A stimulator and an inhibitor to the immune system, Exercise and upper respiratory tract infection, Infection and exercise performance, Exercise and HIV infection, Exercise and Cancer, Exercise aging and immunity, Maintaining immune health, Importance of exercise immunology in health promotion.

## Recommended Books:

- Michael Gleeson, Nicolette Bishop, and Neil Walsh.(Eds) (2013) Exercise immunology. Routledge.
- Warren Levinson (2016) Review of Medical Microbiology and Immunology. LANGE, Mc Graw Hill.


## MSSN 307

## Laboratory $\mathbf{V}$

Credits 3

1. Planning a year round diet for an athelete with diabetes/Sports anaemia.
2. Planning a year round diet for an athelete with Food-Related adverse reactions.
3. Planning a diet for an athlete with sports-injury/Paralympic athlete.
4. Planning a year round diet for vegetarian athletes.
5. Nutrition strategies and menu planning for athletes in different altitude.
6. Nutrition guidelines/suggestions for athletes while travelling and to overcome jet lag.
7. Composition and brand names of supplements that improve Muscle mass commonly available in the market and role of nutrients listed in athletic performance.
8. Composition and brand names of carbohydrate/fat/ supplements commonly available in the market.
9. Composition and brand names of supplements micronutrients commonly available in the market.
10. Composition and brand names of metabolite supplements commonly available in the market.
11. Composition and brand names of botanical supplements commonly available in the market.
12. Planning a diet for strength athletes with supplements for muscle building.
13. Planning a diet for endurance athletes with supplements for energy and micronutrients.
14. Providing diet for clinical conditions with supplement usage (Planning the type, quantity and timing of supplement intake.
15. Methods of measuring dietary recalls: Food diary, Weighed food record, Recall.
16. To assess energy and nutrient intake from diet using suitable software.
17. Procedure to collect and monitor activity record using Time Allocation Pattern and activity monitors.
18. Energy balance: Calculation of total energy expenditure (TEE) and energy intake.
19. Measuring height, body mass, MUAC and skinfold thickness.
20. Measuring body composition using various techniques: Skinfold technique, BOD POD, DEXA and In Body.
21. Exercise testing: Submaximal and maximal level.
22. Fitness tests: Aerobic, Anaerobic, Intermittent, Strength, Endurance, Flexibility and Agility.
23. Estimation of Glucose in blood samples.
24. Estimation of Lactate in blood samples.
25. Handling and using the blood gas/chemistry analyser.
26. Estimation of serum Iron.
27. Estimation of serum Ferritin.
28. Estimation of Lipids.
29. Estimation of Serum Albumin.
30. Estimation of Total Antioxidant Capacity.
31. Estimation of Vitamin A or Vitamin C.
32. Menu planning and fluid intake during training and competition including nutrient periodisation for Cricket/football/Hockey players.
33. Menu planning and fluid intake during training and competition including nutrient periodisation for sprinters/Marathon Runners.
34. Menu planning and fluid intake during training and competition including nutrient periodisation for badminton.
35. Menu planning and fluid intake during training and competition including nutrient periodisation for rowing.
36. Menu planning and fluid intake during training and competition including nutrient periodisation and weight-management for power sports/gymnastics.
37. Menu planning during training and competition including nutrient periodisation for archery.

## SEMESTER-IV

Unit-I
Introduction to Research in Physical Activity, Developing the Problem and Using the Literature, Presenting the Problem, Formulating the Method, Ethical Issues in Research and Scholarship.

Unit-II
Types of Research: Socio Historical Process in Sport Studies, Philosophical Research in Physical Activity, Research Synthesis (Meta-Analysis), Surveys, Other Descriptive Research Methods, Physical Activity Epidemiology Research, Experimental and Quasi-Experimental Research, Qualitative Research, Mixed-Methods Research.

Unit-III
Writing the Research Report: Completing the Research Process, Ways of Reporting Research
Introduction to review of literature, Evaluation of scientific literature; organizing literature - strategies, use of software; Metaanalysis, Writing review - structuring the review, quoting/paraphrasing, the citation referencing system.

## Recommended Books:

- Research Methodology: Methods and Techniques by C. R. Kothari.
- ICMR. Ethical Guidelines for Biomedical Research on Human Subjects. 2006; ICMR, New Delhi.
- Research Methods in Physical Activity- 7th Edition By Jerry Thomas, Jack Nelson, Stephen Silverman, Human Kinetics.
- Research Methods in Sport by Mark F Smith.
- Research Methods for Sports Performance Analysis By Peter O' Donoghue.
- Research Methods in Physical Education and Youth Sport 1st Edition by Kathleen Armour and Doune Macdonald.
- Ridley, D. The Literature Review a step-by-step guide for students. 2012; Sage Publications Limited, New Delhi.


## School of Sports Sciences

Department of Sports Biosciences


# Proposed Course Structure and Course Details 

## M.Sc. Sports Physiology

Central University of Rajasthan NH-8, Bandar Sindri, Kishangarh-305817 Dist.

- Ajmer (Rajasthan)


## M.Sc. Sports Physiology

SEMESTER I (Total credits: 24)

| Code | Title of Course | Type of Course | Credits |
| :--- | :--- | :--- | :--- |
| MSSP 101 | Human Anatomy and Physiology | Core | 3 |
| MSSP 102 | Biomolecules and Metabolism | Core | 3 |
| MSSP 103 | Kinesiology | Core | 3 |
| MSSP 104 | Psychological and Social Aspects of Sports | Core | 3 |
| MSSP 105 | Biomechanics and Motor Learning | Core | 3 |
| MSSP 106 | Elective I <br> - Elective from any other Department <br> - Sports First Aid and Emergencies <br> $\bullet$ History of Physical Education and Sports <br> $\bullet$ Physiological Aspects of Ageing | Elective | 3 |
| MSSP 107 | Laboratory I | Core | 3 |
| MSSP 108 | Laboratory II | Core | 3 |

SEMESTER II (Total credits: 24)

| Code | Title of Course | Type of Course | Credits |
| :--- | :--- | :--- | :--- |
| MSSP 201 | Principles and Methods of Sports Training | Core | 3 |
| MSSP 202 | Performance Evaluation and Testing | Core | 3 |
| MSSP 203 | Fatigue, Injuries and Rehabilitation | Core | 3 |
| MSSP 204 | Food and Nutrition | Core | 3 |
| MSSP 205 | Statistics for Sports Science | Core | 3 |
| MSSP 206 | Elective II <br> • Elective from any other Department <br> - Kinanthropometry in Sports <br> - Health Fitness and Wellness <br> $\bullet$ Adaptations to Exercise and Training | Elective | 3 |
| MSSP 207 | Laboratory III | Core |  |
| MSSP 208 | Laboratory IV | Core | 3 |

SEMESTER III (Total credits: 24)

| Code | Title of Course | Type of Course | Credits |
| :--- | :--- | :--- | :--- |
| MSSP 301 | Physiology of Sports and Exercise | Core | 3 |
| MSSP 302 | Sports Ergonomics and Ergogenic Aids | Core | 3 |
| MSSP 303 | Fitness Assessment and Exercise Prescription | Core | 3 |
| MSSP 304 | Neuroscience and Endocrinology in Sports | Core | 3 |
| MSSP 305 | Physiological Support for Athletes | Core | 3 |
| MSSP 306 | Elective III <br> • Elective from any other Department <br> $\bullet$ <br> $\bullet$ <br> Drugs and Doping in Sports <br> $\bullet$ <br> Sports Genetics and Performance | Elective | 3 |
| MSSP 307 | Laboratory V Immunology |  |  |$\quad$| Core |
| :--- |
| MSSP 308 |

SEMESTER IV (Total credits: 24)

| Code | Title of Course | Type of Course | Credits |
| :--- | :--- | :--- | :--- |
| MSSP 401 | Research Methodology | Core | 3 |
| MSSP 402 | Journal Club Presentation | Presentation | 3 |
| MSSP 403 | Major Project | Tutorial/Laboratory | 18 |

## SEMESTER-I

## Unit-I

Anatomy and Physiology of: Blood, Cardiovascular System, Lymphatic System, Integumentary System and Respiratory System.
Unit-II
Anatomy and Physiology of: Nervous System, Special Senses, Endocrine System, Skeletal System, Joints and Muscular System.

## Unit-III

Anatomy and Physiology of: Digestive System, Immune System, Urinary System, Fluid and Electrolyte Balance, Reproductive System, Pregnancy and Human Development.

## Recommended Books:

- Human Anatomy and Physiology ( $10^{\text {th }}$ edition) by Elaine N Marieb, Katja N Hoehn.
- Introduction to Human Body- The Essentials of Anatomy and Physiology by Gerard J. Tortora.
- Textbook of Anatomy with Coloured Atlas by Inderbir Singh.
- Textbook of Medical Physiology by Arthur C. Guyton.
- Principle of Human Anatomy ( $10^{\text {th }}$ Edition) by Gerard J. Tortora. Gray's Anatomy: Anatomical Basis of Clinical Practice by Standring, Susan. Borley, Neil R. Gray Henry.
- Human Physiology by C.C. Chatterjee.
- Chowdhary Medical Physiology by S K Chowdhary.
- Netter's Atlas of Human Anatomy by Frank H. Netter.

MSSP 102

## Biomolecules and Metabolism

## Credit 3

## Unit-I

Foundation of Biochemistry, Properties of Water, Amino Acids, Peptides and Proteins, Structure and Function of Proteins, Enzymes, Sugars, Carbohydrates and Glycobiology, Nucleotides and Nucleic Acids, Fatty Acids, Structure and Functions of Lipids.

## Unit-II

Principles of Bioenergetics, Major Metabolic Pathways in Human and its Relevance with Exercise, Glycolysis, Gluconeogenesis, Pentose Phosphate Pathway, Citric Acid Cycle, Electron Transfer System in Mitochondria, Oxidative Phosphorylation.

## Unit-III

Basic Concepts and Design of Metabolism, Metabolic Regulation of Glucose and Glycogen, Biosynthesis of Carbohydrates, Lipid Biosynthesis, Fatty Acids Catabolism, Amino Acids- Biosynthesis, Oxidation and Production of Urea, Metabolism of Lactate, Integration and Regulation of Metabolism.

## Recommended Books:

- Principles of Biochemistry- Lehninger Nilson and Cox W.H. Freeman.
- Principles of Biochemistry- Donald Voet, CW Pratt, JG Voet (2012) Wiley, ISBN:1118092449.
- Principles of Exercise Biochemistry Editor(s): Poortmans J.R. (Brussels) Karger Publishers.
- Biochemistry JM Berg, TL Tymoczko L Stryer W. H. Freeman and Company.
- West \& Todd Text book of Biochemistry. Mac Millan Company London.
- G.P. Talwar \& ID Singh Textbook of Biochemistry \& Human Biology - Prentice Hall of India, New Delhi.
- Vasudevan Textbook of Biochemistry. Jaypee Brothers Medical publishers (P) Ltd.
- Jain J.L., Jain Sanjay, Jain Nitin, S Fundamentals of Biochemistry -. Chand and Company Ltd, New Delhi.
- A.C. Dev. Comprehensive Viva and practical Biochemistry. New Central Book Agency Pvt. Ltd.


## MSSP 103

## Kinesiology

## Credit 3

## Unit-I

Meaning of Kinesiology, Aims and Objectives of Kinesiology, Role of Kinesiology in Sports; Anatomical Position, Principles of Plane and Axis, Various types of movements.

Unit-II
Bones: Meaning and composition of bone, Kinds of bones (flat, long, short, irregular and seesamoid), Function of bones, Bone fracture and its types; General features of the following bones: Upper Extremities: Clavicle, Scapula, Radius and Ulna, Humorous; Lower Extremities: Femur, Patella, Tibia, Fibula, Pelvic Bones; Joints: Meaning and types of joints, Joint flexibility, Technique to
increase the flexibilities, Structure, function, fundamental movements around the joints; General features, structure and movements of the following joints: Shoulder Complex, Elbow Complex, Hip Complex, Knee joint, Spinal column and Pelvic girdle.

## Unit-III

Introduction to Muscular System: Muscles and Tendons, Classification of muscles, Structure of Skelton muscle, classification of muscles on basis of fibre arrangement, Physiology of muscle contraction, types of muscle contraction, Role of muscle in movement, Methods of studying the action of muscle. Origin, Insertion and action of major muscle groups of the Body; Nervous System: Overview of Nervous system, Neurons, Motor Unit and Receptors.

## Recommended Books:

- Clinical Mechanics and Kinesiology with web Resource, Human Kinetics, by Janice Loudon, Robert Manske, Michael Reiman.
- Biomechanics and Kinesiology of Exercise - 2013 by Michael Yessis.
- Cynthia C. Norkin, Pamela K. Levangie : Joint structure \& function- A comprehensive analysis 2nd edition.
- Brunnstrom - Clinical Kinesiology, F.A. Davis.
- Rasch and Burk: Kinesiology and Applied Anatomy, Lee and Fabiger.
- Shaw, D,, Pedagogic Kinesiology, Khel Sahitya Kendra, 2007.
- Thompson, C., Manual of Structural Kinesiology. (10th Ed.), St. Louis: Times Mirror/ Mosby College Publishing, 1995.
- Shaw, Dhanonjoy, Kinsiology and Biomechanics of Human Motion, Khel Sahitya Kendra, 1998.
- White and Punjabi - Biomechanics of Spine - Lippincott.
- Kapandji: Physiology of Joints Vol. I, II \& III, W.B. Saunders.
- Luttgens K., Hamilton N.: Kinesiology - Scientific Basis of Human Motion 9th Edi.
- Basic Biomechanics 4th edition, susan J. Hall, MCGraw Hill.


## Psychological and Social Aspects of Sports

## Credit 3

## Unit-I

Sports Psychology and role of Psychology in Sports, Methods of Psychology employed in Sports, Motor leaning and Performance, Importance of Sports Psychology for Athletes, Coaches and others related to sports settings.

## Unit-II

Personality and its role in Sports, Attention and Perception in Sports; Motivation and Goal setting and its role in Sports, Emotions in Sports, Stress and Anxiety in Sports, Biofeedback techniques in Sports.

## Unit-III

Sociology of Sports, Social Factors and Socio-metric techniques in Sports, Group processes, Team cohesiveness and Leadership in sports, Effect of crowd behaviour in Sports, Economics and Politics in Sports.

## Recommended Books:

- Weinberg \& Gould, Foundations of Sports and Exercise Psychology. Human Kinetics 2016.
- Motor Learning and Performance 5th Edition With Web Study Guide From Principles to Application, Human Kinetics by Richard Schmidt, Tim Lee.
- Morgan and King: Introduction to Psychology - Tata McGraw Hill.
- M.L. Kamlesh Psychology in Physical Education and Sports by Mehopolitan book co. Pvt. Ltd., Netaji Subash Marg, New Delhi 11002.
- Sanjeev. P. Sahni Psychology and its application in sports by D.V.S. publications, 100, Giri Nagar Kalkaji, New Delhi110019.
- Agyajit Singh Psychology of Coaching by Friends Publications, \# 101 Ansari Road Darya Ganj, New Delhi-110002.
- Jitendra Mohan Recent Advances in Sports psychology, By, Publisher, Friends Publications.
- Fundamentals of Sociology of Sport and Physical Activity, Human Kinetics by Katherine M. Jamieson, Maureen M. Smith.
- Doing Exercise Psychology, Human Kinetics by Mark Andersen, Stephanie Hanrahan.
- Social Issues in Sport 3rd Edition, Human Kinetics by Ron Woods.


## MSSP 105

Biomechanics and Motor Learning

## Credit 3

Unit-I
Role of Bio-Mechanics in the Field of Sports Science, Principles of Biomechanics; Biomechanical Concepts: Motion, Newton's law of Angular Motion and Linear Motion and its relationships, Force, Centripetal and Centrifugal forces, Equilibrium, Centre of Gravity and Stability, Freely falling bodies and Projectile, Momentum, Impulse, Lever and its Classification, Work, Power, Energy: Relationship of Work, Power and Energy, Friction, Spin, Impact, Elasticity, Rebound, Fluid Mechanics, Air Resistance and Water Resistance.

Unit-II
Determine the simultaneous-sequential nature of a variety of movement skills, Classify motor skills using the classification system presented, .Bio-Mechanical analysis of fundamental skills: Walking, Running, Jumping, Pulling, Pushing, Lifting, Lowering, Throwing.

Unit-III
Introduction to Gait Analysis. Mechanical Analysis of Sports Skills: Athletics (Running, Jumping and Throwing), Swimming, Football, Basketball, Volleyball, Cricket. Technological Use and Advances in Biomechanics: Techniques and Tools for Measurement of Biomechanical Variables.

## Recommended Books:

- Biomechanical Analysis of Fundamental Human Movements by Arthur Chapman, 2008, Human Kinetics.
- Biomechanics of Sport and Exercise 3rd Edition With Web Resource and MaxTRAQ 2D Educational Software Access-Loose-Leaf Edition, Human Kinetics, By Peter McGinnis.
- Biomechanics and Kinesiology of Exercise - 2013 by Michael Yessis.
- Cynthia C. Norkin, Pamela K. Levangie : Joint structure \& function- A comprehensive analysis 2nd edition, F.A. Davis Company Philadelphia.
- Brunnstrom - Clinical Kinesiology, F.A. Davis.
- Rasch and Burk: Kinesiology and Applied Anatomy, Lee and Fabiger.
- White and Punjabi - Biomechanics of Spine - Lippincott.
- Kapandji: Physiology of Joints Vol. I, II \& III, W.B. Saunders.
- Luttgens K., Hamilton N.: Kinesiology - Scientific Basis of Human Motion 9th Edi.
- Basic Biomechanics 4th edition, susan J. Hall, MCGraw Hill.
- Joseph Hamill, Kathleen M. Knutzen. Biomechanical Basis of Human Movement.


## Sports First Aid \& Emergencies

Unit-I
Introduction to Sports First Aid, Athletic Health Care Team, Sport First Aid Game Plan, First Aid Equipment and Kit, Basic Life Support System: Recovery Position, Head to toe- survey, Artificial Ventilation; Basic Sport First Aid Skills : Anatomy and Sport Injury Terminology, Emergency Action Steps , Physical Assessment and First Aid Techniques, Moving Injured or Sick Athletes.

## Unit-II

Sport First Aid for Specific Injuries: Unconsciousness: ABC, CPR, AED, Respiratory Emergencies and Illnesses, Shock, Wounds and Bleeding, Head, Spine and Nerve Injuries, Internal Organ Injuries, Upper Body and Lower Body Musculoskeletal Injuries, Facial and Scalp Injuries, Skin Problems.

Unit-III
Disaster Preparedness and Management: Weather-Related Problems, Environmental Emergencies: Animal Bites and Stings, Allergies, First Aid Protocols, Practical Skills in using: Triangular Bandages, Broad fold, Thin fold, Slings, Collars, Cardiac Emergencies.

## Recommended Books:

- Sport First Aid-5th Edition by Melinda Flegel, Human Kinetics, 2014.
- American Red Cross, First Aid/CPR/AED : PARTICIPANT'S MANUAL.
- Practical First Aid: British Red Cross in Association with Donning Kinder Sley.
- John Morris: First Aid Training Manual, Everyday learning Pvt. Ltd.
- Authorized Manual of St. John Ambulance (India): First Aid.
- Bradley R.A. Wilson. Timothy E. Glaros : Managing Health Promotion Programs Human Kinetics Publishers.


## History of Physical Education and Sports

Unit-I
What are Play, Game and Sports? Types of sports and recreational activities, Importance of free play and organizational games, Terminology of Sports Science and Physical Education, Health related and Motor performance related fitness, Health and Wellness (Physical, Mental, Psychological, Social and Spiritual) and Athletics, Sports Carriers: Media, Management, Performance, Coaching and other related areas.

## Unit-II

Philosophy and its need in Sports and Physical Education, Idealism, Naturalism and Pragmatism in Physical Education, Physical Education in Ancient Greek, Rome, India and Modern India. History of Olympic Games, Asian Games, SAARC Games and SAF Games, National Sports Awards, trends and problems in Sports Sciences and Physical Education in $21{ }^{\text {st }}$ Century

Unit-III
Introduction to general Rules and Regulations of Selected Sports (Football, Field Hockey, Basketball, Volleyball, Cricket Badminton and Tennis), Introduction to Playfields and Track Specifications, General organizational process of Sports Competitions.

## Recommended Books:

- Bucher, C.A.: Foundation of Physical Education, St. Louis: The C.V. Mosby company, 1983.
- History and Philosophy of Sport and Physical Activity, Human Kinetics by R. Scott Kretchmar, Mark Dyreson, Matthew Liewellyn, John Gleaves, 2017.
- Synder and Geoh: Professional preparation in Health Education, Physical Education and Recreation.
- Barrow, H.M.: Man and Movement: Principles of Physical Education, Philadelphia Lea and Fabiger, 1977.
- Joseph, P.M.: Organisation of Physical Education, Kandivila,: Old students Association, T.I.P.E.
- Kamlesh, M.L. and Sangral, M.S. : History and Principles of Physical Education, Prakash Brothers, 1983.
- Wuest and Bucher: Foundations of Physical Education and Sports, B.I. Publications Pvt. Ltd., New Delhi.
- William, H.F.: Physical Education and Sports in Changing Society, Surjeet Publication, Delhi.


## Physiological Aspects of Ageing

Unit-I
Growth and Biological Maturation: Relevance to Athletic Performance; Muscle Development during Childhood and Adolescence, Relevance to Understanding Effects of Growth on Performance.

Unit-II
Theory of Ageing, Age related changes in different body systems, Cardiovascular Concerns in the Young Athlete, Trainability During Childhood, Ageing and muscular strength, ageing and joint flexibility

## Unit-III

Exercise guidelines for geriatric populations. Introduction to Masters Sports, Ageing and performance, Role of continued involvement, Psychosocial issues in Masters Sport, Model of lifespan physical activity, health and performance.

## Recommended Books:

- Helge Hebestreit and Oded Bar-Or (2008) The Young Athlete. Blackwell Publishing Ltd.
- Joseph Baker, Sean Horton and Patricia Weir (2000) The Masters Athlete: Understanding the role of exercise in optimizing aging. Routledge.
- Fitness and Wellness: Warner W. K Hoeger and Sharvon A. Hoegor.
- Fitness \& Wellness Concepts: Charles B. Corbina \& Ruth Lindsey.
- Lifetime Fitness \& Wellness- A personal choice, Melvin H. Williams.

MSSP 107
Laboratory I
Credits-3

- Introduction to laboratory techniques- pipetting, calculations, introduction to equipments, sterile techniques and lab safety.
- How to Use microscopes.
- To study Counting Chambers.
- To determine the total Red Blood Corpuscles count.
- To determine the total Leucocyte Count in blood.
- To measure the Haemoglobin concentration of blood.
- To measure Blood Pressure of a subject in different positions.
- Calculation of Energy expenditure
- Measurement of blood glucose Cholesterol/HDL, Glycerol, Lactate, Triglycerides
- Biochemical Assessment of Metabolites.
- Biochemical Assessment of Enzymes.
- Biochemical Assessment of Hormones.
- Estimation of sugars, iron, phosphate, Vitamin C and organic acids.
- Estimation of protein concentration.

Laboratory II
Credits-3

- To analyse various planes and axes of the body.
- To demonstrate the surface anatomy and muscle attachments of following bones: Clavicle, Scapula, Humerus, Radius, Ulna, Meta Carpals, Phalanges, Femur, Tibia, Fibula, Patella, Tarsals and metatarsals
- To demonstrate the following joints including corresponding muscles and movements of Upper Extremity: Acromioclavicular joint, Sternoclavicular joint, Shoulder joint, Elbow joint, Proximal Radioulnar joint, Distal Radioulnar joint, Wrist joint, Thumb joint
- To demonstrate the following joints including corresponding muscles and movements of Lower Extremity: Hip Joint, Knee Complex, Ankle joint.
- Demonstration and Estimation of Centre of Gravity of Human Body.
- Determination of Human Gait pattern.


## SEMESTER-II

MSSP 201
Principles and Methods of Sports Training

## Credit 3

Unit-I
Scientific basis of Sports Training, Importance, Aims and Objectives of Sports Training; Characteristics of Sports Training; Biological Process in Training; Components of Physical Fitness (motor abilities) - Endurance, Strength, Speed, Flexibility, Coordination; Agility.

## Unit-II

Principles of Sports Training - Overload, Specificity, Progression and Reversibility; Meaning and concept of Training load; Adaptation and Recovery, Super Compensation, Training Structure - Volume, Intensity, Frequency, Peaking, Errors in Training, Adaptations to Resistance Training, Adaptations to Aerobic and Anaerobic Training.

Unit-III
Training plan; Need and importance in planning; Types of training plans - short term and long term plans; Training and Competition Cycles (training conception, macro, micro, meso); Periodization - Need, Types; Aims of various phases of Periodization (Preparatory, competition and transition); Competition -Types of Competition, Preparation for competition; the number and frequency of competition. Training athletes with disability, Adapted games for Disabled; Special Olympics and Paralympics.

Recommended Books:

- Physiology of Sport and Exercise 6th Edition with Web Study Guide-Loose-Leaf Edition by W. Larry Kenney, Jack Wilmore, David Costill.
- Periodization-6th Edition Theory and Methodology of Training by Tudor Bompa, Carlo Buzzichelli.
- Physiological Aspects of Sport Training and Performance, 2nd Edition, Human Kinetics by Jay Hoffman.
- Recovery for Performance in Sport by Institut National du Sport de l'Expertise et de la Performance INSEP, Human Kinetics, Christophe Hausswirth, A. Mujika.
- Essentials of Sports Training and Conditioning by JB Learning, NASM.
- Singh, H: Science of Sports training, DVS Publication, New Delhi, 1991.
- Matweyev, L.P.: Fundamentals of Sports training, publication Moscow, 1984.
- Harre, D: Principles of sports training, Sportverlag, Berlin, 1988.
- Singh, H: Science of Sports training: General theory and methods, NIS, Patiala, 1984.
- Scholisch, M: Circuit training, Sportverlag, Berlin.
- Willmore, J.H.: Athletic training and physical fitness, Antro and Becon Inc, Sydney.


## Unit-I

Introduction to Test, Measurement, Evaluation and Research, Basic concepts in Tests: Evaluation, Validity, Reliability, Objectivity and Norms, Test construction and its Organisation and Administration; Pre-test considerations: Risks associated and Safety considerations, ACSM guidelines for when to stop a Test, Pre-exercise test evaluations: Calculation of HR MAX and $85 \%$ HR max depending on protocol, Population considerations: Children, Elderly and Apparently healthy.

## Unit-II

Test Order: Equations used to estimate aerobic power from TM protocols, Equations used to estimate aerobic power from Cycle ergometer protocols (arm and leg), Calculations used to estimate aerobic power from other variables, Test protocols used for measuring the health and skill-related components of fitness, CV endurance field tests, VO2max testing, Norm tables, Maximal versus submaximal tests.

Unit-III
Modes of testing, Muscular strength, endurance and flexibility, Body composition and Anthropometry, Balance, Agility, Coordination, Reaction time and Anaerobic power, Physical Fitness Batteries, Specific Sports Skill Tests (Soccer, Basketball, Volleyball, Hockey, Badminton, Tennis and other sports)

Recommended Books:

- Advanced Fitness Assessment and Exercise Prescription 8th Edition with Online Video, Human Kinetics by Ann Gibson, Dale Wagner, Vivian Heyward, 2018.
- Laboratory Manual for Exercise Physiology 2nd Edition. With Web Study Guide, Human Kinetics by G. Gregory Haff, Charles Dumke, 2018.
- Measurement and Evaluation in Human Performance 5th Edition, Human Kinetics by James Morrow Jr., Dale Mood, James Disch, Minsoo Kang, 2016.
- Physiological Tests for Elite Athletes 2nd Edition by Australian Institute of Sport Rebecca Tanner, Christopher Gore, 2012.
- ACSM's Guidelines for Exercise Testing and Prescription, $10^{\text {th }}$ Edition by American College of Sports Medicine. Wolters Kluwer, 2017.
- Text book of Applied Measurement Evaluation \& Sports Selection second edition: Dewinder K Kansal Sports \& Spiritual Science Publications.
- Heyward, Vivian. Advanced Fitness Assessment and Exercise Prescription, 5th ed., Human Kinetics, 2006.
- ACSM's Guidelines for Exercise Testing and Prescription, 8th ed., Lippincott Williams and Wilkins, 2009.
- ACSM's Health-Related Physical Fitness Assessment Manual, 3rded, 2009.
- Ed. Durstine and Moore. ACSM's Exercise Management for Persons with Chronic Diseases and Disabilities, 2nd ed. Human Kinetics, 2003.


## MSSP 203

Fatigue, Injuries and Rehabilitation

## Credit 3

## Unit-I

Concept of Overloading, Overtraining, Fatigue and Staleness, Symptoms and Causes of Fatigue, Types of Fatigue, Theories associated with Fatigue, Definition, Types, Symptoms, Findings, Underlying Mechanisms and Frequency of Overtraining and Overtraining Syndrome, Oxygen Debt Theory, Recovery Oxygen Uptake or Excess Post-exercise Oxygen Consumption (EPOC), Implications of EPOC for Exercise and Recovery, Optimal Recovery From Steady-Rate Exercise and Non-Steady-Rate Exercise, Intermittent Exercise and Recovery

## Unit-II

Sports Injury- Meaning, Classification, Causes, Types, General guidelines for their Prevention, Recovery Time, Introduction and Management of common Sports Injuries (Fracture, Dislocation, Laceration, Abrasion, Sprain and Strain), How to avoid Sports Injuries, Role of Warm-up and Cool Down

Unit-III
Rehabilitation: Meaning, Concepts, Objective and scope of Rehabilitation, Principal of care and Rehabilitation
Therapeutic Modalities: Electrotherapeutic modalities (Shortwave Diathermy, Ultra Sound, T.E.N.S), Heat and Cold, Soft tissue Massage, Aquatic Rehabilitation Exercise, Therapeutic Exercise, Therapeutic Nutrition, Psychological Rehabilitation

Recommended Books:

- Shaun Phillips (2015) Fatigue in Sport and Exercise. Routledge, NY
- Therapeutic Modalities for Musculoskeletal Injuries 4th Edition, Human Kinetics by Craig Denegar, Ethan Saliba, Susan Saliba, 2016
- Essentials of Athletic injury management 10th edition by William E. Prentice, Human Kinetics.
- Clinical Sports Medicine Fifth Edition by Peter Brukner, Karim Khan, McGraw-Hill Education Australia, 2016
- Principles and Practice of Therapeutic Massage by Sinha, Jaypee Publishers
- Textbook of Electrotherapy by Singh Jagmohan, Jaypee Publishers
- Manfred Lehmann, Carl Foster, Uwe Gastmann, Hans Keizer and Jtirgen M. Steinacker(Eds) (1997) Overload, Performance Incompetence and Regeneration In sport. Kluwer Academic / Plenum Publishers, N.

Unit-I
Nutrients: Functions and Recommended Intakes, Healthy Eating and Balanced Diet, Fuel Sources for Muscle and Exercise Metabolism, Energy: Food Energy and Expenditure, Gastric Emptying, Digestion, and Absorption.

Unit-II
Nutritional Role and Recommendations for following: Carbohydrate, Fat, Protein and Amino Acids, Water Requirements and Fluid Balance, Vitamins and Minerals, Nutrition Supplements.

Unit-III
Nutrition and Training Adaptations, Nutrition and Immune Function in Athletes, Body Composition and Weight Management, Eating Disorders in Athletes, Personalized Nutrition, Menu Planning (Meal Timing and Spacing)

Recommended Books:

- Sport Nutrition 3rd Edition by Asker Jeukendrup, Michael Gleeson, Human Kinetics, 2018.
- Nutrition for Sport, Exercise, and Health by Marie Spano, Laura Kruskall, D. Travis Thomas, Human Kinetics.
- Physiology of Sport and Exercise 6th Edition with Web Study Guide-Loose-Leaf Edition by W. Larry Kenney, Jack Wilmore, David Costill.
- Exercise Physiology: Nutrition, Energy and Human Performance 8th Edition by William D. McArdle, Frank I. Katch, Victor L. Katch
- Nancy Clark's Sports Nutrition Guidebook by Nancy Clark, Human Kinetics
- NSCA's Guide to Sport and Exercise Nutrition by National Strength Conditioning Association, Human Kinetics
- Fundamental of Foods, Nutrition \& Diet Therapy $5^{\text {th }}$ edition by S.R. Mudambi, M.V. Rajagopal, New Age International Limited, New Delhi.
- Applied Nutrition. By R. Rajlaxmi, IBH Publications, New Delhi.
- Nutritional Supplements in Sports, Exercise and Health: An A to Z Guide by Linda M. Castell, Smantha J. Stear, Louise M. Burke, Routledge.
MSSP 205
Statistics for Sports Science
Credit 3

Unit-I
Introduction to Biostatistics, Frequency Distribution, Variable and Attribute, Line-diagram, Bar-diagram, Pie chart, Histogram, Mean, Median and Mode.

Unit-II
Variance, Standard deviation; Standard error of mean, Null hypothesis, Level of significance and Probability; Regression and correlation.

Unit-III
Student‘s t-test, Fisher's t-test, Chi-square test, Analysis of Variance (ANOVA), ANCOVA.
Introduction and Application of Statistical Softwares
Recommended Books:

- A Text book of Biostatistics, by A.K.Sharma, Discovery publishing house
- Introduction to Biostatistics, By Dr. Pranab Kumar Banerjee, S. Chand Publishers
- Research Methodology: Methods and Techniques Book by C. R. Kothari
- Dutta N.K. Fundamentals of Bio-Statistics. 2002; Kanishka Publishers, New Delhi.
- Gupta S.P. Statistical Methods. 2004; S. Chand \& Sons, New Delhi
- Ruud H. Koning and James H. Albert ( 2008) Statistical thinking in sports. Chapman \& Hall/CRC

MSSP 206
Elective II
Credit 3

## Kinanthropometry in Sports

Unit-I
Introduction, scope and general consideration, i.e. Application of anthropometric data in sports, Body proportions and indices, Sports specific body proportions and indices, Body mass index and its importance in sports'

## Unit-II

Anthropometric Measurements and Procedures, Equipment for anthropometric measurements, Gross Body Measurements and procedures, Length of Body Parts, Measurements and procedures, Diameters of Body Parts, Measurements and procedures, Circumferences of Body Parts, Measurements and procedures, Skinfold Thickness, Measurements and procedures.

Unit-III
Physiological Maturation: Decimal Age and concept of Physiological maturity in sports. Assessment of skeletal maturity of athletes, Body Composition: Anthropometric determination, Importance in sports and various methods to estimate body composition, Somatotyping: Introduction, Definition of Somatotyping and Classification

## Recommended Books:

- Sports Anthropemetry by H.S. Sodhi, ANOVA Publication.
- Physique and Selection of Sportsmen by H.S. Sodhi and L.S. Sidhu.
- Kinanthropometry by S.P. Singh and P. Malhotra, Luna Publication, Patiala.
- Kinanthropometry by Roger Eston and Thomas Reilly, E \& F.N. SPON, London.
- Skeletal Maturity by S.P. Singh, L.S. Sidhu, and J. Singh, Human Biology Publication Society, Punjabi University, Patiala.
- Genetic and Anthropological Studies of Olympic Athletes by De Garray, Louis Levine \& Cater, Academic Press, London.


## Health Fitness and Wellness

Unit-I
Introduction to Health: Concept of health, Lifestyle and Disease, Ageing

Unit-II
Physical Activities \& Fitness: Concept to Fitness, Exercise and its Principles, Health Education Recreation \& Dance
Unit-III
Healthy Life Style Approach: Concept of Wellness, Wellbeing, Stress Management

## Recommended Books:

- Fitness and Wellness: Warner W. K Hoeger and Sharvon A. Hoegor
- Fitness \& Wellness Concepts": Charles B. Corbina \& Ruth Lindsey
- Lifetime Fitness \& Wellness - A personal choice": Melvin H. Williams
- Oxford Textbook of Public Health, Helen Liepman.
- Sunderlal, Aadarsh, Pankaj, 2007, Textbook of Community Medicine, CBS Publishers \& Distributors.
- Kirch, Wilhelm, 2008, Encyclopedia of Public Health, Volume 1 \& 2, Kluwer Academic Publishers.
- Mary -Jane Schneider and Henrey Schneider, 2006 (2nd edition), Introduction to Public Health, Jones and Bartlett Publishers.


## Adaptations to Exercise and Training

## Unit-I

Cardiovascular Adaptations to Endurance and Strength Training, Hypertrophy and Cardiomyopathy in Young and Older Athletes, Heart rate training zone, Effects Of High Altitude, Sudden Cardiac Death and Exercise in Healthy Adults

Unit-II
Respiratory System Adaptations to Endurance and Strength Training, Ventilatory response to exercise and its use in sports, Ventilatory threshold, Effects Of Exercise, response to steady- state exercise, Exercise-Induced Bronchoconstriction, Control of Breathing during exercise; The Respiratory System under Stress, respiratory systems adaptation to long-term exercise, Adaptations to systematic Training, Effects Of High Altitude

## Unit-III

Muscular Mechanisms in Aerobic Endurance Training; Neural Mechanisms in Aerobic Endurance Training, Muscle Molecular Mechanisms in Strength Training, Muscle Property Changes in Strength Training, Neural Mechanisms in Strength Training. Initial responses of the neuromuscular systems to exercise; Training Adaptation of the Neuromuscular System

## Recommended Books:

- Roy J. Shephard and Henry S. Miller, Jr. (1999) Exercise and the Heart in Health and Disease. Marcel Dekker
- Shephard, R.J. and Astrand, P.-0. (1992) Endurance in sport. Blackwell Science Ltd, USA
- McArdle, W.D., Katch, F.I., Katch, V.L. (2006) Essentials of Exercise Physiology. Lippincott Williams and Wilkins, USA.
- Victor F. Froelicher, Jonathan Myers (2006) Exercise and the heart. Elsevier Inc.
- Christopher B. Cooper and Thomas W. Storer (2004) Exercise testing and interpretation- A practical approach. Cambridge University Press.
- K. Wasserman, J Hansen, D Sue, W Stringer, B Whipp, eds (2004) Principles of Exercise Testing and Interpretation, 4th edn.. Lippincott Williams \& Wilkins, Philadelphia, USA.
- Christopher Bell. Cardiovascular Physiology in Exercise and Sport . 1st Edition. 2008; Churchill Livingstone
- Michael G. Levitzky. Pulmonary Physiology, 8e. 2013; Lange. The McGraw-Hill Companies.
- Denise L. Smith and Bo Fernhall (2011) Advanced cardiovascular exercise physiology. Human Kinetics


## MSSP 207

## Laboratory III

Credit 3

- Techniques of taking various anthropometric measurements
- To define and illustrate various body landmarks
- Gross body measurements: Body weight (Kg), Stature, sitting height, Height of interior superior Iliac spine, Subischial length.
- Diameters or Breadths (cms): Bicristal diameter (Shoulder Breadth), Transverse chest diameter, Anteroposterior chest diameter, Femur bicondylar diameter (knee breadth), Humerus Bicondylar diameter (elbow Breadth)
- BMI Estimation with and without software
- Assess Energy and Nutrient intake from Diet using suitable Software
- Circumferences or Girths of body parts, Calf circumference, Thigh circumference, Waist circumference, Chest circumference
- Skinfold measurement and Body Fat Percentage calculations
- Training Program: Circuit Training Program, Interval Training Program, Ballistic Training Program, Fertlek Training Program

MSSP 208
Laboratory IV
Credit 3

- Aerobic Power Field Assessments: Cooper 1.5-Mile Run/Walk Test and 12-Minute Run/Walk Test, Rockport Fitness Walking Test
- High-Intensity Fitness Testing: Léger 20 m Shuttle Run Test, Yo-Yo Intermittent Recovery Test, 30-15 Intermittent Fitness Test, Sprinting Performance, Jumping Performance, Power Endurance, Anaerobic Cycling Power, Margaria-Kalamen StairClimb Test, BROCKPORT test system, AAHPER health related physical fitness test, Philips JCR test for General motor ability testing
- Tests for: Speed, Agility, Balance, Coordination, Reaction time, Flexibility
- Sports Skill Tests for: Soccer, Basketball, Hockey, Tennis


## SEMESTER-III

MSSP 301

## Physiology of Sports and Exercise

## Credit 3

## Unit I

Introduction to Exercise and Sport Physiology, Structure and Function of Exercising Muscle, Fuel for Exercise: Bioenergetics and Muscle Metabolism

## Unit II

The Cardiovascular System and Its Control, Electrophysiology of Heart, Introduction and interpretation of EKG/ECG, Pacemakers and its Rhythms

Unit III
The Respiratory System and Its Regulation, Cardiorespiratory Responses to Acute Exercise, Energy Expenditure and Fatigue

## Recommended Books:

- Physiology of Sport and Exercise 6th Edition with Web Study Guide-Loose-Leaf Edition by W. Larry Kenney, Jack Wilmore, David Costill.
- Physiological Aspects of Sport Training and Performance With Web Resource- 2nd Edition, Human Kinetics By Jay Hoffman
- Exercise Physiology: Theory and Application to Fitness and Performance 10th Edition By Scott Powers and Edward Howley 2018.
- Exercise Physiology: Nutrition, Energy, and Human Performance 8th Edition by William D. McArdle, Frank I. Katch, Victor L. Katch
- Laboratory Manual for Exercise Physiology 2nd Edition. With Web Study Guide, Human Kinetics by G. Gregory Haff, Charles Dumke, 2018.
- A Textbook of Sports \& Exercise Physiology by Dey Swapan Kumar, Jaypee Publishers
- Practical ECG for Exercise Science and Sports Medicine by Greg Whyte, Sanjay Sharma, Human Kinetics, 2010
- Physiological Tests for Elite Athletes 2nd Edition by Australian Institute of Sport Rebecca Tanner, Christopher Gore, 2012.
- ACSM's Guidelines for Exercise Testing and Prescription, 10th Edition by American College of Sports Medicine. Wolters Kluwer, 2017
- Recovery for Performance in Sport by Institut National du Sport de l'Expertise et de la Performance INSEP, Human Kinetics, Christophe Hausswirth, A. Mujika
- A Textbook of Sports \& Exercise Physiology by Swapan kumar Dey, Jaypee brother, 2012.


## Unit-I

Introduction to Ergonomics; Ergonomical Risk Factors in Sports: Physical Properties of Human Structures, Health and Safety, Environmental Stress, Circadian Rhythms and Sports training; Ergonomics Models and Training Modes in Sport and Leisure, Competitive and Training Stress in Sport

## Unit-II

Influence of Sports Equipment and Playing Surfaces, Ergonomics in Physical Activities, Clinical Aspects in Sports Ergonomics, Holistic and Nutritional Ergonomics Perspective

Unit-III
Ergogenic Aids in Sport, Researching Ergogenic Aids, Nutritional Ergogenic Aids, Anti-Doping Codes and Drug Testing, WADA and NADA, Prohibited Substances and Techniques

Recommended Books:

- Handbook of Ergonomics in Sport and Exercise Edited by Youlian Hong, Routledge 2013
- Ergonomics in Sport and Physical Activity Enhancing Performance and Improving Safety by Thomas Reilly, Human Kinetics, 2010.
- Physiology of Sport and Exercise 6th Edition with Web Study Guide-Loose-Leaf Edition by W. Larry Kenney, Jack Wilmore, David Costill
- A Textbook of Sports \& Exercise Physiology by Dey Swapan Kumar, Jaypee Publishers
- IOC Manual of Sports Injuries: An Illustrated Guide to the Management of Injuries in Physical Activity by Roald Bahr, John Wiley \& Sons, 2012
- Principles of Manual Therapy (A Manual Therapy Approach to Musculoskeletal Dysfunction) by Sebastian Deepak, Jaypee Publishers


## MSSP 303

Fitness Assessments and Exercise Prescription

## Credit 3

Unit-I
Physical Activity and Physiological Benefits, Health and Chronic Disease, Preliminary Health Screening and Risk Classification, Health-Related Physical Fitness, Testing and Interpretation, Interpretation of Clinical Exercise Test Results

Unit-II
Principles of Assessment, Prescription, and Exercise Program Adherence, Designing Resistance Training Programs, Exercise Prescription for Healthy Populations with Special Considerations and Environmental Considerations, Exercise Prescription for Patients with Cardiovascular and Cerebrovascular Disease

Unit-III
Exercise Prescription for Pulmonary Diseases, Neuromuscular Diseases, Diabetic Patients and Cancer Patients. Exercise Prescription for Pregnancy, Designing Weight Management and Body Composition Programs, Behavioral Theories and Strategies for Promoting Exercise

Recommended Books:

- ACSM's Guidelines for Exercise Testing and Prescription, Edition 10 by American College of Sports Medicine
- Advanced Fitness Assessment and Exercise Prescription 8th Edition by Ann Gibson, Dale Wagner, Vivian Heyward, Human Kinetics, 2018
- Principles of Exercise Prescription by V Bhutkar Milind, Jaypee Publishers
- Physiology of Sport and Exercise 6th Edition with Web Study Guide-Loose-Leaf Edition by W. Larry Kenney, Jack Wilmore, David Costill.
- Principles of Manual Therapy (A Manual Therapy Approach to Musculoskeletal Dysfunction) by Sebastian Deepak, Jaypee Publishers
- Physiological Tests for Elite Athletes 2nd Edition by Australian Institute of Sport Rebecca Tanner, Christopher Gore, 2012
- Measurement and Evaluation in Human Performance 5th Edition, Human Kinetics by James Morrow Jr., Dale Mood, James Disch, Minsoo Kang, 2016
- Laboratory Manual for Exercise Physiology 2nd Edition. With Web Study Guide, Human Kinetics by G. Gregory Haff, Charles Dumke, 2018.
- Therapeutic Exercise- Foundations \& Techniques by Carolyn Kisner \& Lynn Allen Colby, Jay Pee Brothers, New Delhi.
- Pollock's Textbook of Cardiovascular Disease and Rehabilitation by JL Durstine, HK


## MSSP 304

Neuroscience and Endocrinology in Sports
Credit 3
Unit-I
Neural Control of Exercising Muscle, Hormonal Control during Exercise, Body Composition and Nutrition for Sport
Unit-II
Metabolic Effects of Exercise, Aging in Sport and Exercise, Sex Differences in Sport and Exercise

## Unit-III

Obesity, Diabetes, and Physical Activity, Energy Balance and Weight Control, Exercise Training in the Normal Female: Effects of Low Energy Availability on Reproductive Functions, Cardiovascular Disease and Physical Activity

## Recommended Books:

- Physiology of Sport and Exercise 6th Edition with Web Study Guide-Loose-Leaf Edition by W. Larry Kenney, Jack Wilmore, David Costill.
- Physiological Aspects of Sport Training and Performance With Web Resource- 2nd Edition, Human Kinetics By Jay Hoffman
- Exercise Physiology: Theory and Application to Fitness and Performance 10th Edition by Scott Powers and Edward Howley 2018.
- Exercise Physiology: Nutrition, Energy, and Human Performance 8th Edition by William D. McArdle, Frank I. Katch, Victor L. Katch
- Laboratory Manual for Exercise Physiology 2nd Edition. With Web Study Guide, Human Kinetics by G. Gregory Haff, Charles Dumke, 2018.
- Measurement and Evaluation in Human Performance 5th Edition, Human Kinetics by James Morrow Jr., Dale Mood, James Disch, Minsoo Kang, 2016.
- Physiological Tests for Elite Athletes 2nd Edition by Australian Institute of Sport Rebecca Tanner, Christopher Gore, 2012.
- ACSM's Guidelines for Exercise Testing and Prescription, 10th Edition by American College of Sports Medicine. Wolters Kluwer, 2017
- Endocrinology of Physical Activity and Sport, Second Edition Constantini, Naama, Hackney, Anthony C, 2013.
- Advanced Exercise Endocrinology, Human Kinetics by Katarina Borer, 2013.
- Handbook of Neuroscience and Psychophysiology by Roland Carlstedt.


## MSSP 305

## Physiological Support for Athletes

## Credit 3

Unit-I
Physiology of the Performance, Environmental Influences on Performance, Physical Activity for Health and Fitness, Prescription of Exercise for Health and Fitness

Unit-II
Concept of Athlete Support, Athlete Development stages- Child, Pre-adolescent, Adolescent and Adult, Talent Identification, Steps of Sports talent Selection and counselling, Factors affecting Physical Growth and Development, Talent Development and Promotion

## Unit-III

Athlete Monitoring and Analysis, Time-motion analysis in Sport; Analysis of Athlete Tracking Systems; GPS and accelerometer analysis of training and competition; monitoring and analysis of sport-specific physical and psychological variables; physiological monitoring; external sources of data relating to sports performance; reliability of data and sources. The use of performance indicators in performance analysis, Feedback based analysis of performance, Sport-specific notational systems; computerized notational analysis; notation in individual sports; notation in team sports; augmented feedback through video-based technologies

## Recommended Books:

- Physiology of Sport and Exercise 6th Edition with Web Study Guide-Loose-Leaf Edition by W. Larry Kenney, Jack Wilmore, David Costill.
- Physiological Aspects of Sport Training and Performance With Web Resource- 2nd Edition, Human Kinetics By Jay Hoffman
- Exercise Physiology: Theory and Application to Fitness and Performance 10th Edition By Scott Powers and Edward Howley 2018.
- Talent Identification and Development in Sport International Perspectives Edited by Joseph Baker, Steve Cobley, Jörg Schorer © 2012 - Routledge
- IOC Manual of Sports Injuries: An Illustrated Guide to the Management of Injuries in Physical Activity by Roald Bahr, John Wiley \& Sons, 2012
- Peter O’Donoghue. (2015) An introduction to performance analysis of sport.
- Carol-Lynne and Moore, Kaoru Yamamoto (2012) Beyond words movement observation and analysis. Routledge, NY.
- Routledge, NYMike Hughes and Ian M. Franks. (2015) Essentials of performance analysis in sport. Routledge, NY


## MSSP 306

## Elective III

## Credit 3

## Drugs and Doping in Sports

## Unit I

The Evolution of Doping and Anti-doping in Sports, Prevalence of Doping in Sports, Doping Control in Sports, Inadvertent Use of Prohibited Substances in Sports, Role of Athlete Support Personnel in Preventing Deliberate and Inadvertent Use of Prohibited Substances, WADA Rules and Regulations Regarding Inadvertent Use of Prohibited Substances.

## Unit II

Different Methods and Chemicals of Doping and Masking, Anabolic Androgenic Steroids, Stimulants, Glucocorticoids, PeptideProtein Hormone, Beta-2 Agonists, Hormone and Metabolic Modulators, Narcotics, Beta Blockers, Manipulation of Blood and Blood Components, Chemical and Physical Manipulations, Gene Doping, Diuretics and Masking

Unit III
Substances and Methods Permitted in Sports, Sport Supplements and Herbal Preparations, Evolving Issues Concerning Drug Use in Sports, Athletic Testing, Analytical Procedures and Adverse Analytical Findings, The Future of Performance Enhancing Substances in Sports, Anti-doping Movement

Recommended Books:

- Anthony C Hackey (2017) Doping, Performance-Enhancing Drugs, and Hormones in Sports ISBN:978-0-12-813442-9
- David R. Mottram, Neil Chester (2018) Drugs in Sports, Routledge, ISBN:1351838989
- Portefield, Jason (2008) Doping: athletes and drugs, Rosenn Publishing, New York, ISBN:1-4042-1917-5


## Sports Genetics and Performance

## Unit I

Basic Genetic Concepts, Mendelian inheritance, population genetics, Human chromosome Karyotype, Chromosome Disorders, Genome Structure and Genetic Mapping, Mitochondrial Inheritance, The Genetic Code and Genetic Alterations, DNA Injuries and Repair, Monogenic and Polygenetic Diseases, Molecular Diagnostics

## Unit II

Ethics of Genetic Testing and Research in Sport, Current Challenges and Directions to the Future, Genetic Modifications in Sports, Ethical Considerations of Genetic Manipulation in Sport, Gene Therapy and Gene Doping

Unit III
Connecting Sports and Genetics, The Genetics of Sports Injuries and Athletic Performance, Genetic Contributors To Hypertrophic Cardiomyopathy, Chronic Traumatic Encephalopathy, Different Classes of Performance Enhancing Genetic Variants

Recommended Books:

- Bruce R. Korf and Mira B Irons (2012) Human Genetics and Genomics, WILEY-BLACKWELL
- Manu L Kothari, Lopa A Mehta, Sadhana S roychoudhury, (2009) Principles of Genetics, Universities Press
- Ricki Lewis (2017) Human Genetics the basics, Routledge, ISBN 978-1-138-66801-0
- Michael Posthum and Malcolm Collins (2016) Genetics and Sports, Karger Publisher
- Elaine A. Ostrander, Heather J. Huson, and Gary K. OstranderGenetics of Athletic Performance (2009) Annu. Rev. Genomics Hum. Genet. 2009.10:407-29
- Lisa M. Guth and Stephen M. Roth (2013) Genetic influence on athletic performance, Curr Opin Pediatr. 2013 December; 25(6): 653-658.
- Nicola Mafulli et al (2013) the genetics of sports injuries and athletic performance. Muscles, Ligaments and Tendons Journal, 3 (3): 173-189


## Exercise Immunology

Unit I
Immunological system and exercise: Exercise and innate and humoral immunity, Exercise induced change in Ig and antibody, exercise and cytokines.

## Unit II

Sex Differences in Immune Function after Aerobic Exercise, Sex differences in immune variables and respiratory infection, Killer cell immunoglobulin-like receptors and exercise, Anti-inflammatory influence of exercise training- Physical activity, fitness, and chronic inflammation, C-Reactive Protein (CRP)

## Unit III

Cytokines, Free radicals, Antioxidants, Effect of exercise on immunity, Physical activity - A stimulator and an inhibitor to the immune system, Exercise and upper respiratory tract infection, Infection and exercise performance, Exercise and HIV infection, Exercise and Cancer, Exercise aging and immunity, Maintaining immune health, Importance of exercise immunology in health promotion.

Recommended Books:

- Michael Gleeson, Nicolette Bishop, and Neil Walsh.(Eds) (2013) Exercise immunology. Routledge
- Warren Levinson (2016) Review of Medical Microbiology and Immunology. LANGE, Mc Graw Hill
- Blood Pressure Measurements: Effects of Body Position, Dynamic Exercise and Isometric Contractions on BP
- Resting Metabolic Rate Determinations: Predicting and Measuring RMR
- Determination of VO2max by direct and indirect method.
- Assessment of Peak lactate, lactate tolarence, lactate clearance.
- Determination of anaerobic threshold.
- Assessment of EMG and ECG.
- Oxygen Deficit and EPOC Evaluations
- Submaximal Exercise Testing: Submaximal Bench Step Test, Submaximal Treadmill Test, Submaximal Cycle Ergometer Test
- Pulmonary Function Testing: Lung Volumes and Capacities, Pulmonary Function


## MSSP 308

Laboratory VI
Credit 2

- MMT for Major Muscle Groups of the body
- Use of Body Composition Software
- Use of Fitness Related Software
- Exercise Prescription and Counselling for Weight Management
- Demonstration of ROM Exercises and Prescription
- Measurement of heart rate and blood pressure during and after exercise.(each student is expected to practice measurement on 50 volunteers and determine intra experimenter and inter-experimenter variation)
- Cardio-pulmonary resuscitation practice on Human Mannequin
- Aerobic power measurement using Queens' college test, Astrand-Rhyming test.
- Tests for anaerobic power (Wingate Test)


## SEMESTER-IV

## MSSP 401

Research Methodology
Credit 3

## Unit-I

Introduction to Research in Physical Activity, Developing the Problem and Using the Literature, Presenting the Problem, Formulating the Method, Ethical Issues in Research and Scholarship

Unit-II
Types of Research: Socio Historical Process in Sport Studies, Philosophical Research in Physical Activity, Research Synthesis (Meta-Analysis), Surveys, Other Descriptive Research Methods, Physical Activity Epidemiology Research, Experimental and Quasi-Experimental Research, Qualitative Research, Mixed-Methods Research

Unit-III
Writing the Research Report: Completing the Research Process, Ways of Reporting Research
Introduction to review of literature, Evaluation of scientific literature; organizing literature - strategies, use of software; Metaanalysis, Writing review - structuring the review, quoting/paraphrasing, the citation referencing system

Recommended Books:

- Research Methodology: Methods and Techniques by C. R. Kothari
- ICMR. Ethical Guidelines for Biomedical Research on Human Subjects. 2006; ICMR, New Delhi.
- Research Methods in Physical Activity- 7th Edition By Jerry Thomas, Jack Nelson, Stephen Silverman, Human Kinetics
- Research Methods in Sport by Mark F Smith
- Research Methods for Sports Performance Analysis By Peter O' Donoghue
- Research Methods in Physical Education and Youth Sport 1st Edition by Kathleen Armour and Doune Macdonald
- Ridley, D. The Literature Review a step-by-step guide for students. 2012; Sage Publications Limited, New Delhi.
OLD SCHEME

| Integrated M. Sc. VII Semester |  |  |
| :---: | :--- | :---: |
| Course Code |  | Credite |
|  |  | 4 |
| IMST 411 | Probability Theory | 4 |
| IMST 412 | Distribution Theory | 4 |
| IMST 413 | Linear Algebra and Real Analysis | 4 |
| IMST 414 | Sampling Theory | 4 |
| IMST 415 | Practicals |  |


| Integrated M. Sc. VIII Semester |  |  |
| :---: | :--- | :---: |
| Course Code | Title | Credit |
| IMST 421 | Estimation and Testing of Hypotheses | 4 |
| IMST 422 | Linear Models | 4 |
| IMST 423 | Stochastic Models | 4 |
| IMST 424 | Design of Experiments | 4 |
| IMST 425 | Practicals | 4 |

## NEW SCHEME

| Course Code | Title | Credit |
| :--- | :--- | :---: |
| IMST 421 | Estimation and Testing of Hypotheses | 4 |
| IMST 422 | Linear Models | 4 |
| IMST 423 | Stochastic Models | 4 |
| IMST 424 | Design of Experiments | 4 |
| IMST 425 | Practicals | 4 |


| Course Code | Title | Credit |
| :--- | :--- | ---: |
| MST 101 | Probability Theory | 4 |
| MST 102 | Distribution Theory | 4 |
| MST 103 | Linear Algebra and Matrix theory | 4 |
| MST 104 | Sampling Theory | 4 |
| MST 105 | R: Statistical Programming Language | 4 |
| MST 106 | Practicals | 4 |

Integrated M. Sc. VIII Semester

| Course Code | Title | Credit |
| :--- | :--- | :---: |
| MST 201 | Estimation and Testing of Hypotheses | 4 |
| MST 202 | Linear Models | 4 |
| MST 203 | Stochastic Models | 4 |
| MST 206 | Practicals | 4 |
|  | Elective-1 | 4 |
|  | Elective-2 | 4 |
|  |  |  |
| Elective Courses |  | Credit |
| Course Code | Title | 4 |
| MST 221 | Design of Experiment -II | 4 |
| MST 222 | Econometrics | 4 |
| MST 223 | Financial Mathematics | 4 |
| MST 224 | Economics for actuarial Science | 4 |
| MST 225 | Machine Learning |  |
| MST 226 | Modeling and Simulation (Mathematics, |  |
| MTM 204) | 4 |  |
| MST 227 | Mathematical Software and Tools <br> (Mathematics, MTM 206) | 4 |

[^2]Integrated M.Sc. IX Semester

| Course code | Title | Credit |
| :--- | :--- | :---: |
| MST 301 | Decision Theory and Non Parametric <br> Inference | 4 |
| MST 302 | Time Series Analysis and Forecasting | 4 |
| MST 303 | Maltivariate Analysis | 4 |
| MST 306 | Practicals | 4 |
|  | Elective 1 | 4 |
|  | Elective 2 | 4 |
|  |  |  |
|  |  |  |
| Elective Courses | Credit |  |
| Course Code | Title | 4 |
| MST 321 | Statistical Quality Control | 4 |
| MST 322 | Stochastic Finance | 4 |
| MST 323 | Contingencies | 4 |
| MST 324 | Principle and Practices of Insurance | 4 |
| MST 325 | Data Mining |  |



| Integrated M. Sc. X Semester |  |  |
| :---: | :---: | :---: |
| Course Code | Title | Credit |
| IMST 521 | Multivariate Analysis | 4 |
| IMST 522 | Practicals | 4 |
|  | Elective-1 | 4 |
| IMST 423 | Project | 8 |
|  |  |  |
| Elective Courses for X-Semester |  |  |
| Course Code | Title | Credit |
| $\text { IMST } 541$ | Contingencies | 4 |
| IMST 542 | Decision Theory and Non Parametric Inference | 4 |
| IMST 543 | Econometrics | 4 |
| IMST 544 | Extreme Value Theory | 4 |
| IMST 545 | Life and Health Insurance | 4 |
| IMST 546 | Statistical Methods for Reliability | 4 |
| IMST 547 | Statistical Quality Management | 4 |
| IMST 548 | Stochastic Finance | 4 |
| IMST 549 | Valuation and Loss Reserving | 4 |
| IMST 550 | Statistical Analysis of Clinical Trials | 4 |

Integrated M. Sc. X Semester

| Paper code | Title | Credit |
| :--- | :--- | :---: |
| MST 401 | National Development Statistics | 4 |
| MST 406 | Practicals | 4 |
| MST 410 | Project | 4 |
|  |  |  |
|  |  |  |
|  |  | Credit |
| Elective Courses | 4 |  |
| Paper Code | Title | 4 |
| MST 421 | Survival Models and Analysis | 4 |
| MST 422 | Advance Bayesian Inference | 4 |
| MST 423 | Statistical Quality Management |  |
| MST 424 | Statistical Methods for Non-life | 4 |
|  | Insurance | 4 |
| MST 425 | Life and Health Insurance | 4 |
| MST 426 | Employee Benefit Plans | 4 |
| MST 427 | Valuation and Loss Reserving |  |
| MST 428 | Finance and Financial Reporting |  |

## 

## UNIVERSITY GRANTS COMMISSION

## NOTIFICATION

New Delhi, the 18th July, 2018

## UGC REGULATIONS ON MINIMUM QUALIFICATIONS FOR APPOINTMENT OF TEACHERS AND OTHER ACADEMIC STAFF IN UNIVERSITIES AND COLLEGES AND MEASURES FOR THE MAINTENANCE OF STANDARDS IN HIGHER EDUCATION, 2018

No. F.1-2/2017(EC/PS).-In exercise of the powers conferred under clause (e) and (g) of sub-section(I) of Section 26 read with Section 14 of the University Grants Commission Act, 1956 (3 of 1956), and in supersession of the "UGC Regulations on Minimum qualifications for Appointment of Teachers and other Academic Staff in Universities and Colleges and Measures for the Maintenance of Standards in Higher Education 2010" (Regulation No.F.3-1/2009 dated $30^{\text {th }}$ June, 2010) together with all amendments made therein from time to time, the University Grants Commission, hereby, frames the following Regulations, namely:-

## 1. Short title, application and commencement:

1.1 These Regulations may be called the University Grants Commission (Minimum Qualifications for Appointment of Teachers and other Academic Staff in Universities and Colleges and other Measures for the Maintenance of Standards in Higher Education) Regulations, 2018.
1.2 These shall apply to every University established or incorporated by or under a Central Act, Provincial Act or a State Act, every Institution including a Constituent or an affiliated College recognized by the Commission, in consultation with the University concerned under Clause (i) of Section 2 of the University Grants Commission Act, 1956 and every Institution deemed to be a University under Section 3 of the said Act.
1.3 These shall come into force from the date of notification.
2. The Minimum Qualifications for appointment and other service conditions of University and College teachers, Librarians, and Directors of Physical Education and Sports as a measure for the maintenance of standards in higher education, shall be as provided in the Annexure to these Regulations.
3. If any University contravenes the provisions of these Regulations, the Commission after taking into consideration the cause, if any, shown by the University for such failure or contravention, may withhold from the University, the grants proposed to be made out of the Fund of the Commission.
UGC REGULATIONS ON MINIMUM QUALIFICATIONS FOR APPOINTMENT OF TEACHERS AND OTHER ACADEMIC STAFF IN UNIVERSITIES AND COLLEGES AND OTHER MEASURES FOR THE MAINTENANCE OF STANDARDS IN HIGHER EDUCATION, 2018

Minimum qualifications for the posts of Senior Professor, Professors and Teachers, and other Academic Staff in Universities and Colleges and revision of pay scales and other Service Conditions pertaining to such posts.

### 1.0 Coverage

These Regulations are issued for minimum qualifications for appointment and other service conditions of University and College teachers and cadres of Librarians, Directors of Physical Education and Sports for maintenance of standards in higher education and revision of pay-scales.
1.1 For the purposes of direct recruitment to teaching posts in disciplines relating to university and collegiate education, interalia in the fields of health, medicine, special education, agriculture, veterinary and allied fields, technical education, teacher education, norms or standards laid down by authorities established by the relevant Act of Parliament under article 246 of the Constitution for the purpose of co-ordination and determination of standards in institutions for higher education or research and scientific and technical institutions, shall prevail
i. Provided that where no such norms and standards have been laid down by any regulatory authority, UGC Regulations herein shall be applicable till such time as any norms or standards are prescribed by the appropriate regulatory authority.
ii. Provided further that for appointment to the post of Assistant Professor and equivalent positions pertaining to disciplines in which the National Eligibility Test (NET), conducted by the University Grants Commission or Council of Scientific and Industrial Research as the case may be, or State level

Eligibility Test (SLET) or the State Eligibility Test (SET),conducted by bodies accredited by the UGC for the said purpose, qualifying in NET/SLET/SET shall be an additional requirement.
1.2 Every university or institution deemed to be University, as the case may be, shall as soon as may be, but not later than within six months of the coming into force of these Regulations, take effective steps for the amendment of the statutes, ordinances or other statutory provisions governing it, so as to bring the same in accordance with these Regulations.
Pay Scales, Pay Fixation, and Age of Superannuation
Pay scales as notified by the Government of India from time to time will be adopted by the University Grants Commission.
2.1 Subject to the availability of vacant positions and fitness, teachers such as Assistant Professor, Associate Professor, Professor and Senior Professor only, may be re-employed on contract appointment beyond the age of superannuation, as applicable to the concerned University, college and Institution, up to the age of seventy years.

Provided further that all such re-employment shall be strictly in accordance with the guidelines prescribed by the UGC, from time to time.
2.2 The date of implementation of the revision of pay shall be $\mathbf{1}^{\text {st }}$ January, 2016.
3.0 Recruitment and Qualifications
3.1 The direct recruitment to the posts of Assistant Professor, Associate Professor and Professor in the Universities and Colleges, and Senior Professor in the Universities, shall be on the basis of merit through an all-India advertisement, followed by selection by a duly-constituted Selection Committee as per the provisions made under these Regulations. These provisions shall be incorporated in the Statutes/Ordinances of the university concerned. The composition of such a committee shall be as specified in these Regulations.
3.2 The minimum qualifications required for the post of Assistant Professor, Associate Professor, Professor, Senior Professor, Principal, Assistant Librarian, Deputy Librarian, Librarian, Assistant Director of Physical Education and Sports, Deputy Director of Physical Education and Sports and Director of Physical Education and Sports, shall be as specified by the UGC in these Regulations.
I. The National Eligibility Test (NET) or an accredited test (State Level Eligibility Test SLET/SET) shall remain the minimum eligibility for appointment of Assistant Professor and equivalent positions wherever provided in these Regulations. Further, SLET/SET shall be valid as the minimum eligibility for direct recruitment to Universities/Colleges/Institutions in the respective state only:

Provided that candidates who have been awarded a Ph.D. Degree in accordance with the University Grants Commission (Minimum Standards and Procedure for Award of M.Phil./Ph.D. Degree) Regulation, 2009, or the University Grants Commission (Minimum Standards and Procedure for Award of M.Phil/Ph.D. Degree) Regulation,2016, and their subsequent amendments from time to time, as the case may be, shall be exempted from the requirement of the minimum eligibility condition of NET/SLET/SET for recruitment and appointment of Assistant Professor or any equivalent position in any University, College or Institution.

Provided further that the award of degree to candidates registered for the M.Phil/Ph.D.programme prior to July 11, 2009, shall be governed by the provisions of the then existing Ordinances / Bye-laws / Regulations of the Institutions awarding the degree. All such Ph.D. candidates shall be exempted from the requirement of NET/SLET/SET for recruitment and appointment of Assistant Professor or equivalent positions in Universities/Colleges/Institutions subject to the fulfillment of the following conditions:
a) The Ph.D. degree of the candidate has been awarded in regular mode only;
b) The Ph.D. thesis has been awarded by at least two external examiners;
c) An open Ph.D. viva voce of the candidate has been conducted;
d) The candidate has published two research papers from his/her Ph.D. work out of which at least one is in a refereed journal;
e) The candidate has presented at least two papers, based on his/her Ph.D. work in conferences/seminars sponsored/funded/supported by the UGC/ ICSSR/CSIR or any similar agency.

The fulfilment of these conditions is to be certified by the Registrar or the Dean (Academic Affairs) of the University concerned.
II. The clearing of NET/SLET/SET shall not be required for candidates in such disciplines for which NET/SLET/SET has not been conducted.
3.4 A minimum of $55 \%$ marks (or an equivalent grade in a point-scale, wherever the grading system is followed) at the Master‘s level shall be the essential qualification for direct recruitment of teachers and other equivalent cadres at any level.
I. A relaxation of 5\% shall be allowed at the Bachelor's as well as at the Master's level for the candidates belonging to Scheduled Caste/Scheduled Tribe/Other Backward Classes (OBC)(Non-creamy Layer)/Differentlyabled ((a) Blindness and low vision; (b) Deaf and Hard of Hearing; (c) Locomotor disability including cerebral palsy, leprosy cured, dwarfism, acid-attack victims and muscular dystrophy; (d) Autism, intellectual disability, specific learning disability and mental illness; (e) Multiple disabilities from amongst persons under (a) to (d) including deaf-blindness) for the purpose of eligibility and assessing good academic record for direct recruitment. The eligibility marks of $55 \%$ marks (or an equivalent grade in a point scale wherever the grading system is followed) and the relaxation of $5 \%$ to the categories mentioned above are permissible, based only on the qualifying marks without including any grace mark procedure.
3.5. A relaxation of $5 \%$ shall be provided, (from $55 \%$ to $50 \%$ of the marks) to the Ph.D. Degree holders who have obtained their Master's Degree prior to19 September, 1991.
3.6 A relevant grade which is regarded as equivalent of $55 \%$, wherever the grading system is followed by a recognized university, at the Master's level shall also be considered valid.
3.7 The Ph.D. Degree shall be a mandatory qualification for appointment and promotion to the post of Professor.
3.8 The Ph.D. Degree shall be a mandatory qualification for appointment and promotion to the post of Associate Professor.
3.9 The Ph.D. Degree shall be a mandatory qualification for promotion to the post of Assistant Professor (Selection Grade/Academic Level 12) in Universities.
3.10 The Ph.D. Degree shall be a mandatory qualification for direct recruitment to the post of Assistant Professor in Universities with effect from 01.07.2021.
3.11 The time taken by candidates to acquire M.Phil. and / or Ph.D. Degree shall not be considered as teaching/ research experience to be claimed for appointment to the teaching positions. Further the period of active service spent on pursuing Research Degree simultaneously with teaching assignment without taking any kind of leave, shall be counted as teaching experience for the purpose of direct recruitment/ promotion. Regular faculty members upto twenty per cent of the total faculty strength (excluding faculty on medical / maternity leave) shall be allowed by their respective institutions to take study leave for pursuing Ph.D. degree.

### 3.12 Qualifications:

No person shall be appointed to the post of University and College teacher, Librarian or Director of Physical Education and Sports, in any university or in any of institutions including constituent or affiliated colleges recognised under clause (f) of Section 2 of the University Grants commission Act, 1956 or in an institution deemed to be a University under Section 3 of the said Act if such person does not fulfil the requirements as to the qualifications for the appropriate post as provided in the Schedule 1 of these Regulations.

### 4.0 Direct Recruitment

4.1 For the Disciplines of Arts, Commerce, Humanities, Education, Law, Social Sciences, Sciences, Languages, Library Science, Physical Education, and Journalism \& Mass Communication.
I. Assistant Professor:

Eligibility (A or B) :
A.
i) A Master's degree with $55 \%$ marks (or an equivalent grade in a point-scale wherever the grading system is followed) in a concerned/relevant/allied subject from an Indian University, or an equivalent degree from an accredited foreign university.
ii) Besides fulfilling the above qualifications, the candidate must have cleared the National Eligibility Test (NET) conducted by the UGC or the CSIR, or a similar test accredited by the UGC, like SLET/SET or who are or have been awarded a Ph. D. Degree in accordance with the University Grants Commission (Minimum Standards and Procedure for Award of M.Phil./Ph.D. Degree) Regulations, 2009 or 2016 and their amendments from time to time as the case may be exempted from NET/SLET/SET :

Provided, the candidates registered for the Ph.D. programme prior to July 11, 2009, shall be governed by the provisions of the then existing Ordinances/Bye-laws/Regulations of the Institution awarding the degree and such Ph.D. candidates shall be exempted from the requirement of NET/SLET/SET for recruitment and appointment of Assistant Professor or equivalent positions in Universities/Colleges/Institutions subject to the fulfillment of the following conditions :-
a) The Ph.D. degree of the candidate has been awarded in a regular mode;
b) The Ph.D. thesis has been evaluated by at least two external examiners;
c) An open Ph.D. viva voce of the candidate has been conducted;
d) The Candidate has published two research papers from his/her Ph.D. work, out of which at least one is in a refereed journal;
e) The candidate has presented at least two papers based on his/her Ph.D work in conferences/seminars sponsored/funded/supported by the UGC / ICSSR/ CSIR or any similar agency.

The fulfilment of these conditions is to be certified by the Registrar or the Dean (Academic Affairs) of the University concerned.

Note: NET/SLET/SET shall also not be required for such Masters Programmes in disciplines for which NET/SLET/SET is not conducted by the UGC, CSIR or similar test accredited by the UGC, like SLET/SET.

## OR

B. The Ph.D degree has been obtained from a foreign university/institution with a ranking among top 500 in the World University Ranking (at any time) by any one of the following: (i) Quacquarelli Symonds (QS) (ii) the Times Higher Education (THE) or (iii) the Academic Ranking of World Universities (ARWU) of the Shanghai Jiao Tong University (Shanghai).

Note:The Academic score as specified in Appendix II (Table 3A) for Universities, and Appendix II (Table 3B) for Colleges, shall be considered for short-listing of the candidates for interview only, and the selections shall be based only on the performance in the interview.

## II. Associate Professor:

## Eligibility:

i) A good academic record, with a Ph.D. Degree in the concerned/allied/relevant disciplines.
ii) A Master‘s Degree with at least $55 \%$ marks (or an equivalent grade in a point-scale, wherever the grading system is followed).
iii) A minimum of eight years of experience of teaching and / or research in an academic/research position equivalent to that of Assistant Professor in a University, College or Accredited Research Institution/industry with a minimum of seven publications in the peer-reviewed or UGC-listed journals and a total research score of Seventy five (75) as per the criteria given in Appendix II, Table 2.
III. Professor:

## Eligibility (A or B) :

A.
i) An eminent scholar having a Ph.D. degree in the concerned/allied/relevant discipline, and published work of high quality, actively engaged in research with evidence of published work with, a minimum of 10 research publications in the peer-reviewed or UGC-listed journals and a total research score of 120 as per the criteria given in Appendix II, Table 2.
ii) A minimum of ten years of teaching experience in university/college as Assistant Professor/Associate Professor/Professor, and / or research experience at equivalent level at the University/National Level Institutions with evidence of having successfully guided doctoral candidate.

## OR

B. An outstanding professional, having a Ph.D. degree in the relevant/allied/applied disciplines, from any academic institutions (not included in A above) / industry, who has made significant contribution to the knowledge in the concerned/allied/relevant discipline, supported by documentary evidence provided he/she has ten years' experience.

## IV. Senior Professor in Universities

Up to 10 percent of the existing sanctioned strength of Professors in the university may be appointed as Senior Professor in the universities, through direct recruitment.

## Eligibility:

i) An eminent scholar with good track record of high-quality research publications in Peer-reviewed or UGClisted journals, significant research contribution to the discipline, and engaged in research supervision.
ii) A minimum of ten years of teaching/research experience as Professor or an equivalent grade in a University, College or an institute of national level.
iii) The selection shall be based on academic achievements, favourable review from three eminent subject experts who are not less than the rank of Senior Professor or a Professor of at least ten years experience.
iv) The selection shall be based on ten best publications in the Peer-reviewed or UGC -listed journals and award of Ph.D degrees to at least two candidates under his/her supervision during the last 10 years and interaction with the Selection Committee constituted as per the UGC Regulations.
V. College Principal and Professor (Professor's Grade)
A. Eligibility:
(i) Ph.D. degree
(ii) Professor/Associate Professor with a total service/ experience of at least fifteen years of teaching/research in Universities, Colleges and other institutions of higher education.
(iii) A minimum of 10 research publications in peer-reviewed or UGC-listed journals.
(iv) A minimum of 110 Research Score as per Appendix II,Table 2
B. Tenure
i) A College Principal shall be appointed for a period of five years, extendable for another term of five years on the basis of performance assessment by a Committee appointed by the University, constituted as per these regulations.
ii) After the completion of his/her term as Principal, the incumbent shall join back his/her parent organization with the designation as Professor and in the grade of the Professor.

## VI. Vice Principal

An existing senior faculty member may be designated as Vice-Principal by the Governing Body of the College on the recommendation of the Principal, for a tenure of two years, who can be assigned specific activities, in addition to his/her existing responsibilities. During the absence of the Principal, for any reason, the Vice Principal shall exercise the powers of the Principal.

### 4.2. Music, Performing Arts, Visual Arts and Other Traditional Indian Art Forms like Sculpture, etc.

I. Assistant Professor:

Eligibility (A or B):
A.
i) Master‘s Degree with $55 \%$ marks (or an equivalent grade in a point scale wherever grading system is followed) in the relevant subject or an equivalent degree from an Indian/foreign University.
ii) Besides fulfilling the above qualifications, the candidate must have cleared the National Eligibility Test (NET) conducted by the UGC, CSIR or similar test accredited by the UGC like SLET/SET or who are or have been awarded a Ph. D. Degree in accordance with the University Grants Commission (Minimum Standards and Procedure for Award of M.Phil./Ph.D. Degree) Regulations, 2009 or 2016 and their amendments from time to time as the case may be.

Provided further, candidates registered for the Ph.D. programme prior to July 11, 2009, shall be governed by the provisions of the then existing Ordinances / Bye-laws / Regulations of the Institutions awarding the degree and such Ph.D. candidates shall be exempted from the requirement of NET/SLET/SET for recruitment and appointment of Assistant Professor or equivalent positions in Universities/Colleges /Institutions subject to the fulfilment of the following conditions:
a) Ph.D. degree has been awarded to the candidate in a regular mode
b) The Ph.D. thesis has been evaluated by at least two external examiners;
c) An open Ph.D. viva voce of the candidate had been conducted;
d) candidate has published two research papers from his/her Ph.D. work, out of which, at least one is in a refereed journal;
e) The candidate has presented at least two research papers based on his/her Ph.D. work in conferences/seminars supported/funded/sponsored by the UGC/AICTE/ICSSR or any other similar agency.
Note 1: The fulfilment of these conditions is to be certified by the Registrar or the Dean (Academic Affair) of the University concerned.
Note 2: The clearance of NET/SLET/SET shall also not be required for such Masters Programmes in disciplines for which NET/SLET/SET is not conducted by the UGC, CSIR or similar test accredited by the UGC (like SLET/SET).

## OR

B. A traditional or a professional artist with highly commendable professional achievement in the subject concerned having a Bachelor's degree, who has:
i) studied under a noted/reputed traditional Master(s)/Artist(s)
ii) Has been ' A ' grade artist of AIR/Doordarshan;
iii) Has the ability to explain, with logical reasoning the subject concerned; and
iv) Has adequate knowledge to teach theory with illustrations in the discipline concerned.

## II. Associate Professor :

Eligibility (A or B):
A.
i) Good academic record, with a doctoral degree.
ii) Performing ability of a high professional standard.
iii) Eight year's experience of teaching in a University or College and / or of research in a University/national level institution, equal to that of Assistant Professor in a University/College.
iv) Has made a significant contribution to knowledge in the subject concerned, as evidenced by quality publications.

## OR

B. A traditional or a professional artist with highly-commendable professional achievement having Master's degree in the subject concerned, who has:
i) been 'A'-grade artist of AIR/Doordarshan;
ii) eight years' experience of outstanding performing achievement in the
field of specialisation;
iii) experience in designing of new courses and /or curricula;
iv) participated in National level Seminars/Conferences/Concerts in reputed institutions' and
v) ability to explain, with logical reasoning, the subject concerned and adequate knowledge to teach theory with illustrations in the said discipline.

## III. Professor :

Eligibility (A or B):
A.
i) An eminent scholar having a doctoral degree
ii) Have been actively engaged in research with at least ten years of experience in teaching in University/College and / or research at the University/National level institutions
iii) Minimum of 6 research publications in the peer-reviewed or UGC-listed journals,
iv) Has a total research score of 120, as per Appendix II,Table 2.

## OR

B. A traditional or a professional artist, with highly-commendable professional achievement, in the subject concerned,
i) Having Masters degree, in the relevant subject
ii) Has been 'A'-grade artist of AIR/Doordarshan
iii) Has Ten years of outstanding performing achievements in the field of specialisation
iv) Has made significant contributions in the field of specialisations and ability to guide research;
v) Has participated in National/International Seminars/Conferences/ Workshops/Concerts and/ or recipient of National/International Awards/Fellowships;
vi) Has the ability to explain with logical reasoning the subject concerned, and
vii) Has adequate knowledge to teach theory with illustrations in the said discipline.

### 4.3 Drama Discipline:

## I. Assistant Professor

Eligibility (A or B)
A.
i) Master's Degree with $55 \%$ marks (or an equivalent grade in a point scale wherever grading system is followed) in the relevant subject or an equivalent degree from an Indian/foreign University.
ii) Besides fulfilling the above qualifications, the candidate must have cleared the National Eligibility Test (NET) conducted by the UGC or the CSIR or a similar test accredited by the UGC, like SLET/SET or who are or have been awarded a Ph.D. Degree in accordance with the University Grants Commission (Minimum Standards and Procedure for Award of M.Phil./Ph.D. Degree) Regulations, 2009, or 2016, and their amendments from time to time as the case may be.

Provided further, candidates registered for the Ph.D. programme, prior to July 11,2009, shall be governed by the provisions of the then existing Ordinances/Bye-laws/Regulations of the Institutions awarding the degree and such Ph.D. candidates shall be exempted from the requirement of NET/SLET/SET for recruitment and appointment of Assistant Professor or equivalent positions in Universities/Colleges/Institutions, subject to the fulfillment of the following conditions:-
a) The Ph.D. degree of the candidate has been awarded in the regular mode;
b) The Ph.D. thesis has been evaluated by at least two external examiners;
c) An open Ph.D. viva voce of the candidate has been conducted;
d) The candidate has published two research papers from his/her Ph.D. work out of which at least one must be in a refereed journal;
e) The candidate has presented at least two research papers based on his/her Ph.D. work in conferences/seminars supported/funded/ sponsored by the UGC/CSIR/ICSSR or any other similar agency.

## Note:

1. The fulfilment of these conditions is to be certified by the Registrar or the Dean (Academic Affairs) of the University concerned.
2. NET/SLET/SET shall also not be required for such Masters Programmes in disciplines for which the NET/SLET/SET is not conducted by the UGC, CSIR or similar test accredited by the UGC, like SLET/SET.

## OR

B. A traditional or a professional artist with highly commendable professional achievement in the concerned subject, who has:
i) been a professional artist with three years' Bachelor degree/Post Graduate Diploma, with $55 \%$ marks (or an equivalent grade in a point-scale wherever the grading system is followed), from the National School of Drama, or any other such Institution in India or abroad;
ii) five years of regular acclaimed performance at regional/ national/ international stage, supported by evidence; and
iii) the ability to explain, with logical reasoning, the subject concerned and adequate knowledge to teach theory with illustrations in the discipline concerned.

## II. Associate Professor:

Eligibility (A or B) :
A.
i) A good academic record, having a Ph.D degree with performing ability of high professional standard as certified by an Expert Committee constituted by the University concerned for the said purpose.
ii) Eight years experience of teaching in a University/College and/ or research in a University/nationallevel institutions equal to that of Assistant Professor in a University/College.
iii) A significant contribution to knowledge in the subject concerned, as evidenced by the quality publications.

## OR

B. A traditional or a professional artist, having highly commendable professional achievement in the subject concerned, has a Master's degree, who has:
i) Been recognised artist of Stage/ Radio/TV;
ii) Eight years of outstanding performance in the field of specialisation;
iii) Experience of designing new courses and /or curricula;
iv) Participated in Seminars/Conferences in reputed institutions; and
v) The ability to explain with logical reasoning the subject concerned and adequate knowledge to teach theory with illustrations in the said discipline.

## III. Professor

## Eligibility (A or B) :

A. An eminent scholar, having a doctoral degree, actively engaged in research with ten years of experience in teaching and /or research at a University/National-level institution, including experience of guiding research at the doctoral level, with outstanding performing achievement in the field of specialisation, with a minimum of 6 research publications in the peer-reviewed or UGC listed journals, and a total research score of 120, as per Appendix II, Table 2.

## OR

B. A traditional and a professional artist, having highly commendable professional achievement in the subject concerned, who has:
i) Master's degree, in the relevant subject;:
ii) Ten years of outstanding performing achievements in the field of specialisation;
iii) Made significant contribution in the field of specialisation
iv) Guided research;
v) Participated in National/International Seminars/Conferences/Workshops and/or recipient of National/International Awards/Fellowships;
vi) Ability to explain with logical reasoning the subject concerned;
vii) Adequate knowledge to teach theory, with illustrations in the said discipline.

### 4.4 Yoga Discipline

I. Assistant Professor :

## Eligibility (A or B) :

A. Good academic record, with at least $55 \%$ marks (or an equivalent grade in a point-scale wherever the grading system is followed) at the Master's degree in Yoga or any other relevant subject, or an equivalent degree from an Indian/foreign University.
Besides fulfilling the above qualifications, the candidate must have cleared the National Eligibility Test (NET) conducted by the UGC, CSIR or a similar test accredited by the UGC like SLET/SET or who are or have been awarded a Ph. D. Degree in accordance with the University Grants Commission (Minimum Standards and Procedure for Award of M.Phil./Ph.D. Degree) Regulations, 2009 or 2016 and their amendments from time to time.

## OR

B. A Master's degree in any discipline with at least $55 \%$ marks (or an equivalent grade in a point-scale wherever the grading system is followed) and a Ph.D. Degree in Yoga* in accordance with the University Grants Commission (Minimum Standards and Procedure for Award of M.Phil./Ph.D. Degree) Regulations, 2009 or 2016 and their amendments from time to time as the case may be.
*Note: Considering the paucity of teachers in the newly-emerging field of Yoga, this alternative has been provided and shall be valid only for five years from the date of notification of these Regulations

## II. ASSOCIATE PROPFESSOR

i) A good academic record, with a Ph.D. degree in the subject concerned or in a relevant discipline.
ii) A Master's degree with at least $55 \%$ marks (or an equivalent grade in a point-scale, wherever the grading system is followed).
iii) A minimum of eight years' experience of teaching and/ or research in an academic/research position equivalent to that of Assistant Professor in a University, College or Accredited Research Institutions/Industry with evidence of published work and a minimum of 7 publications as books and / or research/policy papers in peerreviewed or UGC listed journals and a total research score of at least Seventy five (75), as per the criteria given in Appendix II,Table 2.

## III. PROFESSOR

Eligibility (A or B) :
A.
i) An eminent scholar with Ph. D. degree in the subject concerned or in an allied/relevant subject and published work of high quality, actively engaged in research with evidence of published work, with a minimum of 10 publications as books and/ or research/policy papers in the peer-reviewed or UGC listed journals and a total research score of at least 120 as per the criteria given in Appendix II,Table 2.
ii) A minimum of ten years of teaching experience in a University/College and / or experience in research at the university/National level institution/Industries, with evidence of having successfully guided doctoral candidate.

## Or

B. An outstanding professional, with established reputation in the relevant field, who has made significant contribution to the knowledge in the concerned/allied/relevant discipline, to be substantiated by credentials.

### 4.5 QUALIFICATIONS, EXPERIENCE AND OTHER ELIGIBILITY REQUIREMENTS FOR APPOINTMENT OF OCCUPATIONAL THERAPY TEACHERS

## I. ASSISTANT PROFESSOR:

A Bachelor's Degree in Occupational Therapy (B.O.T./B. Th.O./B.O.Th.), Masters in Occupational Therapy (M.O.Th/M.Th.O./ M.Sc. O.T/M.OT.), with at least $55 \%$ marks (or an equivalent grade in a point-scale wherever the grading system is followed), from a recognised University

## II. ASSOCIATE PROFESSOR:

i) Essential : A Master's Degree in Occupational Therapy (M.O.T./M.O.Th./M.Sc. O.T.), with eight years' experience as Assistant Professor.
ii) Desirable: Higher Qualification, including a Ph. D. degree in any discipline of occupational therapy recognised by the UGC, and published work of high standard in peer-reviewed or UGC- listed journals.

## III. PROFESSOR:

i) Essential : Master's Degree in Occupational Therapy (M.O.T./ M.O.Th./M.Th.O./M.Sc. O.T.), with Ten years of total experience in Occupational Therapy.
ii) Desirable: Higher Qualification, such as Ph.D. degree in any discipline of occupational therapy recognised by the UGC, and published work of high standard in peer- reviewed or UGC- listed journals.

## IV. PRINCIPAL / DIRECTOR / DEAN:

Essential: Master's Degree in Occupational Therapy (M.O.T./M.Th.O./M.Oth./M.Sc. O.T.), with fifteen years' experience, which shall include five years' experience as Professor (Occupational Therapy).
Note:
(i) The senior-most Professor in the institution shall be designated as the Principal / Director / Dean.
(ii) Desirable: Higher qualification, like a Ph. D. degree in any discipline of occupational therapy recognized by the UGC and published work of high standard in peer reviewed or UGC listed journals.

### 4.6 QUALIFICATIONS, EXPERIENCE AND OTHER ELIGIBILITY REQUIREMENTS FOR APPOINTMENT OF PHYSIOTHERAPY TEACHERS

## I. ASSISTANT PROFESSOR:

Bachelor's Degree in Physiotherapy (B.P./T./B. Th./P./B.P.Th.),Master's Degree in Physiotherapy (M.\&P.Th/M.Th.P./M.Sc. P.T/M.P.T.) with at least $55 \%$ marks (or an equivalent grade in a point scale wherever the grading system is followed) from a recognized University.

## II. ASSOCIATE PROFESSOR:

i) Essential: A Master's Degree in Physiotherapy (M.P.T./M.P.Th./M.Th.P/M.Sc. P.T.) with eight years' experience as Assistant Professor.
ii) Desirable: Higher Qualification, such as Ph.D. degree in any discipline of Physiotherapy recognised by the U.G.C, and published work of high standard in peer-reviewed or UGC - listed journals.

## III. PROFESSOR:

Essential: Master's Degree in Physiotherapy (M.P.T. / M.P.Th./M.Th.P./M.Sc. P.T.), with ten years experience. Desirable:
(i) Higher Qualification like Ph. D. in any subject of Physiotherapy recognised by U.G.C, and
(ii) Published work of high standard in peer -reviewed or UGC- listed journals.

## IV. PRINCIPAL / DIRECTOR / DEAN:

Essential: Master's Degree in Physiotherapy (M.P.T./M.Th.P./M.Pth./M.Sc. P.T.) with fifteen years total experience, including five years experience as Professor (Physiotherapy).

Note:
(i) Senior-most Professor shall be designated as the Principal / Director / Dean.
(ii) Desirable: Higher qualification like Ph.D. in any subject of Physiotherapy recognized by the UGC and published work of high standard in peer reviewed or UGC listed journals.

### 4.7 MINIMUM QUALIFICATIONS FOR DIRECT RECRUITMENT TO THE POSTS OF UNIVESRITY ASSISTANT LIBRARIAN / COLLEGE LIBRARIAN, UNIVERSITY DEPUTY LIBRARIAN AND UNIVERSITY LIBRARIAN

## I. UNIVERSITY ASSISTANT LIBRARIAN / COLLEGE LIBRARIAN

i) A Master‘s Degree in Library Science, Information Science or Documentation Science or an equivalent professional degree, with at least $55 \%$ marks (or an equivalent grade in a point -scale, wherever the grading system is followed)
ii) A consistently good academic record, with knowledge of computerization of a library.
iii) Besides fulfilling the above qualifications, the candidate must have cleared the National Eligibility Test (NET) conducted by the UGC, CSIR or similar test accredited by the UGC like SLET/SET or who are or have been awarded a Ph.D. Degree in accordance with the University Grants Commission (Minimum Standards and Procedure for Award of M.Phil./Ph.D. Degree) Regulations, 2009 or 2016 and their amendments from time to time as the case may be:

Provided that the, candidates registered for the Ph.D. degree prior to July 11, 2009, shall be governed by the provisions of the then existing Ordinances / Bye-laws / Regulations of the Institution awarding the degree, and such Ph.D. candidates shall be exempted from the requirement of NET/SLET/SET for recruitment and appointment of Assistant Professor or equivalent positions in Universities/Colleges / Institutions subject to the fulfillment of the following conditions:-
a) The $\mathrm{Ph} . \mathrm{D}$. degree of the candidate has been awarded in the regular mode
b) The Ph.D. thesis has been evaluated by at least two external examiners;
c) Open Ph.D. viva voce of the candidate has been conducted;
d) The candidate has published two research papers from his/her Ph.D. work out of which at least one is in a refereed journal;
e) The candidate has presented at least two papers based on his/her Ph.D work in conferences/seminars sponsored /funded/supported by the UGC/ICSSR/CSIR or any similar agency.

Note:
(i) The fulfilment of these conditions is to be certified by the Registrar or the Dean (Academic Affairs) of the University concerned.
(ii) NET/SLET/SET shall also not be required for candidates in such Master's Programmes for which NET/SLET/SET is not conducted by the UGC, CSIR or similar test accredited by the UGC like SLET/SET.

## II. UNIVERSITY DEPUTY LIBRARIAN

i) A Master's Degree in library science/information science/documentation science, with at least 55\% marks or an equivalent grade in a point -scale, wherever grading system is followed.
ii) Eight years experience as an Assistant University Librarian/College Librarian.
iii) Evidence of innovative library services including integration of ICT in library.
iv) A Ph.D. Degree in library science/ Information science / Documentation Science/Archives and manuscript keeping/computerization of library.

## III.UNIVERSITY LIBRARIAN

i) A Master's Degree in Library Science/Information Science/Documentation Science with at least 55\% marks or an equivalent grade in a point -scale wherever the grading system is followed.
ii) At least ten years as a Librarian at any level in University Library or ten years of teaching as Assistant/Associate Professor in Library Science or ten years‘ experience as a College Librarian.
iii) Evidence of innovative library services, including the integration of ICT in a library.
iv) A Ph.D. Degree in library science/information science/documentation /archives and manuscript-keeping.

### 4.8 MINIMUM QUALIFICATIONS FOR THE POSTS OF ASSISTANT DIRECTORS OF PHYSICAL EDUCATION AND SPORTS, DEPUTY DIRECTOR OF PHYSICAL EDUCATION AND SPORTS AND DIRECTOR OF PHYSICAL EDUCATION AND SPORTS (DPES)

## I. University Assistant Director of Physical Education and Sports / College Director of Physical Education and Sports

Eligibility (A or B) :
A.
i) A Master‘s Degree in Physical Education and Sports or Physical Education or Sports Science with 55\% marks (or an equivalent grade in a point-scale, wherever the grading system is followed)
ii) Record of having represented the university / college at the inter-university /inter-collegiate competitions or the State and/ or national championships.
iii) Besides fulfilling the above qualifications, the candidate must have cleared the National Eligibility Test (NET), conducted by the UGC or CSIR, or a similar test accredited by the UGC, like SLET/SET, or who are or have been awarded a Ph.D. Degree in Physical Education or Physical Education and Sports or Sports Science, in accordance with the University Grants Commission (Minimum Standards and Procedure for Award of M.Phil./Ph.D. Degree) Regulations, 2009 or 2016 and their amendments from time to time, as the case may be:

Provided that, candidates registered for the Ph.D. degree prior to July 11, 2009, shall be governed by the provisions of the then existing Ordinances/ Bye-laws/Regulations of the Institutions awarding the degree and such Ph.D. degree holders shall be exempted from the requirement of NET/SLET/SET for recruitment and appointment of Assistant Professor or equivalent positions in Universities/Colleges / Institutions, subject to the fulfillment of the following conditions:-
a) The Ph.D. degree of the candidate has been awarded in regular mode;
b) The Ph.D. thesis has been evaluated by at least two external examiners;
c) Open Ph.D. viva voce of the candidate has been conducted;
d) The candidate has published two research papers from his/her Ph.D. work out of which at least one is in a refereed journal;
e) The candidate has presented at least two research papers in conference/seminar, based on his/her Ph.D work.

Note: The fulfilment of these conditions (a) to (e) is to be certified by the Registrar or the Dean (Academic Affairs) of the University concerned.
iv. NET/SLET/SET shall also not be required for such Masters Programmes in disciplines for which NET/SLET/SET is not conducted by the UGC, CSIR or similar test accredited by the UGC like SLET/SET.
v. Passed the physical fitness test conducted in accordance with these Regulations.

## OR

B. An Asian game or commonwealth games medal winner who has a degree at least at Post-Graduation level.

## II. University Deputy Director of Physical Education and Sports

## Eligibility (A or B) :

A.
i) A Ph.D. in Physical Education or Physical Education and Sports or Sports Science. Candidates from outside the university system, in addition, shall also possess at least $55 \%$ marks (or an equivalent grade in a point scale wherever grading system is followed) at the Master's Degree level by the university concerned.
ii) Eight years experience as University Assistant DPES/College DPES.
iii) Evidence of organizing competitions and conducting coaching camps of at least two weeks duration.
iv) Evidence of having produced good performance of teams/athletes for competitions like state/national/inter-university/combined university, etc.
v) Passed the physical fitness test in accordance with these Regulations.

## OR

B. An Olympic games/ world cup/ world Championship medal winner who has a degree at least at the Post-Graduation Level.

## III. University Director of Physical Education and Sports

i) A Ph.D. in Physical Education or Physical Education and Sports or Sports Science.
ii) Experience of at least ten years in Physical Education and Sports as University Assistant/Deputy DPES or ten years as College DPES or teaching for ten years in Physical Education and Sports or Sports Science as Assistant/Associate Professor.
iii) Evidence of organising competitions and coaching camps of at least two weeks' duration.
iv) Evidence of having produced good performance of teams/athletes for competitions like state/national/inter-university/combined university, etc.

## IV. Physical Fitness Test Norms

(a) Subject to the provisions of these Regulations, all candidates who are required to undertake the physical fitness test are required to produce a medical certificate certifying that he/she is medically fit before undertaking such tests.
(b) On the production of such certificate mentioned in sub-clause (a) above, the candidate would be required to undertake the physical fitness test in accordance with the following norms:

| NORMS FOR MEN |  |  |  |
| :--- | :--- | :--- | :--- |
| 12 MINUTES RUN/WALK TEST | Upto 45 Years | Upto 50 Years |  |
| Upto 30 Years | Upto 40 Years | 1200 metres | 800 metres |
| 1800 metres | 1500 metres |  |  |


| NORMS FOR WOMEN |  |  |  |
| :--- | :--- | :--- | :--- |
| 8 MINUTES RUN/WALK TEST | Upto 45 Years | Upto 50 Years |  |
| Upto 30 Years | Upto 40 Years | 600 metres | 400 metres |
| 1000 metres | 800 metres |  |  |

### 5.0 CONSTITUTION OF SELECTION COMMITTEES AND GUIDELINESS ON SELECTION PROCEDURE:

### 5.1 Selection Committee Composition

## I. Assistant Professor in the University:

(a) The Selection Committee for the post of Assistant Professor in the University shall consist of the following persons :
i) The Vice Chancellor or his/her nominee, who has at least ten years of experience as Professor, shall be the Chairperson of the Committee.
ii) An academician not below the rank of Professor to be nominated by the Visitor/Chancellor, wherever applicable.
iii) Three experts in the subject concerned nominated by the Vice Chancellor out of the panel of names approved by the relevant statutory body of the university concerned.
iv) Dean of the Faculty concerned, wherever applicable.
v) Head/Chairperson of the Department/School concerned.
vi) An academician representing SC/ST/OBC/Minority/Women/Differently-abled categories to be nominated by the Vice Chancellor, if any of the candidates from any of these categories is an applicant and if any of the above members of the selection committee does not belong to that category.
(b) Four members, including two outside subject experts, shall constitute the quorum.
II. Associate Professor in the University
(a) The Selection Committee for the post of Associate Professor in the University shall have the following composition:
i) The Vice Chancellor or his/her nominee, who has at least ten years of experience as Professor, shall be the Chairperson of the Committee.
ii) An academician not below the rank of Professor to be nominated by the Visitor/Chancellor, wherever applicable.
iii) Three experts in the subject/field concerned nominated by the Vice-Chancellor, out of the panel of names approved by the relevant statutory body of the university.
iv) Dean of the faculty, wherever applicable.
v) Head/Chairperson of the Department/School.
vi) An academician representing SC/ST/OBC/ Minority / Women / Differently-abled categories, if any of candidates belonging to any of these categories is the applicant, to be nominated by the Vice Chancellor, if any of the above members of the selection committee does not belong to that category.
(b) At least four members, including two outside subject experts, shall constitute the quorum
III. Professor in the University
(a) The Selection Committee for the post of Professor in the University shall consist of the following persons :
i) Vice-Chancellor who shall be the Chairperson of the Committee.
ii) An academician not below the rank of Professor to be nominated by the Visitor/Chancellor, wherever applicable.
iii) Three experts in the subject/field concerned to be nominated by the Vice- Chancellor out of the panel of names approved by the relevant statutory body of the university concerned.
iv) Dean of the faculty, wherever applicable.
v) Head/Chairperson of the Department/School.
vi) An academician belonging to the SC/ST/OBC/ Minority / Women / Differently-abled categories, if any of the candidates representing these categories is the applicant, to be nominated by the ViceChancellor, if any of the above members of the selection committee does not belong to that category.
(b) At least four members, including two outside subject experts, shall constitute the quorum.

## IV. Senior Professor

(a) The Selection Committee for the post of Senior Professor in the University shall consist of the following persons:
i) Vice Chancellor who shall be the Chairperson of the Committee.
ii) An academician not below the rank of Senior Professor/Professor with minimum ten years experience who is the nominee of the Visitor/Chancellor, wherever applicable.
iii) Three experts not below the rank of a Senior Professor/Professor with a minimum of ten years' experience in the subject/field concerned nominated by the Vice-Chancellor out of the panel of names approved by the relevant statutory body of the university.
iv) Dean (not below the rank of Senior Professor/Professor with minimum ten years experience) of the faculty, wherever applicable.
v) Head/Chairperson (not below the rank of Senior Professor/Professor with minimum ten years experience) or Senior-most Professor (not below the rank of Senior Professor/Professor, with a minimum of ten years' experience) of the Department/School.
vi) An academician (not below the rank of a Senior Professor/Professor with minimum ten years experience) representing SC/ST/OBC/ Minority / Women / Differently-abled categories, if any of candidates representing these categories is the applicant, to be nominated by the Vice Chancellor, if any of the above members of the selection committee do not belong to that category.
(b) Four members, including two outside subject experts, shall constitute the quorum.

## V. Assistant Professor in Colleges, including Private and Constituent Colleges:

(a) The Selection Committee for the post of Assistant Professor in Colleges, including Private and constituent Colleges shall consist of the following persons:
i) Chairperson of the Governing Body of the college or his/her nominee from amongst the members of the Governing body, who shall be the Chairperson of the Committee.
ii) The Principal of the College.
iii) Head of the Department/Teacher-incharge of the subject concerned in the College.
iv) Two nominees of the Vice-Chancellor of the affiliating university, of whom one should be a subject-expert. In case of colleges notified/declared as a minority educational institution, two nominees of the Chairperson of the college from out of a panel of five names, preferably from the minority community, recommended by the Vice-Chancellor of the affiliating university, from the list of experts suggested by the relevant statutory body of the college, of whom one should be a subject-expert.
v) Two subject-experts not connected with the college who shall be nominated by the Chairperson of the College governing body out of a panel of five names recommended by the Vice-Chancellor from the list of subject experts approved by the relevant statutory body of the university concerned. In case of colleges notified/declared as minority educational Institutions, two subject experts not connected with the University nominated by the Chairperson of the Governing Body of the College out of the panel of five names, preferably from the minority communities, recommended by the Vice-Chancellor from the list of subject experts approved by the relevant statutory body of the College.
vi) An academician representing SC/ST/OBC/Minority/Women/Differently-abled categories, if any of candidates belonging to any of these categories is the applicant, to be nominated by the Vice-Chancellor, if any of the above members of the selection committee does not belong to that category.
(b) Five members, including two outside subject experts, shall constitute the quorum.
VI. Associate Professor in Colleges, including Private and Constituent Colleges
(a) The Selection Committee for the post of Associate Professor in Colleges including Private and Constituent Colleges, shall consist of the following persons:
i) The Chairperson of the Governing Body or his/her nominee, from amongst the members of the Governing body, who shall be the Chairperson of the Selection Committee.
ii) The Principal of the College.
iii) The Head of the Department / Teacher-In charge of the concerned subject from the college.
iv) Two University representatives nominated by the Vice-Chancellor, one of whom shall be the Dean of College Development Council or equivalent position in the University, and the other must be expert in the concerned subject. In case of Colleges notified/declared as minority educational institutions, two nominees of the Chairperson of the College from out of a panel of five names, preferably from minority communities, recommended by the Vice-Chancellor of the affiliating university from the list of experts suggested by the relevant statutory body of the college of whom one should be a subject expert.
v) Two subject-experts not connected with the college to be nominated by the Chairperson of the governing body of the college out of a panel of five names recommended by the Vice Chancellor from the list of subject experts approved by the relevant statutory body of the university concerned. In case of colleges notified/declared as minority educational Institutions, two subject experts not connected with the University nominated by the Chairperson of the College Governing Body out of the panel of five names, preferably from minority communities, recommended by the Vice Chancellor from the list of subject experts approved by the relevant statutory body.
vi) An academician belonging to the SC/ST/OBC/ Minority/Women/Differently-abled categories, if any of candidates belonging to these categories is the applicant, to be nominated by the Vice-Chancellor, if any of the above members of the selection committee does not belong to that category.
(b) The quorum for the meeting shall be five, including two subject experts.

## VII. Professor in Colleges, including Private and Constituent Colleges

(a) The Selection Committee for the post of Professor in Colleges including Private and Constituent Colleges shall consist of the following persons:
i) The Chairperson of the Governing Body or his/her nominee, from amongst the members of the Governing body, who shall be the Chairperson of the Selection Committee.
ii) The Principal of the College.
iii) The Head of the Department / Teacher-In charge of the concerned subject from the college not below the rank of Professor.
iv) Two University representatives not below the rank of Professor nominated by the Vice-Chancellor, one of whom shall be the Dean of College Development Council or equivalent position in the University, and the other must be expert in the concerned subject. In case of Colleges notified/declared as minority
educational institutions, two nominees, not below the rank of Professor, of the Chairperson of the College from out of a panel of five names, preferably from minority communities, recommended by the Vice-Chancellor of the affiliating university from the list of experts suggested by the relevant statutory body of the college of whom one should be a subject expert.
v) Two subject-experts not connected with the college to be nominated by the Chairperson of the governing body of the college out of a panel of five names recommended by the Vice Chancellor from the list of subject experts approved by the relevant statutory body of the university concerned. In case of colleges notified/declared as minority educational Institutions, two subject experts not connected with the University nominated by the Chairperson of the College Governing Body out of the panel of five names, preferably from minority communities, recommended by the Vice Chancellor from the list of subject experts approved by the relevant statutory body.
vi) An academician not below the rank of Professor belonging to the SC/ST/OBC/ Minority/Women/Differently-abled categories, if any of candidates belonging to these categories is the applicant, to be nominated by the Vice-Chancellor, if any of the above members of the selection committee does not belong to that category.
(b) The quorum for the meeting shall be five, including two subject experts.

## VIII. College Principal and Professor

## A. Selection Committee

(a) The Selection Committee for the post of College Principal and Professor shall have the following composition:
i) Chairperson of the Governing Body to be the Chairperson.
ii) Two members of the Governing Body of the college to be nominated by the Chairperson of whom one shall be an expert in academic administration.
iii) Two nominees of the Vice-Chancellor who shall be Higher Education experts in the subject/field concerned out of which at least one shall be a person not connected in any manner with the affiliating University. In case of Colleges notified/declared as minority educational institutions, one nominee of the Chairperson of the College from out of a panel of five names, preferably from minority communities, recommended by the Vice-Chancellor of the affiliating university of whom one should be a subject expert.
iv) Three Higher Education experts consisting of the Principal of a College, a Professor and an accomplished educationist not below the rank of a Professor (to be nominated by the Governing Body of the college out of a panel of six experts approved by the relevant statutory body of the university concerned).
v) An academician representing SC/ST/OBC/Minority/Women/Differently-abled categories, if any of candidates representing these categories is the applicant, to be nominated by the Vice-Chancellor, if any of the above members of the selection committee does not belong to that category.
vi) Two subject-experts not connected with the college to be nominated by the Chairperson of the governing body of the college out of a panel of five names recommended by the Vice Chancellor from the list of subject experts approved by the relevant statutory body of the university concerned. In case of colleges notified/declared as minority educational institutioins, two subject experts not connected with the University nominated by the Chairperson of the College governing body out of the panel of five names, preferably from minority communities, recommended by the Vice Chancellor from the list of subject experts approved by the relevant statutory body.
(b) Five members, including two experts, shall constitute the quorum.
(c) All the selection procedures of the selection committee shall be completed on the day/last day of the selection committee meeting itself, wherein, minutes are recorded along with the scoring Proforma and recommendation made on the basis of merit with the list of selected and waitlisted candidates/Panel of names in order of merit, duly signed by all members of the selection committee.
(d) The term of appointment of the College Principal shall be five years, with eligibility for reappointment for one more term only after an assessment by a Committee appointed by the University as per the composition given in sub-clause (B) of 5.1 (VIII).
(e) After the completion of his/her term as Principal, the incumbent shall join back his/her parent organisation with the designation as Professor and in the grade of the Professor..

## B. Committee for Assessment of College Principal and Professor for Second Term

The Committee for assessment to the post of College Principal for second term shall have the following composition:
i) Nominee of the Vice-Chancellor of the affiliating University.
ii) Nominee of the Chairman, University Grants Commission.

The nominees shall be nominated from the Principals of the Colleges with Excellence/College with Potential of Excellence/Autonomous College/NAAC Grade 'A' accredited colleges.
IX. Selection Committees for the posts of Directors, Deputy Directors, Assistant Directors of Physical Education and Sports, Librarians, Deputy Librarians and Assistant Librarians shall be the same as that of Professor, Associate Professor and Assistant Professor, respectively, except that in Library and Physical Education and Sports or Sports Administration, respectively, practicing Librarian/Director Physical Education and Sports, as the case may be, shall be associated with the Selection Committee as one of the subject experts.
X. The "Screening-cum-Evaluation Committee" for CAS promotion of Assistant Professors/equivalent cadres in Librarians/Physical Education and Sports from one level to the other higher level shall consist of:
A. For University teachers:
i) The Vice-Chancellor or his/her nominee shall be the Chairperson of the Committee;
ii) The Dean of the Faculty concerned;
iii) The Head of the Department /Chairperson of the School; and
iv) One subject expert in the subject concerned nominated by the Vice-Chancellor from the University panel of experts.
B. For College teachers:
i) The Principal of the college;
ii) Head /Teacher-Incharge of the department concerned from the college;
iii) Two subject experts in the subject concerned nominated by the Vice-Chancellor from the university panel of experts;
C. For University Assistant Librarian:
i) The Vice-Chancellor shall be the Chairperson of the Committee;
ii) The Dean of the Faculty concerned;
iii) The Librarian, University Library; and
iv) One expert who is a working Librarian nominated by the Vice-Chancellor from the University panel of experts.

## D. For College Assistant Librarian:

i) The Principal shall be the Chairperson of the Committee;
ii) The Librarian, University Library; and
iii) Two experts who are working Librarians nominated by the Vice-Chancellor from the University panel of experts.

## E. For University Assistant Director, Physical Education and Sports:

i) The Vice-Chancellor shall be the Chairperson of the Committee;
ii) The Dean of the Faculty concerned;
iii) The University Director, Physical Education and Sports; and
iv) One expert in Physical Education and Sports Administration from University system nominated by the Vice-Chancellor from the University panel of experts.

## F. For College Director, Physical Education and Sports:

i) The Principal shall be the Chairperson of the Committee;
ii) The University Director, Physical Education and Sports; and
iii) Two experts in Physical Education and Sports Administration from University system nominated by the Vice-Chancellor from the University panel of experts.
Note: The quorum for these committees in all categories shall be three which will include one subject expert/ university nominee.
5.2. The Screening-cum-Evaluation Committee on verification/evaluation of grades secured by the candidate through the Assessment Criteria and Methodology Proforma designed by the respective university based on these Regulations and as per the minimum requirement specified:
(a) In Appendix II,Table 1 for each of the cadre of Assistant Professor;
(b) In Appendix II,Table 4 for each of the cadre of Librarian; and
(c) In Appendix II,Table 5 for each of the cadre of Physical Education and Sports
shall recommend to the Syndicate/ Executive Council /Board of Management of the University/College about the suitability for the promotion of the candidate(s) under CAS for implementation.
5.3 The selection process shall be completed on the day/last day of the selection committee meeting, wherein the minutes are recorded and recommendation made on the basis of the performance of the interview are duly signed by all members of the selection committee.
5.4 For all Selection Committees specified in these Regulations, Head of Department / Teacher-Incharge should be either in the same or higher rank/ position than the rank/position for which the interview is to be held.

### 6.0 SELECTION PROCEDURE:

I. The overall selection procedure shall incorporate transparent, objective and credible methodology of analysis of the merits and credentials of the applicants based on the weightage given to the performance of the candidate in different relevant parameters and his/her performance on a grading system proforma, based on Appendix II, Tables 1, 2, 3A, 3B, 4, and 5.

In order to make the system more credible, universities may assess the ability for teaching and / or research aptitude through a seminar or lecture in a classroom situation or discussion on the capacity to use the latest technology in teaching and research at the interview stage. These procedures can be followed for both the direct recruitment and the CAS promotions, wherever selection committees are prescribed in these Regulations.
II. The universities shall adopt these Regulations for selection committees and selection procedure through their respective statutory bodies incorporating Appendix II, Table 1, 2, 3A, 3B, 4, and 5 at the institutional level for University Departments and their Constituent colleges/ affiliated colleges (Government/Governmentaided/Autonomous/ Private Colleges) to be followed transparently in all the selection processes. The universities may devise their own self-assessment-cum-performance appraisal forms for teachers in strict adherence to the Appendix II,Table 1, 2, 3A, 3B, 4, and 5 specified in these Regulations.
III. In all the Selection Committees of direct recruitment of teachers and other academic staff in universities and colleges provided herein, an academician belonging to the Scheduled Caste/Scheduled Tribe/OBC/Minority/Women/Differently-abled categories, if any of candidates belonging to these categories is the applicant and if any of the members of the selection committee does not belong to that category, shall be nominated by the Vice-Chancellor of the University, and in case of a College, Vice-Chancellor of the University to which the college is affiliated to. The academician, so nominated for this purpose, shall be one level above the cadre level of the applicant, and such nominee shall ensure that the norms of the Central Government or concerned State Government, in relation to the categories mentioned above, are strictly followed during the selection process.
IV. The process of selection of a Professor shall involve the inviting of the application developed by the respective university, based on the Assessment Criteria and Methodology guidelines set out in these Regulations in Appendix II, Table 1 and 2 and reprints of all significant publications of the candidates.
Provided that the publications submitted by the candidate shall have been published during the qualifying period.
Provided further that such publications shall be made available to the subject experts for assessment before holding the interview. The evaluation of the publications by the experts shall be taken into consideration while finalizing the outcome of selection.
V. In the case of selection of faculty members who are from outside the academic field and are considered under Clause 4.1 (III.B), 4.2 (I.B, II.B, III.B), 4.3 (I.B, II.B, III.B) and 4.4 (III.B) of these Regulations, the university's statutory bodies must lay down clear and transparent criteria and procedure so that only outstanding professionals who can contribute substantially to the university knowledge system are selected.
VI. In the selection process for the posts involving different nature of responsibilities in certain disciplines/areas, such as Music and Fine Arts, Visual Arts and Performing Arts, Physical Education and Sports, and Library, greater emphasis may be laid on the nature of deliverables indicated against each of the posts in these Regulations which need to be taken up by the institution while developing the Proforma for both the direct recruitment and the CAS promotion.
VII. The Internal Quality Assurance Cell (IQAC) shall be established in all Universities/Colleges as per the UGC/ National Assessment Accreditation Council (NAAC) guidelines with the Vice-Chancellor, as Chairperson (in the case of Universities), and Principal, as Chairperson (in case of Colleges). The IQAC shall act as the documentation and record-keeping Cell for the institution, including assistance in the development of Assessment Criteria and Methodology Proforma based on these Regulations. The IQAC may also introduce, wherever feasible, the student feedback system as per the NAAC guidelines on institutional parameters without incorporating the component of the students' assessment of individual teachers in the Assessment Criteria and Methodology Proforma.
A. The Assessment of the performance of College and University teachers for the CAS promotion is based on the following criteria:

Teaching-Learning and Evaluation: The commitment to teaching based on observable indicators such as being regular to class, punctuality to class, remedial teaching and clarifying doubts within and outside the class hours, counselling and mentoring, additional teaching to support the college/university as and when the need arises, etc. Examination and evaluation activities like performing of examination supervision duties, question-papers setting for university/college examinations, participation in the evaluation of examination answer scripts, conducting examinations for internal assessment as per the schedule to be announced by the institution at the beginning of each Academic Session and returning and discussing the answers in the class.
ii. Personal Development Related to Teaching and Research Activities: Attending orientation/refresher/methodology courses, development of e-contents and MOOC‘s, organising seminar/ conference/ workshop / presentation of papers and chairing of sessions/guiding and carrying out research projects and publishing the research output in national and international journals etc.
iii. Administrative Support and Participation in Students' Co- curricular and Extra-curricular Activities.

## B. Assessment Process

The following three-step process is recommended for carrying out assessment for promotion under the CAS at all levels:
Step 1: The college/university teachers shall submit to college/university an annual self-appraisal report in the prescribed Proforma to be designed based on Tables 1 to 5 of Appendix II. The report should be submitted at the end of every academic year, within the stipulated time. The teacher will provide documentary evidence for the claims made in the annual self-appraisal report, which is to be verified by the HOD/Teacher- in-charge etc. The submission should be through the Head of the Department (HOD)/teacher-in-charge.
Step: 2: After completion of the required years of experience for promotion under CAS and fulfilment of other requirements indicated below, the teacher shall submit an application for promotion under CAS.
Step 3: A CAS Promotion shall be granted as mentioned in Clauses 6.4 of these Regulations.
6.1 Assessment Criteria and Methodology:
(a) Tables 1 to 3 of Appendix II are applicable to the selection of Assistant Professors/ Associate Professors/ Professors/Senior Professor in Universities and Colleges;
(b) Table 4 of Appendix II is applicable to Assistant Librarians/ College Librarians and Deputy Librarians for promotion under Career Advancement Scheme; and
(c) Table 5 of Appendix II is applicable to Assistant Directors/ College Director of Physical Education sports and Deputy Directors/Directors of Physical Education and Sports for promotions under Career Advancement Scheme
6.2 The constitution of the Selection Committees and Selection Procedure as well as the Assessment Criteria and Methodology for the above cadres, either through direct recruitment or through Career Advancement Scheme, shall be in accordance with these Regulations.
6.3 The criteria for promotions under Career Advancement Scheme laid down under these Regulations shall be effective from the date of notification of these Regulations. However, to avoid hardship to those faculty members who have already qualified or are likely to qualify shortly under the existing regulations, a choice may be given to them, for being considered for promotions under the existing Regulations. This option can be exercised only within three years from the date of notification of these Regulations.
I. A teacher who wishes to be considered for promotion under the CAS may submit in writing to the university/college, within three months in advance of the due date, that he/she fulfils all the requirements under the CAS and submit to the university/college the Assessment Criteria and Methodology Proforma as evolved by the university concerned supported by all credentials as per the Assessment Criteria and Methodology guidelines set out in these Regulations. In order to avoid any delay in holding the Selection Committee meetings for various positions under the CAS, the University/College may initiate the process of screening/selection, and complete the process within six months from the receipt of application. Further, in order to avoid any hardship, the candidates who fulfil all other criteria mentioned in these Regulations, as on and till the date on which these regulations are notified, can be considered for promotion from the date, on or after the date, on which they fulfil these eligibility conditions.
II. The Selection Committee specifications as contained in Clauses 5.1 to 5.4 shall be applicable to all direct recruitments of faculty positions and equivalent cadres and Career Advancement promotions from Assistant Professor to Associate Professor, from Associate Professor to Professor, Professor to Senior Professor (in University) and for equivalent cadres.
III. The CAS promotion from a lower stage to a higher stage of Assistant Professor shall be conducted through a "Screening-cum-Evaluation Committee", following the criteria laid down in Table1 of Appendix II.
IV. The promotion under the CAS being a personal promotion to a teacher holding a substantive sanctioned post, on his/her superannuation, the said post shall revert back to its original cadre.
V. For the promotion under the CAS, the applicant teacher must be on the role and in active service of the University/College on the date of consideration by the Selection Committee.
VI. The candidate shall offer himself/herself for assessment for promotion, if he/she fulfils the minimum grading specified in the relevant Assessment Criteria and Methodology Tables, by submitting an application and the required Assessment Criteria and Methodology Proforma. He/she can do so three months before the due date. The university shall send a general circular twice a year, inviting applications for the CAS promotions from the eligible candidates.
i) If a candidate applies for promotion on completion of the minimum eligibility period and is successful, the date of promotion shall be from that of minimum period of eligibility.
ii) If, however, the candidate finds that he/she would fulfils the CAS promotion criteria, as defined in Tables 1, 2,4 , and 5 of Appendix II at a later date and applies on that date and is successful, his/her promotion shall be effected from that date of the candidate fulfilling the eligibility criteria.
iii) The candidate who does not succeed in the first assessment, he/she shall have to be re-assessed only after one year. When such a candidate succeeds in the eventual assessment, his/her promotion shall be deemed to be one year from the date of rejection.
VII. Regarding the cases pending for promotions from one Academic Level/Grade Pay to another Academic Level/Grade Pay under the Career Advancement Scheme provided under the UGC Regulations on Minimum Qualifications for Appointment of Teachers and other Academic Staff in Universities and Colleges and Measures for the Maintenance of Standards in Higher Education 2010 and its subsequent amendments, the teachers shall be given the option to be considered for the promotion from one Academic Level/Grade Pay to another Academic Level/Grade Pay as per the following:
(a) The teachers shall be considered for promotion from one Academic Level/Grade Pay to another as per the CAS under these Regulations.

## OR

(b) The faculty members shall be considered for the promotion from one Academic Level/Grade Pay to another as per the CAS provided under the UGC Regulations on Minimum Qualifications for Appointment of Teachers and other Academic Staff in Universities and Colleges and Measures for the Maintenance of Standards in Higher Education 2010 and its amendments with relaxation in the requirements of Academic Performance Indicators (API) based Performance Based Appraisal System (PBAS) upto the date of notification of these Regulations.
The relaxation in the requirements of Academic Performance Indicators (API) based Performance Based Appraisal System (PBAS) upto the date of notification of these Regulations for the promotion from one Academic Level/Grade Pay to another under CAS as provided in UGC Regulations on Minimum Qualifications for Appointment of Teachers and other Academic Staff in Universities and Colleges and Measures for the Maintenance of Standards in Higher Education 2010 and its amendments, is defined as under :
i. Exemption from scoring under Category I, as defined in Appendix III of said above mentioned UGC Regulations on Minimum Qualifications for Appointment of Teachers and other Academic Staff in Universities and Colleges and Measures for the Maintenance of Standards in Higher Education 2010 and its amendments including University Grants Commission (Minimum Qualifications for Appointment of Teachers and other Academic Staff in Universities and Colleges and Measures for the Maintenance of Standards in Higher Education) (4 ${ }^{\text {th }}$ Amendment), Regulations, 2016, for faculty and other equivalent cadre positions.
ii. Scoring in Category II and Category III for faculty and other equivalent cadre positions shall be as provided for in the UGC Regulations on Minimum Qualifications for Appointment of Teachers and other Academic Staff in Universities and Colleges and Measures for the Maintenance of Standards in Higher Education 2010 with the following combined minimum API score requirement for Category II and Category III taken together, as mentioned below.
Note: There shall be no minimum API score requirement for Category II and Category III individually.
TABLE-A
(Minimum API requirement for the promotion of teachers under CAS in university departments)

| S.No. |  | Assistant Professor <br> (Stage 1/ AGP <br> Rs.6000/- to Stage <br> 2/AGP Rs.7000/-) |  | Assistant Professor <br> (Stage 3/ AGP <br> Rs.8000/) <br> Associate <br> Professor (Stage <br> 4/AGP Rs.9000/-) | Associate Professor <br> (Stage 4/ <br> Rs.9000/- AGP <br> Professor (Stage <br> 5/AGP Rs.10000/-)  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Research and Academic contribution (Category III) | 40/assessment period | 100/assessment period | 90/assessment period | 120/assessment period |
| 2 | Expert assessment system | Screening Committee | Screening Committee | Selection Committee | Selection Committee |

## Table-B

(Minimum API requirement for the promotion of teachers under CAS in colleges (UG \& PG)

| S.No. |  | Assistant Professor (Stage 1// AGP Rs.6000/- to Stage 2/AGP Rs.7000/-) | Assistant Professor (Stage 2/ AGP Rs.7000/- to Stage 3/AGP Rs.8000/-) | Assistant <br> Professor (Stage 3/ AGP Rs.8000/-) to Associate <br> Professor (Stage 4/AGP Rs.9000/-) | Associate Professor  <br> (Stage 4/ AGP <br> Rs.9000/- to Professor  <br> (Stage 5/AGP  <br> Rs.10000/-)   <br>    |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Research and Academic contribution (Category III) | 20/assessment period | 50/assessment period | 45/assessment period | 60/assessment period |
| 2 | Expert assessment system | Screening Committee | Screening Committee | Selection Committee | Selection Committee |

Table-C
(Minimum API requirement for the promotion of Library staff under CAS in Universities)

| S.N |  | Assistant <br> Librarian (Stage <br> 1/ AGP Rs.6000/- <br> to Stage 2/AGP <br> Rs.7000/-) | Assistant Librarian <br> (Stage 2/ <br> Rs.7000/- AGP <br> Rtage  <br> 3/AGP Rs. So00/-) | Assistant Librarian <br> (Selection <br> Grade/Deputy <br> Librarian) (Stage 3/ <br> AGP Rs.8000/-) to <br> Deputy Librarian <br> (Stage 4/AGP <br> Rs.9000/-) | Deputy Librarian (Stage 4/AGP Rs. 9000/-) to Deputy Librarian (Stage 5 AGP Rs10,000/-) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Research and <br> Academic contribution (Category III) | 40/assessment period | 100/assessment period | 90/assessment period | 120 per assessment period |
| 2 | Expert assessment system | Screening Committee | Screening Committee | Selection Committee | Selection committee |

Table-D
(Minimum API requirement for the promotion of Library staff under CAS in Colleges)

| S.No. |  | Assistant <br> Librarian (Stage 1/ <br> AGP Rs.6000/- to <br> Stage 2/AGP <br> Rs.7000/-) | Assistant <br> Librarian (Stage 2/ <br> AGP Rs.7000/- to <br> Stage 3/AGP <br> Rs.8000/-) <br> Sal | Assistant Librarian (Selection Grade/Deputy Librarian) (Stage 3/ AGP Rs.8000/-) to Deputy Librarian (Stage 4/AGP Rs.9000/-) |
| :---: | :---: | :---: | :---: | :---: |
| 1 | Research and Academic contribution (Category III) | 20/assessment period | 50/assessment period | 45/assessment period |
| 2 | Expert assessment system | Screening Committee | Screening Committee | Selection Committee |

Table-E
(Minimum API requirement for the promotion of University Director/Deputy Director/Assistant Director, Physical Education and Sports)

| S.No. |  | Assistant Director (Stage 1/ AGP Rs.6000/- to Stage 2/AGP Rs.7000/-) | Assistant Director  <br> (Stage 2/ AGP <br> Rs.7000/-) to Assistant <br> Director (Selection  <br> Grade)/Deputy   <br> (Sirector (Stage 3/AGP  <br> Rs.8000/-)   <br>    | Assistant Director  <br> (Selection   <br> Grade)/Deputy   <br> Director (Stage 3/ <br> AGP Rs.8000/-) to <br> Deputy Director  <br> (Stage 4/AGP  <br> Rs.9000/-)   <br>    | Deputy Director (Stage 4/AGP Rs. 9000/-) to Deputy Director (Stage 5 AGP Rs10,000/-) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Research and Academic contribution (Category III) | 40/assessment period | 100/assessment period | 90/assessment period | 120 per assessment period |
| 2 | $\begin{aligned} & \text { Expert assessment } \\ & \text { system } \end{aligned}$ | Screening Committee | Screening Committee | Selection Committee | Selection committee |

Table-F
(Minimum API requirement for the promotion of College Director, Physical Education and Sports)

| S.No. |  | Assistant  <br> Director (Stage <br> 1/ AGP <br> Rs.6000/- to <br> Stage 2/AGP <br> Rs.7000/-)  | Assistant <br> Director (Stage 2/ AGP Rs.7000/) to Assistant Director (Selection Grade)/Deputy Director (Stage 3/AGP Rs.8000/-) | Assistant Director (Selection Grade)/Deputy Director (Stage 3/ AGP Rs.8000/-) to Deputy Director (Stage 4/AGP Rs.9000/) |
| :---: | :---: | :---: | :---: | :---: |
| 1 | Research and Academic contribution (Category III) | 20/assessment period | 50/assessment period | 45/assessment period |
| 2 | Expert assessment system | Screening Committee | Screening Committee | Selection Committee |

VIII. The requirement for Orientation course and Refresher course for promotions due under the CAS shall not be mandatory upto $31^{\text {st }}$ December, 2018.
6.4 STAGES OF PROMOTION UNDER THE CAREER ADVANCEMENT SCHEME OF INCUMBENT AND NEWLY-APPOINTED ASSISTANT PROFESSORS/ASSOCIATE PROFESSORS/PROFESSORS
A. The entry-level Assistant Professors (Level 10) shall be eligible for promotion under the Career Advancement Scheme (CAS) through two successive levels (Level 11 and Level 12), provided they are assessed to fulfill the eligibility and performance criteria as laid down in Clause 6.3. of these Regulations.

## B. Career Advancement Scheme (CAS) for Colleges teachers

## I. Assistant Professor (Academic Level 10) to Assistant Professor (Senior Scale/Academic Level 11)

Eligibility: Assistant Professors who have completed four years of service and having a Ph.D. degree or five years of service and having a M.Phil. / PG Degree in Professional Courses, such as LLM, M.Tech.,M.V.Sc., M.D., or six years of service for those without Ph.D./M.Phil./ PG Degree in Professional courses.
i. Attended one Orientation course of 21 days' duration on teaching methodology; and
ii. Any one of the following: Completed one Refresher / Research Methodology Course

OR

Any two of the following: Workshop, Syllabus Up-gradation Workshop, Training Teaching-LearningEvaluation, Technology Programmes and Faculty Development Programmes of at least one week (5 days) duration,

## OR

Completed one MOOCs course (with e-certification) or development of e-contents in four-quadrants / MOOC's course during the assessment period.

## CAS Promotion Criteria:

A teacher shall be promoted if;
i. He/she gets 'satisfactory' or 'good' grade in the annual performance assessment reports of at least three/four/five of the last four/five/six years of the assessment period as the case may be, as specified in Appendix II, Table 1, and;
ii. The promotion is recommended by the screening-cum-evaluation committee.
II. Assistant Professor (Senior Scale/Academic Level 11) to Assistant Professor (Selection Grade/Academic Level 12)

## Eligibility:

1) Assistant Professors who have completed five years of service in Academic Level 11/Senior Scale.
2) Any two of the following in the last five years of Academic Level-11/ Senior Scale: Completed courses/programmes from among the categories of Refresher Courses/Research Methodology course/Workshops/Syllabus Up Gradation Workshop/ Teaching-Learning-Evaluation/ Technology Programmes/ Faculty Development Programme/ Syllabus Up-gradation Workshop/ Teaching-LearningEvaluation/ Technology Programmes/ Faculty Development Programmes of at least two weeks (ten days) duration (or completed two courses of at least one week (five days) duration in lieu of every single course/programme of at least two weeks (ten days) duration); or completed MOOCs course in the relevant subject (with e-certification); or Contribution towards development of e-content in 4-quadrant (at least one quadrant) minimum of 10 modules of a course/contribution towards development of at least 10 modules of MOOCs course/ contribution towards conducting of a MOOCs course during the period of assessment.

## CAS Promotion Criteria:

A teacher shall be promoted if;
i) The teacher gets 'satisfactory' or 'good' grade in the annual performance assessment reports of at least four of the last five years of the assessment period, (as prescribed in Appendix II,Table 1) and
ii) The promotion is recommended by the Screening-cum-evaluation committee.

## III. Assistant Professor (Selection Grade/Academic Level 12) to Associate Professor (Academic Level 13A) Eligibility:

1) Assistant Professor who has completed three years of service in Academic Level 12/Selection-Grade.
2) A Ph.D. degree in subject relevant /allied/relevant discipline.
3) Any one of the following during the last three years: completed one course / programme from amongst the categories of Refresher Courses/ Methodology Workshop/Syllabus Up-gradation Workshop/ Teaching-Learning-Evaluation Technology Programme/ Faculty Development Programme of at least two weeks (ten days) duration (or completed two courses of at least one week (five days) duration in lieu of every single course/programme of at least two weeks (ten days) duration); or completed one MOOCs course (with ecertification); or contribution towards development of e-contents in 4-quadrant(at least one quadrant) minimum of 10 modules of a course/contribution towards development of at least 10 modules of MOOCs course/ contribution towards conduct of a MOOCs course during the period of assessment.

## CAS Promotion Criteria:

A teacher may be promoted if;
i) $\quad \mathrm{He} /$ she gets a 'satisfactory' or 'good' grade in the annual performance assessment reports of at least two of the last three years of the assessment period as prescribed in Appendix II,Table 1, and
ii) The promotion to the post of Associate Professor is recommended by the selection committee in accordance with these Regulations.

## IV. Associate Professor (Academic Level 13A) to Professor (Academic Level 14)

## Eligibility:

1. Associate Professors who have completed three years of service in Academic Level 13A.
2. A Ph.D. degree in subject relevant/allied/relevant discipline.
3. A minimum of 10 research publications in peer-reviewed or UGC-listed journals out of which three research papers shall be published during the assessment period.
4. A minimum of 110 Research Score as per Appendix II,Table 2

## CAS Promotion Criteria:

A teacher shall be promoted if;
i) The teacher gets 'satisfactory' or 'good' grade in the annual performance assessment reports of at least two of the last three years of the assessment period, as per Appendix II, Table 1 and at least 110 research score as per Appendix II, Table 2.
ii) The promotion to the post of Professor is recommended by selection committee constituted in accordance with these Regulations.

## C. Career Advancement Scheme (CAS) for University teachers

## I. Assistant Professor (Academic Level 10) to Assistant Professor (Senior Scale/Academic Level 11)

## Eligibility:

i) An Assistant Professor who has completed four years of service with a Ph.D. degree or five years of service with a M.Phil. / PG Degree in Professional Courses, such as LLM, M.Tech, M.V.Sc.and M.D., or six years of service in case of those without a Ph.D./M.Phil./ PG Degree in a Professional course and satisfies the following conditions:
ii) Attended one Orientation course of 21 days duration on teaching methodology;
iii) Any one of the following: Completed Refresher/ Research Methodology Course/ Workshop/ Syllabus Up-gradation Workshop/ Training Teaching-Learning-Evaluation, Technology Programmes/ Faculty Development Programmes of at least one week ( 5 days) duration, or taken one MOOCs course (with ecertification) or development of e-contents in four-quadrants / MOOC's course during the assessment period; and
iv) Published one research publication in the peer-reviewed journals or UGC-listed journals during assessment period.

## CAS Promotion Criteria :

## A teacher shall be promoted if;

i) He/she gets a 'satisfactory' or 'good' grade in the annual performance assessment reports of at least three/four/five of the last four/five/six years of the assessment period as the case may be (as provided in Appendix II,Table 1), and;
ii) The promotion is recommended by the screening-cum evaluation committee.
II. Assistant Professor (Senior Scale/Academic Level 11) to Assistant Professor (Selection Grade/Academic Level 12)

Eligibility:
i) Assistant Professors who has completed five years of service in Academic Level 11/Senior Scale.
ii) A Ph.D. Degree in the subject relevant/allied/relevant discipline.
iii) Has done any two of the following in the last five years of Academic Level 11/Senior Scale: Completed a course / programme from amongst the categories of Refresher Courses/Research Methodology/ Workshops/ Syllabus Up-gradation Workshop/ Teaching-Learning-Evaluation/ Technology Programmes / Faculty Development Programme of at least two weeks (ten days) duration (or completed two courses of at least one week (five days) duration in lieu of every single course/programme of at least two weeks (ten
days) duration), or, completed one MOOCs course in the relevant subject (with e-certification); or contribution towards the development of e-content in 4-quadrant (at least one quadrant) minimum of 10 modules of a course/contribution towards the development of at least 10 modules of MOOCs course/ contribution towards conduct of a MOOCs course during the period of assessment.
iv) Published three research papers in the peer-reviewed journals or UGC-listed journals during assessment period.

## CAS Promotion Criteria:

A teacher shall be promoted if;
i) The teacher gets a 'satisfactory' or 'good' grade in the annual performance assessment reports of at least four of the last five years of the assessment period, (as prescribed in Appendix II, Table 1) and;
ii) The promotion is recommended by the Screening-cum-evaluation committee.

## III. Assistant Professor (Selection Grade/Academic Level 12) to Associate Professor (Academic Level 13A)

1) Assistant Professor who has completed three years of service in Academic Level 12/ Selection grade.
2) A Ph.D Degree in the subject concerned/allied/relevant discipline.
3) Any one of the following during last three years: completed one course / programme from amongst the categories of Refresher Courses/ Research Methodology Workshops/Syllabus Up-gradation Workshop/ Teaching-Learning-Evaluation Technology Programme/ Faculty Development Programme of at least two weeks (ten days) duration (or completed two courses of at least one week (five days) duration in lieu of every single course/programme of at least two weeks (ten days) duration); or completed one MOOCs course (with ecertification); or contribution towards the development of e-content in 4-quadrant (at least one quadrant) minimum of 10 modules of a course/contribution towards development of at least 10 modules of MOOCs course/ contribution towards conduct of a MOOCs course during the period of assessment.
4) A minimum of seven publications in the peer-reviewed or UGC-listed journals out of which three research papers should have been published during the assessment period.
5) Evidence of having guided at least one Ph.D. candidate.

## CAS Promotion Criteria:

A teacher shall be promoted if;
i) $\quad \mathrm{He} /$ she gets a 'satisfactory' or 'good' grade in the annual performance assessment reports of at least two of the last three years of the assessment period as specified in Appendix II,Table 1, and has a research score of at least 70 as per Appendix II,Table 2.
ii) The promotion is recommended by a selection committee constituted in accordance with these Regulations.

## IV. Associate Professor (Academic Level 13A) to Professor (Academic Level 14)

Eligibility:

1) An Associate Professor who has completed three years of service in Academic Level 13 A .
2) A Ph.D degree in the subject concerned/allied/relevant discipline.
3) A minimum of ten research publications in the peer- reviewed or UGC-listed journals out of which three research papers should have been published during the assessment period.
4) Evidence of having successfully guided doctoral candidate.
5) A minimum of 110 Research Score as per Appendix II, Table 2.

## CAS Promotion Criteria:

A teacher shall be promoted if;
i) He/she gets 'satisfactory' or 'good' grade in the annual performance assessment reports of at least two of the last three years of the assessment period, as per Appendix II,Table 1, and at least 110 research score, as per Appendix II,Table 2.
ii) The promotion is recommended by a selection committee constituted in accordance with these Regulations.

## V. Professor (Academic Level 14) to Senior Professor (Academic Level 15)

A Professor can be promoted to the post of Senior Professor under the CAS. The promotion shall be based on academic achievement, favourable review from three eminent subject -experts who are not of the rank lower than the rank of a Senior Professor or a Professor having at least ten years' of experience. The selection shall be based on 10 best publications during the last 10 years and interaction with a Selection Committee constituted in accordance with these Regulations.

## Eligibility:

i) Ten years' experience as a Professor.
ii) A minimum of ten publications in the peer-reviewed or UGC-listed journals and Ph.D. degree has been successfully awarded to two candidates under his/her supervision during the assessment period.

## D. Career Advancement Scheme (CAS) for Librarians

## Note:

i) The following provisions apply only to those persons who are not involved in the teaching of Library Science. Teachers in institutions where Library Science is a teaching department shall be covered by the provisions given under sections 6.4 (B) and 6.4 (C), of these Regulations for Colleges/Institutions and for Universities, respectively.
ii) The Deputy Librarian in Universities shall have two levels i.e. Academic Level 13A and Academic Level 14 while College Librarians shall have five levels i.e. Academic Level 10, Academic Level 11, Academic Level 12, Academic Level 13A and Academic Level 14.
I. From University Assistant Librarian (Academic level 10)/College Librarian (Academic level 10) to University Assistant Librarian (Senior Scale/Academic level 11)/ College Librarian (Senior Scale/Academic level 11):

## Eligibility:

An Assistant Librarian/ College Librarian who is in Academic Level 10 and has completed four years of service having a Ph.D. degree in Library Science/ Information Science/ Documentation Science or an equivalent degree or five years' of experience, having at least a M.Phil.degree, or six years of service for those without a M.Phil or a Ph.D. degree.
(i) $\mathrm{He} /$ she has attended at least one Orientation course of 21 days' duration; and
(ii) Training, Seminar or Workshop on automation and digitalisation, maintenance and related activities, of at least 5 days, as per Appendix II, Table 4.

## CAS Promotion Criteria:

An Assistant Librarian/College Librarian may be promoted if:
i) He/she gets a 'satisfactory' or 'good' grade in the annual performance assessment reports of at least three/four/five out of the last four/five/six years of the assessment period as the case may be as specified in Appendix II, Table 4, and
ii) The promotion is recommended by a screening-cum-evaluation committee.
II. From University Assistant Librarian (Senior Scale/Academic level 11)/College Librarian (Senior Scale/Academic level 11) to University Assistant Librarian (Selection Grade/ Academic level 12/ College Librarian (Selection Grade/Academic level 12)

## Eligibility:

1) $\mathrm{He} /$ she has completed five years of service in that grade.
2) $\mathrm{He} /$ she has done any two of the following in the last five years: (i)Training/Seminar/Workshop/Course on automation and digitalisation, (ii)Maintenance and other activities as per Appendix II,Table 4 of at least two weeks (ten days) duration (or completed two courses of at least one week (five days) duration in lieu of every single course/programme of at least two weeks (ten days) duration), (iii) Taken/developed one MOOCs course in the relevant subject (with e-certification), or (iv) Library up-gradation course.

## CAS Promotion Criteria:

An individual shall be promoted if:
i) He/she gets a 'satisfactory' or 'good' grade in the annual performance assessment reports of at least four out of the last five years of the assessment period, as specified in Appendix II,Table 4, and;
ii) The promotion is recommended by a screening-cum-evaluation committee.
III. From University Assistant Librarian (Selection Grade/Academic level 12)/ College Librarian (Selection Grade/Academic level 12) to University Deputy Librarian (Academic Level 13A)/College Librarian (Academic Level 13A)

1) $\mathrm{He} /$ she has completed three years of service in that grade.
2) $\mathrm{He} /$ she has done any one of the following in the last three years: (i)Training/Seminar/Workshop/Course on automation and digitalization, (ii)Maintenance and related activities as per Appendix II,Table 4 of at least two weeks' (ten days) duration, (iii) Completed two courses of at least one week (five days) duration in lieu of every single course/programme of at least two weeks (ten days) duration), (iv) Taken/developed one MOOCs course in the relevant subject (with e-certification), and (v) Library up-gradation course.

## CAS Promotion Criteria:

An individual shall be promoted if:
i) He/she gets a 'satisfactory' or 'good' grade in the annual performance assessment reports of at least two out of the last three years of the assessment period, as specified in Appendix II,Table 4; and
ii) The promotion is recommended by a Selection Committee constituted as per these Regulations on the basis of the interview performance.
IV. The criteria for CAS Promotions from University Deputy Librarian/College Librarians (Academic Level 13A) to University Deputy Librarian/College Librarians (Academic Level 14) shall be the following:

1) $\mathrm{He} /$ she has completed three years of service in that grade.
2) $\mathrm{He} /$ she has done any one of the following in the last three years: (i)Training/Seminar/Workshop/Course on automation and digitalization, (ii)Maintenance and related activities as per Appendix II,Table 4 of at least two weeks' (ten days) duration, (iii) Completed two courses of at least one week (five days) duration in lieu of every single course/programme of at least two weeks (ten days) duration), (iv) Taken/developed one MOOCs course in the relevant subject (with e-certification), and (v) Library up-gradation course.
3) Evidence of innovative library services, including the integration of ICT in a library.
4) A Ph.D. Degree in Library Science/Information Science/Documentation /archives and ManuscriptKeeping

## CAS Promotion Criteria:

An individual shall be promoted if:
i) He/she gets a 'satisfactory' or 'good' grade in the annual performance assessment reports of at least two out of the last three years of the assessment period, as specified in Appendix II,Table 4; and
ii) The promotion is recommended by a Selection Committee constituted as per these Regulations on the basis of the interview performance.

## E. Career Advancement Scheme (CAS) for Directors of Physical Education and Sports

Note:
i) The following provisions apply only to those personnel who are not involved in teaching physical education and sports. Teachers in institutions where Physical Education and Sports is a teaching department shall be covered by the provisions given under sections 6.4 (B) and 6.4 (C), of these Regulations for Colleges/Institutions and for Universities, respectively.
ii) The Deputy Director Physical Education and Sports in Universities shall have two levels i.e. Academic Level 13A and Academic Level 14 while College Director Physical Education and Sports shall have five levels i.e. Academic Level 10, Academic Level 11, Academic Level 12, Academic Level 13A and Academic Level 14.
I. From Assistant Director of Physical Education and Sports (Academic Level 10)/College Director of Physical Education and Sports (Academic Level 10) to Assistant Director of Physical Education and Sports (Senior Scale/Academic Level 11) / College Director of Physical Education and Sports (Senior Scale/Academic Level 11)

## Eligibility:

i) $\quad \mathrm{He} /$ she has completed four years of service with a Ph.D. degree in Physical Education or Physical Education \& Sports or Sports Science or five years of service with an M.Phil. degree or six years of service for those without an M.Phil or Ph.D. degree.
ii) $\mathrm{He} /$ she has attended one Orientation course of 21 days' duration; and
iii) $\quad \mathrm{He} /$ she has done any one of the following: (a)Completed Refresher / Research Methodology Course/ workshop, (b)Training Teaching-Learning-Evaluation Technology Programme/ Faculty Development Programme of at least 5 days duration and (c) Taken/developed one MOOCs course (with e-certification).

## CAS Promotion Criteria:

An individual may be promoted if:
i) He/she gets a 'satisfactory' or 'good' grade in the annual performance assessment reports of at least three/four/five of the last four/five/six years of the assessment period as the case may be, as specified in Appendix II, Table 5; and
ii) The promotion is recommended by a screening-cum-evaluation committee.
II. From Assistant Director of Physical Education and Sports (Senior Scale/Academic Level 11)/ College Director of Physical Education And Sports (Senior Scale/Academic Level 11) to University Assistant Director of Physical Education and Sports (Selection Grade/Academic Level 12) / College Director of Physical Education and Sports (Selection Grade/Academic Level 12)

1) $\mathrm{He} /$ she has completed five years of service in that grade.
2) $\mathrm{He} /$ she has done any two of the following in the last five years: (i)Completed one course / programme from among the categories of refresher courses, research methodology workshops, (ii)Teaching-Learning-Evaluation Technology Programmes / Faculty Development Programmes of at least two weeks (ten days) duration, (iii)Completed two courses of at least one week(five days) duration in lieu of every single course/programme of at least two weeks (ten days) duration), and (iv) Taken/developed one MOOCs course in the relevant subject (with e-certification).

## CAS Promotion Criteria:

An individual may be promoted if;
i) He/she gets a 'satisfactory' or 'good' grade in the annual performance assessment reports of at least four out of the last five years' of the assessment period as specified in Appendix II,Table 5, and;
ii) The promotion is recommended by a screening-cum-evaluation committee .
III. From University Assistant Director of Physical Education and Sports (Selection Grade/Academic Level 12)/ College Director of Physical Education and Sports (Selection Grade/Academic Level 12) to University Deputy Director of Physical Education and Sports (Academic Level 13 A)/ College Director of Physical Education and Sports (Academic Level 13A)

1) $\mathrm{He} /$ she has completed three years of service.
2) $\mathrm{He} /$ she has done any one of the following during last three years: (i)Completed one course / programme from among the categories of Refresher Courses, Research Methodology Workshop, (ii)Teaching-LearningEvaluation Technology Programmes / Faculty Development Programmes of at least two weeks (ten days) duration (or completed two courses of at least one week (five days) duration in lieu of every single course/programme of at least two weeks (ten days) duration), (iii) Taken / developed one MOOCs course in relevant subject (with e-certification).

## CAS Promotion Criteria:

An individual may be promoted if;
i) He/she gets a 'satisfactory' or 'good" grade performance assessment reports of at least two out of the last three years of the assessment period as specified in Appendix II,Table 5, and;
ii) The promotion is recommended by a selection committee constituted as per these Regulations on the basis of the interview performance.
IV. The criteria for CAS Promotions from University Deputy Director Physical Education and Sports/College Director Physical Education and Sports (Academic Level 13A) to University Deputy Director Physical Education and Sports/College Director Physical Education and Sports (Academic Level 14) shall be the following:

1) $\mathrm{He} /$ she has completed three years of service.
2) $\mathrm{He} /$ she has done any one of the following during last three years: (i)Completed one course / programme from among the categories of Refresher Courses, Research Methodology Workshop, (ii)Teaching-Learning-Evaluation Technology Programmes / Faculty Development Programmes of at least two weeks (ten days) duration (or completed two courses of at least one week (five days) duration in lieu of every single course/programme of at least two weeks (ten days) duration), (iii) Taken / developed one MOOCs course in relevant subject (with e-certification).
3) Evidence of organising competitions and coaching camps of at least two weeks‘duration.
4) Evidence of having produced good performance of teams/athletes for competitions like state/national/interuniversity/combined university, etc.
5) A Ph.D. in Physical Education or Physical Education and Sports or Sports Science.

## CAS Promotion Criteria:

An individual may be promoted if;
i) He/she gets a 'satisfactory' or 'good' grade performance assessment reports of at least two out of the last three years of the assessment period as specified in Appendix II,Table 5, and;
ii) The promotion is recommended by a selection committee constituted as per these Regulations on the basis of the interview performance.
6.5. Discretionary award of advance increments for those who enter the profession as Associate Professor or Professor with higher merit, high number of research publications of high quality and experience at the appropriate level, shall be within the competence of the appropriate authority of the University concerned or recruiting institution based on the recommendations of a selection committee while considering the case of individual candidates in the context of the merits of each case, taking into account the pay structure of other teachers in the faculty and other merit- specific factors. Discretionary award of advance increments is not applicable to those entering the profession as Assistant Professor/Assistant Librarian/Assistant Director of Physical Education and Sports and to those who are entitled for grant of advance increments for having acquired a Ph. D., M. Phil. or M.Tech. and LLM degree. However, those entering the service as Assistant Professor/Assistant Librarian/Assistant Director of Physical Education and Sports, having a post-doctoral teaching/research experience, after obtaining a Ph.D. degree and proven credentials, may be eligible for discretionary award of advanced increments to be given to the person, as decided and recorded by the Selection Committee in the minutes of its meeting.

### 7.0 SELECTION OF PRO-VICE CHANCELLOR / VICE - CHANCELLOR OF UNIVERSITIES:

### 7.1 PRO-VICE-CHANCELLOR:

The Pro-Vice-Chancellor shall be appointed by the Executive Council on the recommendation of the ViceChancellor.
7.2 It shall be the prerogative of the Vice-Chancellor to recommend a person to be the Pro-Vice-Chancellor to the Executive Council. The Pro-Vice-Chancellor shall hold office for a period, which is co-terminus with that of the Vice-Chancellor.

### 7.3. VICE CHANCELLOR:

i. A person possessing the highest level of competence, integrity, morals and institutional commitment is to be appointed as Vice-Chancellor. The person to be appointed as a Vice-Chancellor should be a distinguished academician, with a minimum of ten years' of experience as Professor in a University or ten years' of experience in a reputed research and / or academic administrative organisation with proof of having demonstrated academic leadership.
ii. The selection for the post of Vice-Chancellor should be through proper identification by a Panel of 3-5 persons by a Search-cum-Selection-Committee, through a public notification or nomination or a talent search process or a combination thereof. The members of such Search-cum-Selection Committee shall be
persons' of eminence in the sphere of higher education and shall not be connected in any manner with the University concerned or its colleges. While preparing the panel, the Search cum-Selection Committee shall give proper weightage to the academic excellence, exposure to the higher education system in the country and abroad, and adequate experience in academic and administrative governance, to be given in writing along with the panel to be submitted to the Visitor/Chancellor. One member of the Search cumSelection Committee shall be nominated by the Chairman, University Grants Commission, for selection of Vice Chancellors of State, Private and Deemed to be Universities.
iii. The Visitor/Chancellor shall appoint the Vice Chancellor out of the Panel of names recommended by the Search-cum-Selection Committee.
iv. The term of office of the Vice-Chancellor shall form part of the service period of the incumbent making him/her eligible for all service related benefits.

### 8.0 DUTY LEAVE, STUDY LEAVE, SABBATICAL LEAVE

### 8.1 DUTY LEAVE:

i. Duty leave upto 30 days in an academic year may be granted for the following purposes:
(a) Attending Orientation Programme, Refresher Course, Research Methodology Workshop, Faculty Induction Programme, Conference, Congresses, Symposia and Seminar, as a delegate nominated by the university or with the permission of the university/college ;
(b) Delivering lectures in institutions and universities at the invitation of such institutions or universities received by the university, and accepted by the Vice- Chancellor/Principal of the College;
(c) Working in another Indian or foreign university, any other agency, institution or organisation, when so deputed by the university/College;
(d) Participating in a delegation or working on a committee appointed by the Central Government, State Government, the UGC, a sister university or any other similar academic body; and
(e) For performing any other duty assigned to him/her by the university/college.
ii. The duration of leave should be such as may be considered necessary by the sanctioning authority on each occasion.
iii. The leave may be granted on full pay, provided, that if the teacher receives a fellowship or honorarium or any other financial assistance beyond the amount needed for normal expenses, he/she may be sanctioned duty leave on reduced pay and allowances.
iv. Duty leave may be combined with earned leave, half pay leave or extraordinary leave, or Casual leave.
v. Duty leave should be given also for attending meetings in the UGC, DST, etc. where a teacher is invited to share his/her expertise with an academic body, government agency or NGO.

### 8.2 STUDY LEAVE:

i. The scheme of Study Leave provides an opportunity to avail of scholarships/fellowships awarded to the faculty who wish to acquire new knowledge and to improve analytical skills. When a teacher is awarded a scholarship or stipend (by whatever nomenclature called), for pursing further studies, leading to a Ph.D./Post- doctoral qualification or for undertaking a research project in a higher education institution abroad, the amount of the scholarship/fellowship shall not be linked to the recipient's pay/salary paid to him/her by his /her parent institution. The awardee shall be paid salary for the entire duration of fellowship/scholarship, provided, that he/she does not take up any other remunerative jobs, like teaching, in the host country.
ii. A teacher on Study Leave shall not take up, during the period of that leave, any regular or part-time appointment under an organisation in India or abroad. He/she may, however, be allowed to accept a fellowship or a research scholarship or an ad-hoc teaching and research assignment with an honorarium or any other form of assistance, other than the regular employment in an institution either in India or abroad, provided, that the Executive Council/Syndicate of his/her parent institution may, if it so desires, sanction study leave on reduced pay and allowances to the extent of any receipt in this regard, in-lieu of teaching etc., which may be determined by his/her employer.
iii. The study leave shall be granted to an entry-level appointee as Assistant Professor/Assistant Librarian/Assistant Director of Physical Education and Sport/College DPE\&S (other than as Associate Professor or Professor of a University/College/Institution, who is otherwise eligible for sabbatical leave) after a minimum of three years of continuous service, to pursue a special line of study or research directly related to his/her work in the University/College/Institution or to make a special study of the various aspects of University organisation and methods of education, giving full plan of the work.
iv. The study leave shall be granted by the Executive Council/Syndicate on the recommendation of the Head of the Department concerned. The leave shall not be granted for more than three years in one spell, save in exceptional cases, in which the Executive Council/Syndicate is satisfied that such extension is unavoidable on academic grounds and necessary in the interest of the University/College/Institution.
v. The study leave shall not be granted to a teacher who is due to retire within five years of the date on which he/she is expected to return to duty after the expiry of study leave.
vi. The study leave shall be granted not more than twice during one's entire career. However, the maximum period of study leave admissible during the entire service shall not exceed five years.
vii. The study leave may be granted more than once, provided, that not less than five years have elapsed after the teacher/returned to duty on completion of the earlier spell of study leave. For subsequent spell of study leave, the teacher shall indicate the work done during the period of earlier leave as also give details of work to be done during the proposed spell of study leave.
viii. No teacher who has been granted study leave shall be permitted to alter substantially the course of study or the programme of research without the permission of the Executive Council/Syndicate, in the event the course of study falls short of study leave sanctioned, the teacher shall resume duty on the conclusion of the course of study unless the previous approval of the Executive Council/Syndicate to treat the period of shortfall as Extra-Ordinary leave has been obtained.
ix. Subject to the maximum period of absence from duty, on leave not exceeding three years, the study leave may be combined with the earned leave, half-pay leave, extra-ordinary leave of vacation provided that the earned leave at the credit of the teacher shall be availed of at the discretion of the teacher. When the study leave is taken in continuation of vacation, the period of study leave shall be deemed to begin to run on the expiry of the vacation. A teacher, who is selected to a higher post during the study leave, shall be placed in that position and shall get the higher scale only after joining the post.
x. The period of study leave shall count as service for purpose of the retirement benefits (pension/contributory provident fund), provided that the teacher rejoins the University/College/Institution on the expiry of his/her study leave, and serve the institution for the period for which the Bond has been executed.
xi. The study leave granted to a teacher shall be deemed to have been cancelled in case it is not availed of within 12 months of its sanction, provided, that where the study leave granted has been so cancelled. The teacher may apply again for such leave.
xii. A teacher availing himself/herself of the study leave, shall undertake that he/she shall serve the University/College/Institution for a continuous period of at least three years to be calculated from the date of his/her resuming duty on the expiry of the study leave.
xiii. A teacher -
(a) who is unable to complete his/her studies within the period of study leave granted to him/her or
(b) who fails to rejoin the services of the University on the expiry of his/her study leave or
(c) who rejoins the service of the university but leaves the service without completing the prescribed period of service after rejoining the service or
(d) who, within the said period, is dismissed or removed from the service by the University shall be liable to refund, to the University/College/Institution, the amount of the leave salary and allowances and other expenses, incurred on the teacher or paid to him/her or on his/her behalf in connection with the course of study.

## Explanation:

If a teacher asks for extension of the study leave and is not granted the extension but does not rejoin duty on the expiry of the leave originally sanctioned, he/she shall be deemed to have failed to rejoin the service on the expiry of his/her leave for the purpose of recovery of dues under these Regulations.

Notwithstanding the above provision, the Executive Council/Syndicate may order that nothing in these Regulations shall apply to a teacher who, within three years of return to duty from study leave is permitted to retire from service on medical grounds, provided further that the Executive Council/Syndicate may, in any other exceptional case, waive or reduce, for reasons to be recorded the amount refundable by a teacher under these Regulations.
xiv. After the leave has been sanctioned, the teacher shall, before availing himself/herself of the leave, execute a bond in favour of the University/College/Institution, binding himself/herself for the due fulfillment of the conditions laid down in paragraph (x) to (xiii) above and give security of immovable property to the satisfaction of the Finance Officer/Treasurer or a fidelity bond of an insurance company or a guarantee by a scheduled bank or furnish security of two permanent teachers for the amount which might become refundable to the University/College/Institutions in accordance with paragraph (x) to (xiii) above.
xv. The teacher on study leave shall submit to the Registrar/Principal of his/her parent University/College/Institution six-monthly reports of progress in his/her studies from his/her supervisor or the Head of the institution. Such report shall reach the Registrar/Principal within one month of the expiry of every six months of the period of the study leave. If the report does not reach the Registrar/Principal within the specified time, the payment of leave salary may be deferred till the receipt of such report.
xvi. The teacher on leave shall submit a comprehensive report on the completion of the study leave period. A copy of the research document/monograph/academic paper produced during the period of the study leave shall be put in the public domain, preferably on the website of the University/College/Institution.
xvii. With a view to enhancing the knowledge and skills of the faculty members, especially the junior faculty, at the level of Assistant Professor, the Heads of universities/Colleges/Institutions and their subordinate Departments are enjoined to be generous in the award of study leave in the interest of faculty improvement, thereby impacting the academic standards of the University/College/Institution in the long run.

### 8.3 Sabbatical Leave:

i) The permanent, whole-time teachers of the university and colleges who have completed seven years' of service as a Reader/Associate Professor or a Professor may be granted sabbatical leave to undertake study or research or any other academic pursuit solely for the object of increasing their proficiency and usefulness to the university and higher education system. The duration of leave shall not exceed one year, at a time, and two years in the entire career of the teacher.
ii) A teacher, who has availed himself/herself of study leave, would not be entitled to the sabbatical leave, until after the expiry of five years from the date of the teacher's return from previous study leave or any other kind of training programme of duration of one year or more.
iii) A teacher shall, during the period of sabbatical leave, be paid full pay and allowances (subject to the prescribed conditions being fulfilled) at the rates applicable to him/her immediately prior to his/her proceeding on sabbatical leave.
iv) A teacher on sabbatical leave shall not take up, during the period of that leave, any regular appointment under another organisation in India or abroad. He/she may, however, be allowed to accept a fellowship or a research scholarship or ad hoc teaching and research assignment with honorarium or any other form of assistance, other than the regular employment in an institution of advanced studies, provided that in such cases the Executive Council/Syndicate may, if it so desires, sanction the sabbatical leave on reduced pay and allowances.
v) During the period of sabbatical leave, the teacher shall be allowed to draw the increment on the due date. The period of leave shall also count as service for purposes of pension/contributory provident fund, provided that the teacher rejoins the university on the expiry of his/her leave.

### 8.4 Other Kinds of Leave Rules for Permanent Teachers of the Universities / Colleges

## The following kinds of leave would be admissible to permanent teachers:

(i) Leave treated as duty, viz. casual leave, special casual leave, and duty leave;
(ii) Leave earned by duty, viz. earned leave, half-pay leave, and commuted leave;
(iii) Leave not earned by duty, viz. extraordinary leave; and leave not due;
(iv) Leave not debited to leave account
(v) Leave for academic pursuits, viz. study leave, sabbatical leave and academic leave;
(vi) Leave on grounds of health, viz., maternity leave and quarantine leave.
(b) The Executive Council/Syndicate may grant, in exceptional cases, for the reasons to be recorded, any other kind of leave, subject to such terms and conditions as it may deem fit to impose.

## I. Casual Leave

(i) The total casual leave granted to a teacher shall not exceed eight days in an academic year.
(ii) Casual leave cannot be combined with any other kind of leave except special casual leave. However, such casual leave may be combined with holidays including Sundays. Holidays or Sundays falling within the period of casual leave shall not be counted as casual leave.

## II. Special Casual Leave

(i) Special casual leave, not exceeding 10 days in an academic year, may be granted to a teacher:
(a) To conduct examination of a university/Public Service Commission/Board of Examination or any other similar body/institution; and
(b) To inspect academic institutions attached to a statutory board.
(ii) In computing the 10 days' leave admissible, the days of actual journey, if any, to and from the places where activities specified above, take place, will be excluded.
(iii) In addition, special casual leave to the extent mentioned below, may also be granted;
(a) To undergo sterilization operation (vasectomy or salpingectomy) under family welfare programme. Leave in this case shall be restricted to six working days; and
(b) To a female teacher who undergoes non-puerperal sterilization. Leave in this case shall be restricted to 14 days.
(iv) The special casual leave shall not accumulate, nor can it be combined with any other kind of leave except the casual leave. It may be granted in combination with holidays or vacation by the sanctioning authority on each occasion.

## III. Earned Leave

(i) Earned leave admissible to a teacher shall be:
(a) $1 / 30$ th of the actual service, including vacation; plus
(b) $1 / 3 \mathrm{rd}$ of the period, if any, during which he/she is required to perform duty during the vacation.
For purposes of computation of the period of actual service, all periods' of leave except casual, special casual, and duty leave, shall be excluded.
(ii) Earned leave at the credit of a teacher shall not accumulate beyond 300 days. The maximum period of earned leave that may be sanctioned at a time shall not exceed 60 days. Earned leave exceeding 60 days may, however, be sanctioned in the case of higher study, or training, or leave with medical certificate, or when the entire leave, or a portion thereof, is spent outside India.
For removal of doubt, it may be clarified :

1. When a teacher combines vacation with earned leave, the period of vacation shall be reckoned as leave in calculating the maximum amount of leave on average pay which may be included in the particular period of leave.
2. In case where only a portion of the leave is spent outside India, the grant of leave in excess of 120 days shall be subject to the condition that the portion of the leave spent in India shall not, in the aggregate, exceed 120 days.
3. Encashment of earned leave shall be allowed to members of the teaching staff as applicable to the employees of the Central Government or State Government.

## IV. Half-pay Leave

Half-pay leave may be sanctioned for a period of 20 days to a permanent teacher for each completed year of service. Such leave may be granted on the basis of a medical certificate from a registered medical practitioner, for any private affairs or for any academic purpose.

## Explanation:

A "completed year of service" means the continuous service of a specified duration under the university, and includes the periods of absence from duty as well as leave, including the extraordinary leave.
Note : Half-pay leave shall be combined with earned leave for calculating the number of earned leaves in case the number of earned leaves are less than 300 for purpose of encashment of leave at the time of superannuation as applicable to the employees of Government of India/State Government.

## V. Commuted Leave

Commuted leave, not exceeding half the amount of half-pay leave due, may be granted to a permanent teacher on the basis of medical certificate from a registered medical practitioner subject to the following conditions:
(i) Commuted leave during the entire service shall be limited to a maximum of 240 days;
(ii) When commuted leave is granted, twice the amount of such leave shall be debited against the half-pay leave account; and
(iii) The total duration of earned leave and commuted leave taken in conjunction shall not exceed 240 days, at a time;

Provided that no commuted leave shall be granted under these Regulations, unless the authority competent to sanction leave has reason to believe that the teacher would return to duty on its expiry.

## VI. Extraordinary Leave

(i) A permanent teacher may be granted extraordinary leave when:
(a) No other leave is admissible; or
(b) Other leave is admissible and the teacher applies in writing for the grant of extraordinary leave.
(ii) The extraordinary leave shall always be without pay and allowances. It shall not count for an increment except in the following cases:
(a) Leave taken on the basis of medical certificates;
(b) Cases where the Vice-Chancellor/Principal is satisfied that the leave was taken due to causes beyond the control of the teacher, such as inability to join or rejoin duty due to civil commotion or .a natural calamity, and the teacher has no other kind of leave to his credit;
(c) Leave taken for pursuing higher studies; and
(d) Leave granted to accept an invitation to a teaching post or fellowship or research-cum- teaching post or on assignment for technical or academic work of importance.
(iii) Extraordinary leave may be combined with any other leave except the casual leave and special casual leave, provided that the total period of continuous absence from duty on leave (including periods of vacation when such vacation is taken in conjunction with leave) shall not exceed three years, except in cases where the leave is taken on medical certificate. The total period of absence from duty shall in no case, exceed five years in the entire service period of the individual.
(iv) The authority empowered to grant leave may commute retrospectively the periods of absence without the leave into extraordinary leave.
VII. 'Leave Not Due'
(i) 'Leave not due', may, at the discretion of the Vice-Chancellor/Principal, be granted to a permanent teacher for a period not exceeding 360 days during the entire period of service, out of which not more than 90 days at a time and 180 days, in all, may be otherwise than on a medical certificate. Such leave shall be debited against the half-pay leave earned by him/her subsequently.
(ii) 'Leave not due' shall not be granted, unless the Vice-Chancellor/Principal is satisfied that as far as can reasonably be foreseen, the teacher will return to duty on the expiry of the leave and earn the leave granted.
(iii) A teacher to whom 'leave not due' is granted shall not be permitted to tender his/her resignation from service so long as the debit balance in his/her leave account is not wiped off by active service, or he/she refunds the amount paid to him/her as pay and allowances for the period not so earned. In a case where retirement is unavoidable on account of reason of ill-health, incapacitating the teacher for further service, refund of leave salary for the period of leave yet to be earned may be waived by the Executive Council/College Governing Body.
Provided that the Executive Council/College Governing Body may waive off, in any other exceptional case, for reasons to be recorded in writing, the refund of leave salary for the period of leave yet to be earned.

## VIII. Maternity Leave

(i) Maternity leave on full pay may be granted to a woman teacher for a period not exceeding 180 days, to be availed of twice in the entire career. Maternity leave may also be granted in case of miscarriage, including abortion, subject to the condition that the total leave granted in respect of this to a woman teacher in her career is not more than 45 days, and the application for leave is supported by a medical certificate.
(ii) Maternity leave may be combined with any earned leave, half-pay leave or extraordinary leave, but any leave applied for in continuation of the maternity leave may be granted if the request is supported by a medical certificate.

## IX. Child-care Leave

Woman teachers having any minor child/children may be granted leave up to a period of two years for taking care of the minor child/children. The child-care leave for a maximum period of two years ( 730 days) may be granted to the woman teachers during entire service period in lines with the Central Government woman employees. In the cases, where the child-care leave is granted for more than 45 days, the University/College/Institution may appoint a part-time / guest substitute teacher with intimation to the UGC.

## X. Paternity Leave

Paternity leave of 15 days may be granted to male teachers during the confinement of their wife, and such leave shall be granted only up to two children.
XI. Adoption leave

Adoption leave may be provided as per the rules of the Central Government.

## XII. Surrogacy leave

Leave for Surrogacy shall be applicable as per the Rules, Regulations and Norms as laid down by the Government of India.

## 9. Research Promotion Grant

The UGC or the respective agency (Central/State Governments) may provide a start-up grant at the level of Rs. 3.0 lakhs in Social Sciences, Humanities and Languages and Rs. 6.0 lakhs in Sciences and Technology to teachers and other non-vocational academic staff to take up research immediately after their appointment.

### 9.1 Consultancy Assignments

The consultancy rules, terms, conditions and the model of revenue sharing between institutions and consultantteachers shall be as per the UGC Consultancy Rules to be provided separately.

### 10.0 Counting of Past Services for Direct Recruitment and Promotion under CAS

Previous regular service, whether national or international, as Assistant Professor, Associate Professor or Professor or equivalent in a University, College, National Laboratories or other scientific/professional organisations such as the CSIR, ICAR, DRDO, UGC, ICSSR, ICHR, ICMR and DBT, should count for the direct recruitment and promotion under the CAS of a teacher as Assistant Professor, Associate Professor, Professor or any other nomenclature, provided that:
(a) The essential qualifications of the post held were not lower than the qualifications prescribed by the UGC for Assistant Professor, Associate Professor and Professor, as the case may be.
(b) The post is/was in an equivalent grade or of the pre-revised scale of pay as the post of Assistant Professor (Lecturer) Associate Professor (Reader) and Professor.
(c) The concerned Assistant Professor, Associate Professor and Professor should possess the same minimum qualifications as prescribed by the UGC for appointment to the post of Assistant Professor, Associate Professor and Professor, as the case may be.
(d) The post was filled in accordance with the prescribed selection procedure as laid down in the Regulations of the University/State Government/Central Government/ Institutions concerned, for such appointments.
(e) The previous appointment was not as guest lecturer for any duration.
(f) The previous Ad-hoc or Temporary or contractual service (by whatever nomenclature it may be called) shall be counted for direct recruitment and for promotion, provided that:
(i) the essential qualifications of the post held were not lower than the qualifications prescribed by the UGC for Assistant Professor, Associate Professor and Professor, as the case may be
(ii) the incumbent was appointed on the recommendation of a duly constituted Selection Committee/Selection Committee constituted as per the rules of the respective university;
(iii) the incumbent was drawing total gross emoluments not less than the monthly gross salary of a regularly appointed Assistant Professor, Associate Professor and Professor, as the case may be; and
(g) No distinctions shall be made with reference to the nature of management of the institution where previous service was rendered (private/local body/Government), while counting the past service under this clause.

### 11.0 Period of Probation and Confirmation

11.1 The minimum period of probation of a teacher shall be one year, extendable by a maximum period of one more year in case of unsatisfactory performance.
11.2 The teacher on probation shall be confirmed at the end of one year, unless extended by another year through a specific order, before expiry of the first year.
11.3 Subject to Clause 11 of this Regulation, it is obligatory on the part of the university/the concerned institution to issue an order of confirmation to the incumbents within 45 days of completion of the probation period after following the due process of verification of satisfactory performance.
11.4 The probation and confirmation rules shall be applicable only at the initial stage of recruitment, issued from time to time, by the Central Government.
11.5 All other Central Government rules on probation and confirmation shall be applicable mutatis mutandis.

### 12.0 Creation and Filling-up of Teaching Posts

12.1 Teaching posts in universities, as far as feasible, may be created in a pyramidal order, for instance, for one post of Professor, there shall be two posts of Associate Professors and four posts of Assistant Professor, per department.
12.2 All the sanctioned/approved posts in the university system shall be filled up on an urgent basis.

### 13.0 Appointments on Contract Basis

The teachers should be appointed on contract basis only when it is absolutely necessary and when the studentteacher ratio does not satisfy the laid-down norms. In any case, the number of such appointments should not exceed $10 \%$ of the total number of faculty positions in a College/University. The qualifications and selection procedure for appointing them should be the same as those applicable to a regularly-appointed teacher. The
fixed emoluments paid to such contract teachers should not be less than the monthly gross salary of a regularlyappointed Assistant Professor. Such appointments should not be made initially for more than one academic session, and the performance of any such entrant teacher should be reviewed for academic performance before reappointing him/her on contract basis for another session. Such appointments on contract basis may also be resorted to when absolutely necessary to fill vacancies arising due to maternity leave, child-care leave, etc.

### 14.0 Teaching Days

14.1 The Universities/Colleges must have at least 180 teaching, i.e., there should be a minimum of 30 weeks of actual teaching in a 6 -day week. Of the remaining period, 12 weeks may be devoted to admission and examination activities, and non-instructional days for co-curricular, sports, college day, etc., 8 weeks for vacations and 2 weeks may be attributed to various public holidays. If the University adopts a 5 day week pattern, then the number of weeks should be increased correspondingly to ensure the equivalent of 30 weeks of actual teaching, with a 6-day week.

The above provision is summarised as follows:

|  | Number of weeks : 6-days a week pattern |  | Number of weeks : 5-days a week pattern |  |
| :--- | :---: | :---: | :---: | :---: |
| Categorisation | University | College | University | College |
| Teaching and <br> Learning Process | 30 <br> $(180$ days) weeks | 30 <br> $(180$ days)weeks | 36 <br> $(180$ days) weeks | 36 <br> $(180$ days) weeks |
| Admissions, <br> Examinations, and <br> preparation <br> Examination | 12 | 10 | 8 | 8 |
| Vacations |  |  |  |  |
| Public Holidays <br> (to increase and <br> adjust teaching days <br> accordingly) | 8 | 10 | 6 |  |
| Total | 2 | 2 | 2 | 2 |

14.2 In-lieu of the curtailment of vacation by 2 weeks, the university teachers may be credited with $1 / 3^{\text {rd }}$ of the period of their earned leave. However, colleges may have an option of a total vacation of 10 weeks in a year and no earned leave except when required to work during the vacations for which, as in the case of University teachers, $1 / 3^{\text {rd }}$ of the period shall be credited as Earned Leave.

### 15.0 Workload

15.1 The workload of the teachers in full employment should not be less than Forty hours a week for Thirty working weeks (One Hundred and Eighty teaching days) in an academic year. It should be necessary for the teacher to be available for at least Five hours daily in the University/College. Teachers shall devote at least Two hours per day for mentoring of students (minimum Fifteen students per coordinator) for Community Development/ExtraCurricular Activities/library consultation/research in case of Under-Graduate Courses and/or at least Two hours per day for research in case of Post-Graduate courses, for which the necessary space and infrastructure shall be provided by the University/College. The direct teaching-learning work load should be as follows:
Assistant Professor - 16 hours per week
15.2 Professors/ Associate Professors/ Assistant Professors involved in administration/ extension work can devote two hours per week from the teaching and learning hours.

### 16.0 Service Agreement and Fixing of Seniority

16.1 At the time of recruitment in Universities and Colleges, a service agreement should be executed between the University/College and the teacher concerned and a copy thereof shall be deposited with the Registrar/Principal. Such service agreement shall be duly stamped as per the government rates applicable.
16.2. The self-appraisal methodology, as per Clause 6.0 and its sub-clauses and Clauses 6.1 to 6.4 and all the subclauses contained therein and as per Tables 1 to 5 of Appendix II, as per eligibility, shall form part of the service agreement/record.

### 16.3 Inter-se seniority between the direct recruited and teachers promoted under CAS

The inter-se seniority of a direct recruit shall be determined with reference to the date of joining and for the teachers promoted under the CAS with reference to the date of eligibility as indicated in the recommendations of the selection committee of the respective candidates. The rules and regulations of the respective Central/State Government shall apply, for all other matters of seniority.

### 17.0 Code of Professional Ethics

## I. Teachers and their Responsibilities :

Whoever adopts teaching as a profession assumes the obligation to conduct himself / herself in accordance with the ideal of the profession. A teacher is constantly under the scrutiny of his students and the society at large. Therefore, every teacher should see that there is no incompatibility between his precepts and practice. The national ideals of education which have already been set forth and which he/she should seek to inculcate among students must be his/her own ideals. The profession further requires that the teacher should be calm, patient and communicative by temperament and amiable in disposition.

## Teacher should:

(i) Adhere to a responsible pattern of conduct and demeanor expected of them by the community;
(ii) Manage their private affairs in a manner consistent with the dignity of the profession;
(iii) Seek to make professional growth continuous through study and research;
(iv) Express free and frank opinion by participation at professional meetings, seminars, conferences etc., towards the contribution of knowledge;
(v) Maintain active membership of professional organisations and strive to improve education and profession through them;
(vi) Perform their duties in the form of teaching, tutorials, practicals, seminars and research work, conscientiously and with dedication;
(vii) Discourage and not indulge in plagiarism and other non ethical behaviour in teaching and research;
(viii) Abide by the Act, Statute and Ordinance of the University and to respect its ideals, vision, mission, cultural practices and tradition;
(ix) Co-operate and assist in carrying out the functions relating to the educational responsibilities of the college and the university, such as: assisting in appraising applications for admission, advising and counselling students as well as assisting the conduct of university and college examinations, including supervision, invigilation and evaluation; and
(x) Participate in extension, co-curricular and extra-curricular activities, including the community service.

## II. Teachers and Students

## Teachers should:

(i) Respect the rights and dignity of the student in expressing his/her opinion;
(ii) Deal justly and impartially with students regardless of their religion, caste, gender, political, economic, social and physical characteristics;
(iii) Recognise the difference in aptitude and capabilities among students and strive to meet their individual needs;
(iv) Encourage students to improve their attainments, develop their personalities and at the same time contribute to community welfare;
(v) Inculcate among students scientific temper, spirit of inquiry and ideals of democracy, patriotism, social justice, environmental protection and peace;
(vi) Treat the students with dignity and not behave in a vindictive manner towards any of them for any reason;
(vii) Pay attention to only the attainment of the student in the assessment of merit;
(viii) Make themselves available to the students even beyond their class hours and help and guide students without any remuneration or reward;
(ix) Aid students to develop an understanding of our national heritage and national goals; and
(x) Refrain from inciting students against other students, colleagues or administration.

## III. Teachers and Colleagues

## Teachers should:

(i) Treat other members of the profession in the same manner as they themselves wish to be treated;
(ii) Speak respectfully of other teachers and render assistance for professional betterment;
(iii) Refrain from making unsubstantiated allegations against colleagues to higher authorities; and
(iv) Refrain from allowing considerations of caste, creed, religion, race or sex in their professional endeavour.

## IV. Teachers and Authorities :

## Teachers should:

(i) Discharge their professional responsibilities according to the existing rules and adhere to procedures and methods consistent with their profession in initiating steps through their own institutional bodies and / or professional organisations for change of any such rule detrimental to the professional interest;
(ii) Refrain from undertaking any other employment and commitment, including private tuitions and coaching classes which are likely to interfere with their professional responsibilities;
(iii) Co-operate in the formulation of policies of the institution by accepting various offices and discharge responsibilities which such offices may demand;
(iv) Co-operate through their organisations in the formulation of policies of the other institutions and accept offices;
(v) Co-operate with the authorities for the betterment of the institutions keeping in view the interest and in conformity with the dignity of the profession;
(vi) Adhere to the terms of contract;
(vii) Give and expect due notice before a change of position takes place; and
(viii) Refrain from availing themselves of leave except on unavoidable grounds and as far as practicable with prior intimation, keeping in view their particular responsibility for completion of academic schedule.

## V. Teachers and Non-Teaching Staff :

## Teachers should :

(i) Treat the non-teaching staff as colleagues and equal partners in a cooperative undertaking, within every educational institution;
(ii) Help in the functioning of joint-staff councils covering both the teachers and the non-teaching staff.

## VI. Teachers and Guardians

## Teachers should:

(i) Try to see through teachers' bodies and organisations, that institutions maintain contact with the guardians, their students, send reports of their performance to the guardians whenever necessary and meet the guardians in meetings convened for the purpose for mutual exchange of ideas and for the benefit of the institution.

## VII. Teachers and Society

## Teachers should:

(i) Recognise that education is a public service and strive to keep the public informed of the educational programmes which are being provided;
(ii) Work to improve education in the community and strengthen the community's moral and intellectual life ;
(iii) Be aware of social problems and take part in such activities as would be conducive to the progress of society and hence the country as a whole;
(iv) Perform the duties of citizenship, participate in community activities and shoulder responsibilities of public offices;
(v) Refrain from taking part in or subscribing to or assisting in any way activities, which tend to promote feeling of hatred or enmity among different communities, religions or linguistic groups but actively work for national integration.

## The Vice-Chancellor/Pro-Vice-Chancellor/Rector

## The Vice-Chancellor/Pro-Vice-Chancellor/Rector should :

(a) Provide inspirational and motivational value-based academic and executive leadership to the university through policy formation, operational management, optimization of human resources and concern for environment and sustainability;
(b) Conduct himself/herself with transparency, fairness, honesty, highest degree of ethics and decision making that is in the best interest of the university;
(c) Act as steward of the university's assets in managing the resources responsibility, optimally, effectively and efficiently for providing a conducive working and learning environment;
(d) Promote the collaborative, shared and consultative work culture in the university, paving way for innovative thinking and ideas;
(e) Endeavour to promote a work culture and ethics that brings about quality, professionalism, satisfaction and service to the nation and society.
(f) Refrain from allowing considerations of caste, creed, religion, race, gender or sex in their professional endeavour.

## College Principal should;

(a) Provide inspirational and motivational value-based academic and executive leadership to the college through policy formation, operational management, optimization of human resources and concern for environment and sustainability;
(b) Conduct himself/herself with transparency, fairness, honesty, highest degree of ethics and decision making that is in the best interest of the college;
(c) Act as steward of the College's assets in managing the resources responsibility, optimally, effectively and efficiently for providing a conducive working and learning environment;
(d) Promote the collaborative, shared and consultative work culture in the college, paving way for innovative thinking and ideas;
(e) Endeavour to promote a work culture and ethics that brings about quality, professionalism, satisfaction and service to the nation and society.
(f) Adhere to a responsible pattern of conduct and demeanor expected of them by the community;
(g) Manage their private affairs in a manner consistent with the dignity of the profession;
(h) Discourage and not indulge in plagiarism and other non ethical behaviour in teaching and research;
(i) Participate in extension, co-curricular and extra-curricular activities, including the community service.
(j) Refrain from allowing considerations of caste, creed, religion, race, gender or sex in their professional endeavour.

## Director Physical Education and Sports (University/College)/Librarian (University/College) should;

(a) Adhere to a responsible pattern of conduct and demeanor expected of them by the community;
(b) Manage their private affairs in a manner consistent with the dignity of the profession;
(C) Discourage and not indulge in plagiarism and other non ethical behaviour in teaching and research;
(d) Participate in extension, co-curricular and extra-curricular activities, including the community service.
(e) Refrain from allowing considerations of caste, creed, religion, race, gender or sex in their professional endeavour.

### 18.0 Maintenance of Standards in Higher-Education Institutions:

In order to maintain the academic standards in higher education, the following recommendations shall be adopted by the respective Universities/Colleges/Institutions:
i. The process of evaluation for $\mathrm{Ph} . \mathrm{D}$ shall be uniform in all the universities in accordance with the respective UGC Regulations and their amendments from time to time, in this regard. The Universities shall adopt these Regulations within six months of their notification.
ii. There shall be special provision of supernumerary Ph.D seats not exceeding $10 \%$ of the total seats available in the department, if there is no vacant seat available with the eligible Supervisors in that department, to the in-service teachers for encouraging the faculty members of colleges and universities for getting a Ph.D. degree.
iii. In order to encourage research and increase country's research output, Universities shall accord permission and provide need-based facility for college teachers to supervise Ph.D./M.Phil. scholars. Universities shall amend their Statutes and Ordinances accordingly.
iv. All newly-recruited faculty members shall be provided one-time seed money/start up grant/research grant for establishing a basic research/computational facility as per the provisions laid down in these regulations.
v. The Ph.D. degree shall be made a mandatory requirement for recruitment and promotions in accordance with the provisions laid down in these Regulations.
vi. Research clusters shall be created amongst the universities/colleges/research institutions within the state for sharing research facilities, human resources, skills and infrastructure to ensure optimal utilisation of resources and to create synergies among higher education institutions.
vii. An induction programme of one month shall be introduced for all newly-recruited Assistant Professors in the universities /colleges/institutions ideally before the starting of their teaching work, but definitely within one year of the recruitment of the new faculty member. In addition to the Human Resource Development Centres of the UGC, Universities/Institutions with the Pandit Madan Mohan Malviya National Mission on Teachers and Teaching(PMMMNMTT) scheme shall also organize such induction programmes as per their mandate.
viii. These induction programmes shall be treated at par with the Orientation Programmes already being run by the Human Resource Development Centres of the UGC for the purpose of the CAS requirements. Universities/Colleges/Institutions shall send the faculty members to such programmes in a phased manner so that the teaching work does not suffer.
ix. All short-term and long-duration capacity-building programmes for teachers/faculty ranging from one week to one month as well as seminars, workshops in different pedagogic and discipline-specific areas being conducted by centres such as Schools of Education (SoEs), Teaching Learning Centres (TLCs), Faculty Development Centres (FDCs), Centres for Excellence in Science and Mathematics (CESMEs), Centres for Academic Leadership and Education Management (CALEMs) under the PMMMNMTT scheme shall be taken into consideration for fulfilment of the requirements as laid down in Career Advancement Scheme of these Regulations.

### 19.0 Other Terms and Conditions

### 19.1 Incentives for Ph.D./M.Phil. and other Higher Qualification

i. Five non-compounded advance increments shall be admissible at the entry level of recruitment as Assistant Professor to persons possessing the degrees of Ph.D. awarded in a relevant discipline by the University following the process of admission, registration, course work and external evaluation as prescribed by the UGC.
ii. M.Phil degree holders at the time of recruitment to the post of Assistant Professor shall be entitled to two noncompounded advance increments.
iii. Those possessing Post-graduate degree in the professional course such as LL.M./M.Tech/M.Arch./ M.E./M.V.Sc./M.D., etc. recognized by the relevant statutory body/ council, shall also be entitled to two non-compunded advance increments at the entry level.
iv.
a) Teachers who complete their Ph.D. degree while in service shall be entitled to three non-compounded increments fixed at increment applicable at entry level only if such Ph.D. is in a relevant discipline of the
discipline of employment and has been awarded by a University complying with the process prescribed by the UGC for enrolment, course work, evaluation, etc.
b) However, teachers in service who have already been awarded Ph.D. by the time of coming into force of these Regulations or having been enrolled for Ph.D. have already undergone course-work as well as evaluation, if any, and only Notification in regard to the award of Ph.D. is awarded, shall also be entitled to the award of three non-compounded increments fixed at increment applicable at entry level only, even if the university awarding such Ph.D. has not yet been notified by the UGC as having complied with the process prescribed by the Commission.
v. In respect of every other case, a teacher who is already enrolled for Ph.D. shall avail the benefit of three noncompounded increments fixed at increment applicable at entry level only if the university awarding the Ph.D. has been notified by the UGC to have complied with the process prescribed by the Commission for the award of Ph.D. in respect of either course-work or evaluation or both, as the case may be.
vi. Teachers in service who have not yet enrolled for Ph.D. shall therefore, derive the benefit of three noncompounded increments fixed at increment applicable at entry level only on award of Ph.D. , while in service only if such enrolment is with a university which complies with the entire process including that of enrolment as prescribed by the UGC.
vii. Teachers who acquire M.Phil. Degree or a post-graduate degree in a professional course recognised by the relevant Statutory Body / Council, while in service, shall be entitled to one advance increment fixed at increment applicable at entry level only.
viii. Five non-compounded advance increments shall be admissible to Assistant Librarian / College Librarian who are recruited at entry level with Ph.D. degree in the discipline of library science from a university complying with the process prescribed by the UGC in respect of enrolment, course-work and evaluation process for the award of Ph.D. in Library Science.
ix. (a) Assistant Librarian/College Librarian acquiring the degree of Ph.D. at any time while in service, in the discipline of library science from a university complying with the process prescribed by the UGC in respect of enrolment, course-work and evaluation shall be entitled to three non-compounded advance increments fixed at increment applicable at entry level only.
(b) However, persons in posts of Assistant Librarian/College Librarian on higher positions who have already been awarded Ph.D. in library science at the time of coming into force of these Regulations or having already undergone course-work as well as evaluation, if any, and only Notification in regard to the award of Ph.D. is awaited, shall also be entitled to the award of three non-compounded increments fixed at increment applicable at entry level only.
x. In respect of every other case of persons in the post of Assistant Librarian / College Librarian or higher positions who are already enrolled for Ph.D. shall avail the benefit three non-compounded increments fixed at increment applicable at entry level only if the university awarding the Ph.D. has been notified by the UGC to have complied with the process prescribed by the Commission for the award of Ph.D.in respect of either course-work or evaluation or both as the case may be.
xi. Assistant Librarian/College librarian and others in higher library positions in service who have not yet enrolled for Ph.D. shall therefore, derive the benefit of three non-compounded increments fixed at increment applicable at entry level only on award of Ph.D. while in service only if such enrolment is with a university which complies with the entire process, including that of enrolment as prescribed by the UGC.
xii. Two non-compounded advance increments shall be admissible for Assistant Librarian/College Librarian with M.Phil. degree in Library Science at the entry level. Assistant Librarian/College Librarian and those in higher positions acquiring M.Phil degree in library science at any time during the course of their service shall be entitled to one advance increment fixed at increment applicable at entry level only.
xiii. Five non-compounded advance increments shall be admissible to Assistant Director of Physical Education and Sports / College Director of Physical Education and Sports who are recruited at entry level with Ph.D. degree in the discipline of Physical Education/Physical Education and Sports / Sports Science from a university complying with the process prescribed by the UGC in respect of enrolment, course-work and evaluation process for the award of Ph.D. in Physical Education/Physical Education and Sports / Sports Science.
xiv. Not withstanding anything in the forgoing clauses, those who have already availed the benefit of advance increments for possessing Ph.D./M.Phil at the entry level or in service once either under this regulation or under the earlier schemes/regulations shall not be entitled to the benefit of advance increments under these Regulations.
xv. Teachers, library and Physical Education and Sports cadres who have already availed the benefits of increments as per the then existing policy for acquiring Ph.D./M.Phil. while in service shall not be entitled to advance increments under these Regulations.
xvi. For posts at the entry level where no such advance increments were admissible for possessing Ph.D./M.Phil. under the earlier schemes/regulations, the benefit of advance of increments for possessing Ph.D./M.Phil shall be available to only those appointments which have been made on or after the coming into force of these Regulations.

### 19.2 Promotion

When an individual gets a promotion, his new pay on promotion would be fixed in the Pay Matrix as follows:
On promotion, the teacher or equivalent position would be given a notional increment in his/her existing Academic Level of Pay, by moving him/her to the next higher Cell at that Level; and the pay shown in this Cell would now be located in the new Academic Level corresponding to the post to which he/she has been promoted. If a Cell identical with that pay is available in the new Level, that Cell shall be the new pay, otherwise the next higher Cell in that Level shall be the new pay of the teacher or equivalent position. If the pay arrived at in this manner is less than the first Cell in the new Level, then the pay shall be fixed at the first Cell of the new Level.

### 19.3 Allowances and Benefits

I. Other allowances and benefits, such as Hometown Travel Concession, Leave Travel Concession, Special Compensatory Allowances, Children's Education Allowance, Transport Allowance, House Rent Allowance, House Building Allowance, Deputation Allowance, Travelling Allowance, Dearness Allowance, Area-based Special Compensatory Allowance etc. for teachers and Library and Physical Education and Sports Cadres, shall be as applicable to the Central Government employees and be governed by the relevant rules as notified by the Government of India from time to time.
II. Pension, Gratuity, ex-gratia compensation etc. as applicable to Central/State Government employees shall also be applicable to teachers and Library and Physical Education and Sports Cadres of Central/State Universities and Colleges including affiliated and constituent Colleges as the case may be.
III. Medical Benefits: All medical benefits for teachers and Library and Physical Education Cadres, shall be as applicable to the Central Government employees. Further, the Teachers and Library and Physical Education Cadres may be placed under Central Government Health Scheme or any other such scheme of the Central Government/ Health Scheme of respective State Government, as the case may be, for Central/State Universities/Colleges respectively.

## APPENDICES

| Appendix I | Fitment Tables for fixation of pay of the existing incumbents, who were in <br> position as on 01.01.2016, in various categories of posts indicated in the tables <br> (MHRD Notification MHRD letters No. Corrigendum F.No.1-7/2015-U.II(1) <br> dated 08.11.2017 |
| :--- | :--- |
| Appendix II | Assessment Criteria and Methodology <br> Table 1 to 3-For University and College Teachers <br> Table 4 - For Assistant Librarian, Deputy Librarian, Librarian etc. <br> Table 5 - For Assistant Director/Deputy Director/Director Physical Education <br> and Sports etc. |
|  |  |

Fitment Tables for fixation of pay of the existing incumbents, who were in position as on 01.01 .2016 , in various categories of posts indicated in the tables

F.No.1-2/2015-U[H(1)<br>Governmant oflodia<br>.<br><br>




## Corgigendurn

Subject: Scheme of revision of pay of teachers sand ecpivalent cadres in universition and colleges following the revision of pay scales of Central Govermment employees on the recommendations of the $7^{\text {th }}$ Central Pay Comumission (CPC).

In the order of the Government of India in the Ministry of Human Resource Development (Department of Higher Education) no. 1-7/2018-U.II(1) dated 2.11.2017 in the


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Pay Matrix

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| Entry Pay（Rs．） | 21.800 | 25，700 | 29.900 | $4920 \%$ | $5 \mathrm{~S}, 000$ | 37，000 |
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| 18 | 95.300 | 1．13，800 | 1，31，700 | 2．17．100 |  |
| 19 | 98，200 | 9，17，200 | 135,700 |  |  |
| 20 | 107， 100 | 120.700 | 139,800 |  |  |
| 21 | 204， 100 | 1．24，30］ | 2， 44.009 |  |  |
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## Appendix II

Table 1

## Assessment Criteria and Methodology for University/College Teachers

| S.No. | Activity | Grading Criteria |
| :---: | :---: | :---: |
| 1. | Teaching: (Number of classes taught/total classes assigned) $\mathrm{x} 100 \%$ <br> (Classes taught includes sessions on tutorials, lab and other teaching related activities) | 80\% \& above - Good <br> Below $80 \%$ but $70 \%$ \& above-Satisfactory <br> Less than 70\% - Not satisfactory |
| 2. | Involvement in the University/College students related activities/research activities: <br> (a) Administrative responsibilities such as Head, Chairperson/ Dean/ Director/ Co-ordinator, Warden etc. <br> (b) Examination and evaluation duties assigned by the college / university or attending the examination paper evaluation. <br> (c) Student related co-curricular, extension and field based activities such as student clubs, career counselling, study visits, student seminars and other events, cultural, sports, NCC, NSS and community services. <br> (d) Organising seminars/ conferences/ workshops, other college/university activities. <br> (e) Evidence of actively involved in guiding Ph.D students. <br> (f) Conducting minor or major research project sponsored by national or international agencies. <br> (g) At least one single or joint publication in peerreviewed or UGC list of Journals. | Good - Involved in at least 3 activities <br> Satisfactory - 1-2 activities <br> Not-satisfactory - Not involved / undertaken any of the activities <br> Note: <br> Number of activities can be within or across the broad categories of activities |

## Overall Grading:

Good: Good in teaching and satisfactory or good in activity at Sl.No.2.
Or
Satisfactory: Satisfactory in teaching and good or satisfactory in activity at S1.No.2.
Not Satisfactory: If neither good nor satisfactory in overall grading
Note: For the purpose of assessing the grading of Activity at Serial No. 1 and Serial No. 2, all such periods of duration which have been spent by the teacher on different kinds of paid leaves such as Maternity Leave, Child Care Leave, Study Leave, Medical Leave, Extraordinary Leave and Deputation shall be excluded from the grading assessment. The teacher shall be assessed for the remaining period of duration and the same shall be extrapolated for the entire period of assessment to arrive at the grading of the teacher. The teacher on such leaves or deputation as mentioned above shall not be put to any disadvantage for promotion under CAS due to his/her absence from his/her teaching responsibilities subject to the condition that such leave/deputation was undertaken with the prior approval of the competent authority following all procedures laid down in these regulations and as per the acts, statutes and ordinances of the parent institution.

Table 2

## Methodology for University and College Teachers for calculating Academic/Research Score

(Assessment must be based on evidence produced by the teacher such as: copy of publications, project sanction letter, utilization and completion certificates issued by the University and acknowledgements for patent filing and approval letters, students' Ph.D. award letter, etc,.)

| S.N. | Academic/Research Activity | Faculty of Sciences /Engineering / Agriculture / Medical /Veterinary Sciences | Faculty of Languages / Humanities / Arts / Social Sciences / Library /Education / Physical Education / Commerce / Management \& other related disciplines |
| :---: | :---: | :---: | :---: |
| 1. | Research Papers in Peer-Reviewed or UGC listed Journals | 08 per paper | 10 per paper |
| 2. | Publications (other than Research papers) |  |  |
|  | (a) Books authored which are published by ; |  |  |
|  | International publishers | 12 | 12 |
|  | National Publishers | 10 | 10 |
|  | Chapter in Edited Book | 05 | 05 |
|  | Editor of Book by International Publisher | 10 | 10 |
|  | Editor of Book by National Publisher | 08 | 08 |
|  |  |  |  |
|  |  |  |  |
|  | (b) Translation works in Indian and Foreign Languages by qualified faculties |  |  |
|  | Chapter or Research paper | 03 | 03 |
|  | Book | 08 | 08 |
| 3. | Creation of ICT mediated Teaching Learning pedagogy and content and development of new and innovative courses and curricula |  |  |
|  | (a) Development of Innovative pedagogy | 05 | 05 |
|  | (b) Design of new curricula and courses | 02 per curricula/course | 02 per curricula/course |
|  | (c) MOOCs |  |  |
|  | Development of complete MOOCs in 4 quadrants (4 credit course)(In case of MOOCs of lesser credits 05 marks/credit) |  | 20 |
|  | MOOCs (developed in 4 quadrant) per module/lecture | 05 | 05 |
|  | Content writer/subject matter expert for each module of MOOCs (at least one quadrant) |  | 02 |
|  | Course Coordinator for MOOCs ( 4 credit course)(In case of MOOCs of lesser credits 02 marks/credit) |  | 08 |
|  | (d) E-Content |  |  |
|  | Development of e-Content in 4 quadrants for complete course/e-book | 12 | 12 |
|  | e-Content (developed in 4 quadrants) per module | 05 | 05 |
|  | Contribution to development of e-content module in complete course/paper/e-book (at least one quadrant) |  | 02 |
|  | Editor of e-content for complete course/ paper /e-book | 10 | 10 |
|  | (a) Research guidance |  |  |


|  | Ph.D. | 10 per degree awarded 05 per thesis submitted | 10 per degree awarded 05 per thesis submitted |
| :---: | :---: | :---: | :---: |
|  | M.Phil./P.G dissertation | 02 per degree awarded | 02 per degree awarded |
|  | (b) Research Projects Completed |  |  |
|  | More than 10 lakhs | 10 | 10 |
|  | Less than 10 lakhs | 05 | 05 |
|  | (c) Research Projects Ongoing : |  |  |
|  | More than 10 lakhs | 05 | 05 |
|  | Less than 10 lakhs | 02 | 02 |
|  | (d) Consultancy | 03 | 03 |
| 5 | (a) Patents |  |  |
|  | International | 10 | 10 |
|  | National | 07 | 07 |
|  | (b) *Policy Document (Submitted to an Intern UNO/UNESCO/World Bank/International Mone Government or State Government) | ational body/organisation like tary Fund etc. or Central |  |
|  | International | 10 | 10 |
|  | National | 07 | 07 |
|  | State | 04 | 04 |
|  | (c) Awards/Fellowship |  |  |
|  | International | 07 | 07 |
|  | National | 05 | 05 |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| 6. | *Invited lectures / Resource Person/ paper presentation in Seminars/ Conferences/full paper in Conference Proceedings (Paper presented in Seminars/Conferences and also published as full paper in Conference Proceedings will be counted only once) |  |  |
|  | International (Abroad) | 07 | 07 |
|  | International (within country) | 05 | 05 |
|  | National | 03 | 03 |
|  | State/University | 02 | 02 |

## The Research score for research papers would be augmented as follows :

Peer-Reviewed or UGC-listed Journals (Impact factor to be determined as per Thomson Reuters list) :
i) Paper in refereed journals without impact factor

- 5 Points
ii) Paper with impact factor less than 1 - 10 Points
iii) Paper with impact factor between 1 and 2 - 15 Points
iv) Paper with impact factor between 2 and 5 - 20 Points
v) Paper with impact factor between 5 and 10 - 25 Points
vi) Paper with impact factor $>10$ - 30 Points
(a) Two authors: $70 \%$ of total value of publication for each author.
(b) More than two authors: $70 \%$ of total value of publication for the First/Principal/Corresponding author and $30 \%$ of total value of publication for each of the joint authors.

Joint Projects: Principal Investigator and Co-investigator would get $50 \%$ each.

## Note:

- Paper presented if part of edited book or proceeding then it can be claimed only once.
- For joint supervision of research students, the formula shall be $70 \%$ of the total score for Supervisor and Cosupervisor. Supervisor and Co-supervisor, both shall get 7 marks each.
- *For the purpose of calculating research score of the teacher, the combined research score from the categories of 5(b). Policy Document and 6. Invited lectures/Resource Person/Paper presentation shall have an upper capping of thirty percent of the total research score of the teacher concerned.
- The research score shall be from the minimum of three categories out of six categories.


## Table: 3 A

Criteria for Short-listing of Candidates for Interview for the Post of Assistant Professors in Universities

| S.N. | Academic Record | Score |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. | Graduation | $80 \%$ \& Above $=15$ | $60 \%$ to less than $80 \%=13$ | $55 \%$ to less than $60 \%=$ 10 | $\begin{array}{\|l} 45 \% \text { to } \\ \text { less than } \\ 55 \%=05 \end{array}$ |
| 2. | Post-Graduation | $80 \%$ \& Above $=25$ | $60 \%$ to less than $80 \%=23$ | 55\% (50\% SC/ST/OBC creamy lay to less than | in case of (non- <br> er)/PWD) $50 \%=20$ |
| 3. | M.Phil. | 60\% \& above = 07 | $55 \%$ to less than $60 \%=05$ |  |  |
| 4. | Ph.D. | 30 |  |  |  |
| 5. | NET with JRF | 07 |  |  |  |
|  | NET | 05 |  |  |  |
|  | SLET/SET | 03 |  |  |  |
| 6. | Research Publications ( 2 marks for each research publications published in Peer-Reviewed or UGC-listed Journals) | 10 |  |  |  |
| 7. | Teaching / Post Doctoral Experience (2 marks for one year each)\# | 10 |  |  |  |
| 8. | Awards |  |  |  |  |
|  | International / National Level <br> (Awards given by International Organisations/ Government of India / Government of India recognised National Level Bodies) | 03 |  |  |  |
|  | State-Level <br> (Awards given by State Government) | 02 |  |  |  |

\#However, if the period of teaching/Post-doctoral experience is less than one year then the marks shall be reduced proportionately.

## Note:

(A)
(i) M.Phil + Ph.D Maximum - 30 Marks
(ii) JRF/NET/SET Maximum - 07 Marks
(iii) In awards category Maximum - 03 Marks
(B) Number of candidates to be called for interview shall be decided by the concerned universities.
(C)

| Academic Score | - | 80 |
| :--- | :---: | :---: |
| Research Publications | - | 10 |
| Teaching Experience | - | 10 |
| Total | $\mathbf{-} \mathbf{1 0 0}$ |  |

(D) Score shall be valid for appointment in respective State SLET/SET Universities/ Colleges/ Institutions only

Table: 3 B
Criteria for Short-listing of candidates for Interview for the Post of Assistant Professors in Colleges

| S.N. | Academic Record | Score |  |  |
| :--- | :--- | :--- | :--- | :--- |
| 1. | Graduation | $80 \%$ \& Above $=21$ | $\begin{array}{l}60 \% \text { to less than } \\ 80 \%=19\end{array}$ | $\begin{array}{l}55 \% \text { to less } \\ \text { than } 60 \% \\ 16\end{array}$ |
| 2. | Post-Graduation to |  |  |  |
| less than |  |  |  |  |
| $55 \%=10$ |  |  |  |  |$)$

\# However, if the period of teaching/post-doctoral experience is less than one year then the marks shall be reduced proportionately.

Note :
(A)

| (i) | M.Phil. + Ph.D. | Maximum | - | 25 Marks |
| :--- | :--- | :--- | :--- | :--- |
| (ii) | JRF/NET/SET | Maximum | - | 10 Marks |
| (iii) | In awards category | Maximum | - | 03 Marks |

(B) Number of candidates to be called for interview shall be decided by the college.
(C) Academic Score

Research Publications - 06
Teaching Experience - 10
TOTAL - 100
(D) SLET/SET score shall be valid for appointment in respective State Universities/Colleges/institutions only.

## Table 4

## Assessment Criteria and Methodology for Librarians

| S.No. | Activity | Grading Criteria |
| :---: | :---: | :---: |
| 1 | Regularity of attending library (calculated in terms of percentage of days attended to the total number of days he/she is expected to attend) <br> While attending in the library, the individual is expected to undertake, inter alia, following items of work: <br> - Library Resource and Organization and maintenance of books, journals and reports. <br> - Provision of Library reader services such as literature retrieval services to researchers and analysis of report. <br> - Assistance towards updating institutional website | $90 \%$ and above - Good <br> Below $90 \%$ but $80 \%$ and above - Satisfactory <br> Less than 80\% - Not satisfactory |
| 2. | Conduct of seminars/workshops related to library activity or on specific books or genre of books. | Good - 1 National level seminar/ workshop + 1 State/institution level workshop/Seminar <br> Satisfactory - 1 National level seminar/ workshop or 1 state level seminar/ workshop +1 institution level seminar/ workshop or 4 institution seminar / workshop <br> Unsatisfactory - Not falling in above two categories |
| 3. | If library has a computerized database then OR <br> If library does not have a computerized database | Good - 100\% of physical books and journals in computerized database. <br> Satisfactory - At least $99 \%$ of physical books and journals in computerized database. <br> Unsatisfactory - Not falling under good or satisfactory. <br> OR <br> Good - 100\% Catalogue database made up to date <br> Satisfactory- $90 \%$ catalogue database made up to date <br> Unsatisfactory - Catalogue database not upto mark. <br> (To be verified in random by the CAS Promotion Committee) |


| 4. | Checking inventory and extent of missing books | Good: Checked inventory and missing book less than 0.5\% <br> Satisfactory - Checked inventory and missing book less than 1\% <br> Unsatisfactory - Did not check inventory <br> Or <br> Checked inventory and missing books $1 \%$ or more. |
| :---: | :---: | :---: |
| 5. | (i) Digitisation of books database in institution having no computerized database. <br> (ii) Promotion of library network. <br> (iii)Systems in place for dissemination of information relating to books and other resources. <br> (iv)Assistance in college administration and governance related work including work done during admissions, examinations and extracurricular activities. <br> (v)Design and offer short-term courses for users. <br> (vi)Publications of at least one research paper in UGC approved journals. | Good : Involved in any two activities <br> Satisfactory : At least one activity <br> Not Satisfactory : Not involved/ undertaken any of the activities. |
| Overall Grading | Good : Good in Item 1 and satisfactory/good <br> Satisfactory : Satisfactory in Item 1 and satisf <br> Not satisfactory : If neither good nor satisfact | any two other items including Item 4. ctory /good in any other two items including Item 4. ry in overall grading. |
| Note: <br> (1) <br> (2) <br> (3) | is recommended to use ICT technology to mo ssment. <br> Librarian must submit evidence of published rse, successful research guidance from Head of system of tracking user grievances and the ex CAS promotion committee. | or the attendance of library staff and compute the criteria of paper, participation certificate for refresher or methodology Department of the concerned department, project completion. t of grievances redressal details may also be made available to |

## Table 5

## Assessment Criteria and Methodology for Directors of Physical Education and Sports

| S. No. | Activity | Grading Criteria |
| :--- | :--- | :--- |
| 1 | Attendance calculated in terms of <br> percentage of days attended to the total <br> number of days he is expected to attend. | 90 and above - Good <br> Above 80 but below 90- Satisfactory. <br> Less than $80-$ Not satisfactory. |
| 2. | Organizing intra college competition | Good - Intra college competition in more than <br> 5 disciplines. <br> Satisfactory - Intra college competition in 3-5 <br> disciplines. <br> Unsatisfactory - Neither good nor <br> satisfactory. |


| 3. | Institution participating in external competitions | Good - National level competition in at least one discipline plus State/District level competition in at least 3 disciplines. <br> Satisfactory- State level competition in at least one discipline plus district level competition in at least 3 disciplines. <br> Or District level competition in at least 5 disciplines. <br> Unsatisfactory - Neither good nor satisfactory. |
| :---: | :---: | :---: |
| 4. | Up-gradation of sports and physical training infrastructure with scientific and technological inputs. <br> Development and maintenance of playfields and sports and physical Education facilities. | Good/Satisfactory/Not-Satisfactory to be assessed by the Promotion committee. |
| 5. | (i)At least one student of the institution participating in national/ state/ university (for college levels only) teams. Organizing state/national/inter university/inter college level competition. <br> (ii)Being invited for coaching at state/national level. <br> (iii)Organizing at least three workshops in a year. <br> (iv)Publications of at least one research paper in UGC approved journal. Assistance in college administration and governance related work including work done during admissions, examinations and extracurricular college activities. | Good: Involved in any two activities. <br> Satisfactory: 1 activity <br> Not Satisfactory : Not involved/ undertaken any of the activities. |
| Overall Grading | Good: Good in Item 1 and satisfactory/good in any two other items. <br> Satisfactory: Satisfactory in Item 1 and satisfactory/good in any other two items. <br> Not Satisfactory: If neither good nor satisfactory in overall grading. |  |
| Note: <br> i)It is recommended to use ICT technology to monitor the attendance of sports and physical education and compute the criteria of assessment. <br> ii)The institution must obtain student feedback. The feed-backs must be shared with the concerned Director of Physical and Education and Sports and also the CAS Promotion committee. <br> iii)The system of tracking user grievances and the extent of grievance redressal details may also be made available to the CAS Promotion Committee. |  |  |

Students' Council Elections 2018-19


# Central University of Rajasthan 

Students' Council Elections 2018-19

| Group | No. of Rep. | Name of Elected Candidate |
| :--- | :---: | :--- |
| Ph.D | 02 | 1. Mr. Himanshu Kumar Bairwa (2017PHDMB01), <br> 2.Mr. Shankar Lar Choudhary (2015PHDEN04), <br> Department of English <br> M.Tech, M.Pharm, M. Arch |
| Architecture | 01 | Mr. Akshay Gupta (2018MARCH009), Department <br> of Architecture |
| Chemistry | 01 | NIL |$|$| Mr. Vivek Meena (201 \&MSBCH016), Department of |
| :--- |
| Physics |
| Mathematics |
| Economics |




## MINISTRY OF HUMAN RESOURCE DEVELOPMENT

UNIVERSITY GRANTS COMMISSION

## NOTIFICATION

New Delhi, the 5th May, 2016
University Grants Commission (Minimum Standards and Procedure for Award of M.PHIL./PH.D
Degrees) Regulations, 2016
\{In supersession of the UGC (Minimum Standards and Procedure for Awards of M.Phil./Ph.D. Degree) Regulation, 2009, notified in The Gazette of India [No. 28, Part III-Section 4] for the week July 11-July 17, 2009\}

No. F. 1-2/2009(EC/PS)V(I) Vol. II - In exercise of the powers conferred by clauses (f) and (g) of sub-section (1) of Section 26 of the University Grants Commission Act, 1956 (3 of 1956), and in supersession of the UGC (Minimum Standards and Procedure for Awards of M.Phil./Ph.D. Degree) Regulation, 2009, notified in The Gazette of India [No. 28, Part III-Section 4] for the week July 11 - July 17, 2009, the University Grants Commission hereby makes the following Regulations, namely:-

1. Short title, Application and Commencement:
1.1 These Regulations may be called University Grants Commission (Minimum Standards and Procedure for Award of M.Phil./Ph.D. Degrees) Regulations, 2016.
1.2 They shall apply to every University established or incorporated by or under a Central Act, a Provincial Act, or a State Act, every affiliated college, and every Institution Deemed to be a University under Section 3 of UGC Act, 1956.
1.3 They shall come into force from the date of their publication in the Gazette of India.
2. Eligibility criteria for admission to the M.Phil. programme:
2.1 Candidates for admission to the M.Phil. programme shall have a Master's degree or a professional degree declared equivalent to the Master's degree by the corresponding statutory regulatory body, with at least $55 \%$ marks in aggregate or its equivalent grade ' B ' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational Institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions.
2.2 A relaxation of $5 \%$ of marks, from $55 \%$ to $50 \%$, or an equivalent relaxation of grade, may be allowed for those belonging to SC/ST/OBC(non-creamy layer)/Differently-Abled and other categories of candidates as per the decision of the Commission from time to time, or for those who had obtained their Master's degree prior to $19^{\text {th }}$ September, 1991. The eligibility marks of $55 \%$ (or an equivalent grade in a point scale wherever grading system is followed) and the relaxation of $5 \%$ to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedures.
3. Eligibility criteria for admission to Ph.D.programme:

Subject to the conditions stipulated in these Regulations, the following persons are eligible to seek admission to the Ph.D. programme:
3.1 Master's Degree holders satisfying the criteria stipulated under Clause 2 above.
3.2 Candidates who have cleared the M.Phil. course work with at least $55 \%$ marks in aggregate or its equivalent grade ' B ' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) and successfully completing the M.Phil. Degree shall be eligible to proceed to do research work leading to the Ph. D. Degree in the same Institution in an integrated programme. A relaxation of $5 \%$ of marks, from $55 \%$ to $50 \%$, or an equivalent relaxation of grade, may be allowed for those belonging to SC/ST/OBC(non-creamy layer)/differently-abled and other categories of candidates as per the decision of the Commission from time to time.
3.3 A person whose M.Phil. dissertation has been evaluated and the viva voce is pending may be admitted to the Ph.D. programme of the same Institution;
3.4 Candidates possessing a Degree considered equivalent to M.Phil. Degree of an Indian Institution, from a Foreign Educational Institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions, shall be eligible for admission to Ph.D. programme.

## 4. Duration of the Programme:

4.1 M.Phil. programme shall be for a minimum duration of two (2) consecutive semesters / one year and a maximum of four (4) consecutive semesters / two years.
4.2 Ph.D. programme shall be for a minimum duration of three years, including course work and a maximum of six years.
4.3 Extension beyond the above limits will be governed by the relevant clauses as stipulated in the Statute/Ordinance of the individual Institution concerned.
4.4 The women candidates and Persons with Disability (more than $40 \%$ disability) may be allowed a relaxation of one year for M.Phil and two years for Ph.D. in the maximum duration. In addition, the women candidates may be provided Maternity Leave/Child Care Leave once in the entire duration of M.Phil/Ph.D. for up to 240 days.
5. Procedure for admission:
5.1 All Universities and Institutions Deemed to be Universities shall admit M.Phil/Ph.D. students through an Entrance Test conducted at the level of Individual University/Institution Deemed to be a University. The University/Institution Deemed to be a University may decide separate terms and conditions for Ph.D. Entrance Test for those students who qualify UGC-NET (including JRF)/UGC-CSIR NET (including JRF)/SLET/GATE/teacher fellowship holder or have passed M.Phil programme. Similar approach may be adopted in respect of Entrance Test for M.Phil programme.
5.2 Higher Educational Institutions (HEIs) referred to in sub-clause 1.2 above and Colleges under them which are allowed to conduct M.Phil. and/or Ph.D. programmes, shall:
5.2.1 decide on an annual basis through their academic bodies a predetermined and manageable number of M.Phil. and/or Ph.D. scholars to be admitted depending on the number of available Research Supervisors and other academic and physical facilities available, keeping in mind the norms regarding the scholar- teacher ratio (as indicated in Para 6.5), laboratory, library and such other facilities;
5.2.2 notify well in advance in the institutional website and through advertisement in at least two (2) national newspapers, of which at least one (1) shall be in the regional language, the number of seats for admission, subject/discipline-wise distribution of available seats, criteria for admission, procedure for admission, examination centre(s) where entrance test(s) shall be conducted and all other relevant information for the benefit of the candidates;
5.2.3 adhere to the National/State-level reservation policy, as applicable.
5.3 The admission shall be based on the criteria notified by the Institution, keeping in view the guidelines/norms in this regard issued by the UGC and other statutory bodies concerned, and taking into account the reservation policy of the Central/State Government from time to time.
5.4 HEIs as mentioned in Clause 1.2 shall admit candidates by a two stage process through:
5.4.1 An Entrance Test shall be qualifying with qualifying marks as $50 \%$. The syllabus of the Entrance Test shall consist of $50 \%$ of research methodology and $50 \%$ shall be
subject specific. The Entrance Test shall be conducted at the Centre(s) notified in advance (changes of Centres, if any, also to be notified well in advance) at the level of the individual HEI as mentioned in clause 1.2; and
5.4.2 An interview/viva-voce to be organized by the HEI as mentioned in clause 1.2 when the candidates are required to discuss their research interest/area through a presentation before a duly constituted Department Research Committee.
5.5 The interview/viva voce shall also consider the following aspects, viz. whether:
5.5.1 the candidate possesses the competence for the proposed research;
5.5.2 the research work can be suitably undertaken at the Institution/College; 5.5.3 the proposed area of research can contribute to new/additional knowledge.
5.6 The University shall maintain the list of all the M.Phil. / Ph.D. registered students on its website on year-wise basis. The list shall include the name of the registered candidate, topic of his/her research, name of his/her supervisor/co-supervisor, date of enrolment/registration.
6. Allocation of Research Supervisor: Eligibility criteria to be a Research Supervisor, Co- Supervisor, Number of M.Phil./Ph.D. scholars permissible per Supervisor, etc.
6.1 Any regular Professor of the University/Institution Deemed to be a University/College with at least five research publications in refereed journals and any regular Associate/Assistant Professor of the university/institution deemed to be a university/college with a Ph.D. degree and at least two research publications in refereed journals may be recognized as Research Supervisor.

Provided that in areas/disciplines where there is no or only a limited number of refereed journals, the Institution may relax the above condition for recognition of a person as Research Supervisor with reasons recorded in writing.
6.2 Only a full time regular teacher of the concerned University/Institution Deemed to be a University/College can act as a supervisor. The external supervisors are not allowed. However, CoSupervisor can be allowed in inter-disciplinary areas from other departments of the same institute or from other related institutions with the approval of the Research Advisory Committee.
6.3 The allocation of Research Supervisor for a selected research scholar shall be decided by the Department concerned depending on the number of scholars per Research Supervisor, the available specialization among the Supervisors and research interests of the scholars as indicated by them at the time of interview/viva voce.
6.4 In case of topics which are of inter-disciplinary nature where the Department concerned feels that the expertise in the Department has to be supplemented from outside, the Department may appoint a Research Supervisor from the Department itself, who shall be known as the Research Supervisor, and a Co-Supervisor from outside the Department/ Faculty/College/Institution on such terms and conditions as may be specified and agreed upon by the consenting Institutions/Colleges.
6.5 A Research Supervisor/Co-supervisor who is a Professor, at any given point of time, cannot guide more than three (3)M.Phil. and Eight (8) Ph.D. scholars. An Associate Professor as Research Supervisor can guide up to a maximum of two (2) M.Phil. and six (6) Ph.D. scholars and an Assistant Professor as Research Supervisor can guide up to a maximum of one (1) M.Phil. and four (4) Ph.D. scholars.
6.6 In case of relocation of an M.Phil/Ph.D. woman scholar due to marriage or otherwise, the research data shall be allowed to be transferred to the University to which the scholar intends to relocate provided all the other conditions in these regulations are followed in letter and spirit and the research work does not pertain to the project secured by the parent institution/ supervisor from any funding agency. The scholar will however give due credit to the parent guide and the institution for the part of research already done.
7. Course Work: Credit Requirements, number, duration, syllabus, minimum standards for completion, etc.
7.1 The credit assigned to the M.Phil. or Ph.D. course work shall be a minimum of 08 credits and a maximum of 16 credits.
(C) Now the final course structure for the Integrated M.Sc. five year ( 10 Semester) Programme will be as per the following table:-

| Mathe maties <br> (1) | Physics <br> (2) | Chemist ry (3) | Biology <br> (4) | Comp. Sc. (5) | Statistics (6) | Economi cs. | English. <br> ICT(I) <br> (8) | Env. Sc. <br> (9) | $\begin{aligned} & \text { Open } \\ & \text { Elec-01 } \\ & \text { (10) } \end{aligned}$ | Open <br> Elec-02 <br> (11) | Total Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| अा-का(d) | $\begin{gathered} \text { P88-014 } y^{2} \\ \text { W } \end{gathered}$ | гннаит | [ili-104.3) 14. $102311^{2}$ |  | $\begin{aligned} & \hline 51-10 t(3) \\ & 31-16 \pi(1) v \end{aligned}$ | \|16.10|(4) | Ex-10¢ |  | -- |  | $\begin{aligned} & \text { Own sub. }+ \\ & \text { Mathematics }+02 \\ & \text { out of }(1 \text { to } 7)^{+} \\ & (8)=18 \end{aligned}$ |
| M1. 50114 |  | $\begin{aligned} & (712.3016) \\ & \text { cut:osir. } \end{aligned}$ | 14-201(3) meseant | $\begin{array}{\|l\|} \hline C s-201(b) \\ \text { cs-30at1) } \end{array}$ | S1-2013 งг-xepurp |  |  |  | --- |  | $\begin{aligned} & \text { Own sub. }+ \\ & \text { Mathematics+02 } \\ & \text { out of }(1 \text { to } 7)^{+} \\ & (8)=18 \end{aligned}$ |
|  |  |  |  |  |  si.wentre | [5.5णाय | - | $\begin{array}{\|l\|} \hline \text { ENV. } \\ \text { 30(0) } \end{array}$ | --- | Social <br> Science(3) | $\begin{aligned} & \text { Own sub. }+2 \text { out } \\ & \text { of }(1 \text { to } 7)+ \\ & (9)+(11)=18 \end{aligned}$ |
| प्रा.007 | $\begin{array}{r} \text { PIनoly } \\ \text { W. } \end{array}$ |  |  |  |  | 16.30167 |  |  | Science <br> (3) | Social <br> Science(3) | $\begin{aligned} & \text { Own sub. }+2 \text { out } \\ & \text { of }(1 \text { to } 7)+ \\ & (10)+(11)=18 \end{aligned}$ |
| MT(12) | PII(12) | (1)12) | 131/\inv.(12) | Cs(12) | ST(12) | 1:(1)12) |  |  | $\begin{aligned} & \hline \text { Science } \\ & (3)+(3) \end{aligned}$ |  | $\begin{aligned} & \text { lout (1to7) } \\ & +(10)=18 \end{aligned}$ |
| MT712) | Pl(12) | C11(12) | B17:nv. (12) | $\operatorname{CS}(12)$ | ST(12) | E(C12) |  |  | $\begin{aligned} & \text { Science } \\ & \text { (3)+(3) } \end{aligned}$ |  | $\begin{aligned} & \text { lout (1to7) } \\ & +(10)=18 \end{aligned}$ |
| MTY 20$)$ | PH(20) | $\mathrm{CH}(20)$ | Micro/Bio- Tech//Bio-Chem \#:nv.Sc. (20) | Csizo) | ST(20) | 1:C ${ }^{(20)}$ |  |  |  |  | lout ( 1 to 7)=20 |


| MT(20) | PH(20) | $\stackrel{\mathrm{CH}(20)}{ }$ | Micro/Bio- <br> Tech/Bio-Chem <br> /Finv.Sc. (20) | CS(20) | ST(20) | EC(20) |  |  |  |  | 1out ( 1107 ) $=20$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MT(20) | PH(20) | Cll(30) | Micro/Bio-Tech/Bio-Chem /Env.Sc. (20) | CS(20) | ST(20) | F.C(20) |  |  |  |  | Iout (1107) $=20$ |
| MT(20) | PH(20) | Cll(20) | Micro/Bio- <br> Teck/Bio-Chem <br> ת.nv.Sc. (20) | CS(20) | ST(20) | EC(20) |  |  |  |  | lout ( 1 to 7) $=20$ |

(D) The elective courses of different subjects will be available semester wise, according to the following table:-

that he/she has completed all required core courses of his/her subject. of the departments of their schools
(F) As per the discussion in the previous meetings, students may opt any four courses including their own course in which he/she has taken admission. Any course for which student has registered may have up to the maximum limit of students that is 250 or as lowest as 25 , therefore examination evaluation is to be properly clarified.

The Evaluation is done by the concern teacher for the course he/she is teaching.
Semester - I
Semester - II
Semester -III
Semester - IV
(C) Now the final course structure for the Integrated M.Sc. five year ( 10 Semester) Programme will be as per the following table:-

| Mathe matics <br> (1) | Physics <br> (2) | Chemist ry <br> (3) | Biology <br> (4) | Comp. Sc. (5) | Statistics <br> (6) | Economi cs. <br> (7) | English. ICT(1) <br> (8) | Env. Sc. <br> (9) | Open Elec-01 (10) | Open <br> Elec-02 <br> (II) | Total Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (x) Cut (t) |  |  |  | $\begin{aligned} & \text { Cs-1ars) } \\ & \text { Cs-10x }(1+\mathrm{P} \end{aligned}$ | STनाष (3) | स्वना(4) | Ex-101e] |  | -- |  | $\begin{aligned} & \text { Own sub. }+ \\ & \text { Mathematics }+02 \\ & \text { out of }(1 \text { to } 7)+ \\ & (8)=18 \end{aligned}$ |
|  |  | (11.2014) chesosury |  | $\begin{aligned} & \mathrm{CS}-201(x) \\ & \mathrm{CS}-\text { nan })^{\circ} \end{aligned}$ | \$1-20133 sr-3040 | FC.304t | $\begin{aligned} & \hline \text { EN.201C) } \\ & \text {-crion(1) } \end{aligned}$ |  | -- |  | $\begin{aligned} & \text { Own sub. }+ \\ & \text { Mathematics }+02 \\ & \text { out of }(1 \text { to } 7)+ \\ & (8)=18 \end{aligned}$ |
| ${ }^{\text {Mr.aeth }}$ |  |  |  | $\begin{aligned} & \hline \mathrm{Cs} \text {-mis) } \\ & \text { cs-jog(1)' } \end{aligned}$ | $51.304 .{ }^{2}$ <br> st. 302ris. |  | - | $\begin{aligned} & \hline \text { ENV. } \\ & 301(01 \end{aligned}$ | ---- | Social <br> Science(3) | $\begin{aligned} & \text { Own sub. }+2 \text { out } \\ & \text { of }(1 \text { to } 7)+ \\ & (9)+(11)=18 \end{aligned}$ |
| पा-notid | $\begin{aligned} & \text { Pl-oll } \\ & \text { Will } \end{aligned}$ |  |  |  |  | [C-30h+1 |  |  | Science <br> (3) | Social <br> Science(3) | $\begin{aligned} & \text { Own sub. }+2 \text { out } \\ & \text { of }(1 \text { to } 7)+ \\ & (10)+(11)=18 \end{aligned}$ |
| MT(12) | PII(12) | Cll(12) | BI/Inv.(12) | $\mathrm{CS}(12)$ | ST(12) | 1(C,12) |  |  | $\begin{aligned} & \text { Science } \\ & (3)+(3) \end{aligned}$ |  | $\begin{aligned} & \text { Iout }(1 \text { to } 7) \\ & +(10)=18 \end{aligned}$ |
| MT(12) | PII(12) | $\mathrm{ClI}(12)$ | B1Finv.(12) | $\mathrm{CS}(12)$ | $51(12)$ | EC(12) |  |  | Science $(3)+(3)$ |  | $\begin{aligned} & \text { lout (1to7) } \\ & +(10)=18 \end{aligned}$ |
| MT(20) | PH(20) | Cll( 20$)$ | Miero/Bio- Teck/_/Bio-Chem /Env.Sc. (20) | Cs(20) | ST(20) | 1:C $(20)$ |  |  |  |  | 1out (1to7) $=20$ |


| MT(20) | PH(20) | $\stackrel{\mathrm{CH}(20)}{ }$ | Micro/Bio- <br> Tech/Bio-Chem <br> /Finv.Sc. (20) | CS(20) | ST(20) | EC(20) |  |  |  |  | 1out ( 1107 ) $=20$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| MT(20) | PH(20) | Cll(30) | Micro/Bio-Tech/Bio-Chem /Env.Sc. (20) | CS(20) | ST(20) | F.C(20) |  |  |  |  | Iout (1107) $=20$ |
| MT(20) | PH(20) | Cll(20) | Micro/Bio- <br> Teck/Bio-Chem <br> ת.nv.Sc. (20) | CS(20) | ST(20) | EC(20) |  |  |  |  | lout ( 1 to 7) $=20$ |

(D) The elective courses of different subjects will be available semester wise, according to the following table:-

that he/she has completed all required core courses of his/her subject. of the departments of their schools
(F) As per the discussion in the previous meetings, students may opt any four courses including their own course in which he/she has taken admission. Any course for which student has registered may have up to the maximum limit of students that is 250 or as lowest as 25 , therefore examination evaluation is to be properly clarified.

The Evaluation is done by the concern teacher for the course he/she is teaching.

# Central University of Rajasthan School of Education 



COURSE STRUCTURE AND SYLLABUS Ph.D Pre-Course Work

## Course Structure for Pre PhD Course Work

Total Credit: 12

## First Semester

| Course | Course <br> Code | Course Name | Credit (CR) |
| :--- | :--- | :--- | :--- |
| Course I | PED101 | Research Methodology in Education | 4 credits |
| Course II | PEDI02 | Recent Trends in Education | 4 credits |
| Course III | PED103 | Emerging Issues of Teacher Education | 4 credits |
|  |  |  | Total Credit | 12 Credits

Detail Course Structure of PhD in Education Programme

| Course Code | Course Title | L T P | CH | CR |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Semester I | Research Methodology in Education | 3 | 1 | 0 | 4 |

Total Credit $(4+4+4) \quad: \quad 12$

## Central University of Rajasthan

School of Education
Ph.D Course Work Syllabus

## Course I: Research Methodology in Education Course Code: PED 101

Credits : Four (04)

| L | T | P |
| :--- | :--- | :--- |
| 3 | I | 0 |

Objective: The researcher would be able to

- Develop understanding about the various research methods
- Analyse and interpret the qualitative data
- Construct various types of tools.
- Understand sampling technique


## Unit I: Educational Research and Research Methods

a) Introduction to Research in Education
i) The Nature of Research; Nature of Knowledge and Scientific Inquiry: Inter disciplinarily in Educational Research. Generalisation in educational research
ii) Role of Assumptions, Paradigms and Approaches in Research
iii) Perspective of educational research: Positivism. Realism. Empiricism. Symbolic interactionism, Phenomenology
b) Research Methods: Historical, Philosophical, Experimental \& Ex-Post Facto, Survey: Normative, Co-relational, Evaluative, Ethnographic Study, Biographical. Grounded Theory analysis, conversational discourse analysis. Case Study

## Unit II: Tools and Sampling

a) Development of Tools for Educational Research
i) Questionnaire
ii) Interview Schedule
iii) Observation Schedule
iv) Sociometry
v) Psychological Tests \& Inventories
vi) Document Analysis
b) Sampling
i) Process of Sampling
ii) Sampling Errors
iii) Probability and Non -Probability Techniques

Unit III: Qualitative Analysis and Interpretation
a) Qualitative research in education
b) Tools used for qualitative research
c) Theoretical frames and basis and review of empirical studies
d) Inductive Logical Analysis

e) Content Analysis
f) Codes \& Coding
g) Theory Building
h) Reliability and Validity

## Unit IV: Modern Trends in Educational Research

a) Trends in Educational Research
b) Computer in Educational Research
i) Quantitative and qualitative analysis of data
ii) Use of computer in data analysis with special reference to SPSS,
iii) Introduction to UGC infonet, INFLIBNET and ERNET etc.
iv) Online Citation Tools: EasyLib, Biblio, Endnote etc.
v) Reference management and Anti-Plagiarism Tools

## Assignments:

- Preparing a research proposal
- Conduct a review of related literature
- Construct and adaptation a tool and fellow the procedure of standardization
- Write a research article
- Use the various anti-plagiarism tools


## Textbooks

- Best John. W. \& Kahn. J.V.(2003) : Research in Education (ninth edition) Pearson Prentice Hall,
- Koul, Lokesh(2002) Methodology of Educational Research. New Delhi: Vikas Publishing Company.


## Suggested Readings

- Bridges. D. \& Smith, R (2007).Philosophy, Methodology and Educational Research. Oxford: Wiley-Blackwell.
- Clive. O. (2004).Doing Educational research-A Guide for first time researchers. New Delhi. Vistar publication
- Creswell, J. W. (2011). Educational Research. New Delhi: PHI Learning Pvt Ltd.
- Fink, A., (2009). Conducting Research Literature Reviews: From the Internet to Paper. Sage Publications
- Flick, U. (2007). Designing Qualitative Research. London: Sage Pub.
- Garret. H. E. (2008). Statistics in Psychology and Education. Bombay Vakils: Feffer \& Simons Pvt Lid.
- Kerlinger, F.N. (1986). Foundations of Behavioural Research. Surjeet Publications, Delhi.
- Patton. M. Q.(2002).Qualitative Research and evaluation Methods. Thousand Oaks: C.A. Sage Pub.



## Course II: Recent Trends in Education <br> Course Code: PED 102

Credits: Four (04)

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## Course Objectives:

On completion of this course the researcher will be able to:
To develop understand various emerging trends in education
To develop a critical understanding about Paradigm \& pedagogical shifts in process of education
To inculcate critically evaluation role of Information Communication Technology in present and future.
To identify new\& suitable research areas of educational research

## Unit I: Recent trends in Education

a) Paradigm shifts in the process and pedagogy of education
b) Educational leadership, Inclusive Education, Generic and life skills, Classroom realities of the world's education. Higher education as a common good, Gender equality and women participation

## Unit-II: Entrepreneurship and Professional Development

a) Entrepreneurship Education
b) Professional Development through interpersonal relationship
c) Cognitive sciences and futurology of education

## Unit III: ICT and Communication in Educational Research

a) Evaluating online resources: Authority. Accuracy and objectivity
b) E-learning: scope, trends, attributes, opportunities
c) Open educational resources
d) Massive open online courses.

## Unit IV: Curriculum Development

a) Understanding the meaning, nature and scope of curriculum
b) Developing curriculum framework as per need
c) Implementation and evaluation process of Curriculum

## Activities:

- Identify research problems among the areas suggested above.
- Analyse any teacher education course curriculum on the basis of framework developed by curriculum framework committee guidelines.
- Critically review the educational issues by compiling articles from new spapers. magazines and web resources and prepare a report.

- Critical Reflection on the writings of the best books of Education
- Any other activity like: presentations, discussion, brain storming sessions, etc.


## Text Books:

- Bartlett, L.D. and Weisentein, G. R. (2003). Successful Inclusion for Educational Leaders. New Jersey: Prentice Hall.
- Mishra. B. K.. Mohanty. R. K. (2008). Trends in Education: R. Lall Book Depot. Near Govt. Inter College. Meerut U.P.
- Mohit Chakrabarti. (2005), Education in the 21 st Century, Delhi, Kalpar publication


## Suggested Readings:

- Hegarthy. S. \&Alur, M. (2002) Education of Children with Special Needs: from Segregation to Inclusion, Corwin Press. Sage Publishers
- Mason Robin \& Frank R. (2006). E-learning - The key concepts. Routledge. New York.
- Pathak. R.P. \& Chaudhary, J (2012). Educational Technology, Pearson. New Delhi.
- Richard Andrews \& Caroline (2007). E-learning Research - A handbook of, SAGE, New Delhi.
- Anand. C. L. et al. (1983). The Teacher and Education in Emerging Indian Society. New Delhi. NCERT.



## Course III: Emerging Issues of Teacher Education Course Code: PED 102

Credits : Four (04)

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## Course Objectives:

On completion of the course, the Research Scholars will be able to:

- Understand the conceptual basis of teacher education
- Understand the different paradigms of teacher education
- Acquaint with new knowledge pedagogies and approaches for teaching.
- Reflect on the basic parameters and new ideas of the processes of teacher education in India.

Unit I: Conceptual Framework of Teacher Education:
a) Concept of Teacher Education
b) Aims. Objectives. Needs. Scope and Structure of Teacher Education at different level of education
c) Teaching as a profession and professional ethics and socialization of teachers
d) Pre-service and in-service teacher education programs, Innovative programmes and practices for Continuing Professional Development of Teachers and Teacher Educators
Unit- II Governance and Quality Assurance of Teacher Education in India
a) Role of Regulatory Bodies of Teacher Education (UGC, NCTE, NAAC, QCI)
b) New Education Policy: Draff document and Directions
c) Central and state sponsored schemes for revamping Teacher Education system.
d) Total Quality Management: Concept-indicators of quality, setting standards for performance

## Unit- III Recent Trends in Teacher Education:

a) Information and Communication Technology in Teacher Education
b) Teach R and National teacher platform
c) NCFTE 2009 and its reflections on Teacher Education
d) Issues \& Challenges related to Teacher Education programmes in India

Unit- IV Research Areas of Teacher Education:
a) Action Research in Teacher Education
b) Quality issues and challenges in Teacher Education
c) Evaluation Strategies and Comparative Education.
d) Issues related to Globalization and Privatization of Teacher Education
e) International trends in Educational Research with special reference to Teacher Eduçation


## Activities:

- Identify suitable research areas in the field of education.
- Critically review the educational issues related with the same \& other associated topics by compiling research projects, research reports, research papers \& articles from newspapers, or internet sources and pprepare a report.
- Critical Reflection on the writings of the best books of Education
- Any other activity like: presentations, discussion, brain storming sessions, etc.


## Text Books:

- Gupta Arun K.: Teacher Education: Current \& Prospects New Delhi. Sterling Publications 1984.
Beck. C. \& Clark K. (2006).Innovations in Teacher Education: A Social Constructivist Approach. Ney York: State University of York.
Brubacher (1950) Modern Philosophies of Education. McGraw Hill Book Co. New York
$\square$ Herne S., Jessel J. \& Griffith, J. (2000). Study to Teach: A Guide to Studying in Teacher Education. London and New: York. Rout ledge Falmer.


## Suggested Readings:

- Desai D.M.:( 1971 ).New directions in the Education of Indian teachers Baroda. M.S. University
- Hillard, F.H. (1971). Teaching the Teacher Education London: George Allen and unwin Lid.
- Jangira N.K. (1979): Teacher training \& teacher effectiveness an experience in teacher, behavior New Delhi,National Publishing House,
- Loughran, J. (2006). Developing a Pedagogy of Teacher Education: Understanding Teachingand Learning about Teaching. New York: Routledge:
- NCF 2000, NCF 2005-NCERT Publication. New Delhi.
- NCFTE-2009-NCTE Publication, New Delhi.
- UNESCO(1976). Regional office for Education in Asia, Bangkok, Exploring, New dimensions in TeacherEducation. Bangkok, UNESCO.
- Yadav, M.S. \& Lakshmi, T.K.S. (2003). Conceptual Inputs for Secondary Teacher Education:The Instructional Role. India: NCTE.



## Algebra-I

## Core Mathematics Course (Course code: PMC-102)

Unit-I: Free Groups, Presentation of Groups, Generators and Relations, Finitely Generated Groups, Dehn's Fundamental Problem, Word's Problem, Conjugacy Problem, Isomorphism Problem, Canonical Form of Word, Coset Enumeration Method, Schreier's Transversal. ( $\mathbf{1 5}$ Lectures)

Unit-II: Free Product of Groups, Central Product of Groups, Amalgamation, Semidirect Product of Groups, Classification of groups of order pq, Affine Groups. ( 15 Lectures)

Unit-III: Non-associative algebraic structures, Universal Algebra, Quasigroups, Loops, Right loops, Multiplication Group of Loops, Inner Mapping Groups, Transversal in groups as algebraic structure, Congruences in right loops, Maltcev Variety. ( 15 Lectures)

## Reference Books:

(1) M. Suzuki, Group Theory I \& II, Springer Verlag, 1982
(2) D. Robinson, A Course in the Theory of Groups, Springer, 1996
(3) R. Lal, Algebra I \& II, Springer, 2017
(4) J. D. H. Smith, An Introduction to Quasigroups and Their Representations, CRC Press, 2006
(5) W. Magnus, A. Karrass, D. Solitar, Combinatorial group theory,Dover Publication, 1976


## Algebra-II <br> Course with the research supervisor (Course code: PMC-103)

## Credit: 04

L/T/P: 3/1/0
Unit-I: Bilinear Maps, Tensor Product of Algebras, Exact sequences, Chain complex, Cochain complex, Boundary and coboundary, Cycle and cocycle, Ext and Tor, Homology and cohomology of chain complex, Long exact sequence, Connecting Homomorphism. ( 15 Lectures)

Unit-II: Group Extension, Crossed homomorphism, principle crossed homomorphism, Interpretation of first cohomology group, Factor system, Equivalence of group extensions, Interpretation of second cohomology group, Schur-Zassenhaus Theorem, Calculation of second cosmology groups of some finite groups of small order. ( 15 Lectures)

Unit-III: Commutator subgroups, Commutator identities, Higher commutator, Three subgroup lemma, Nilpotent Groups, Lower Central Series, Upper Central Series, Nilpotency class, finite pgroups, Structure of finite p-groups upto order p ${ }^{\wedge} 4$. ( $\mathbf{1 5}$ Lectures)

## Reference Books:

(1) M. Suzuki, Group Theory I \& II, Springer Verlag, 1982
(2) D. Robinson, A Course in the Theory of Groups, Springer, 1996
(3) R. Lal, Algebra I \& II, Springer, 2017
(4) A. Babakhanian, Cohomological Methods in Group Theory, Marcel Dekker, 1972
(5) L. R. Vermani, An Elementary Approach to Homological Algebra, CRC Press, 2003


# CENTRAL UNIVERSITY OF RAJASTHAN 



MINUTES

OF

## THE NINETEENTH MEETING OF THE ACADEMIC COUNCIL

Meeting No. : Nineteenth (19 ${ }^{\text {th }}$ )

Venue : Conference Room
First Floor of Administrative Building Central University of Rajasthan, Bandarsindri, NH-8,
Tehsil - Kishangarh-305817
Dist. - Ajmer (Rajasthan)
Date : Friday, 22 ${ }^{\text {nd }}$ February, 2019
Time : 11:00 AM

## Minutes of the $19^{\text {th }}$ Meeting of the Academic Council held on Friday, $22^{\text {nd }}$ February, 2019 at 11:00 AM in the Conference Room, First Floor of Administrative Building, Central University of Rajasthan, Bandarsindri, NH-8, Tehsil-Kishangarh, District-Ajmer (Rajasthan)

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|  | 19-5.17 | New Programmes of Studies |
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|  | 19-5.19 | Fee Structure to be implemented for various existing programmes of the University for Academic Session 2019-20 |
| 19-6.0 | Any other item(s) with permission of the Chair. |  |

ANNEXURES

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Minutes of the 19th Meeting of the Academic Council held on Friday, 22 ${ }^{\text {nd }}$ February, 2019 at 11:00 AM in the Conference Room, First Floor of Administrative Building, Central University of Rajasthan, Bandarsindri, NH-8, Tehsil-Kishangarh, District-Ajmer (Rajasthan)

The following members were present:

1. Prof. Arun K Pujari
2. Prof. S. N. Ambedkar
3. Prof. M. D. Shrimali
4. Prof. J. K. Prajapat

Chairman
5. Dr. Anjali Sharma

Member
6. Prof. Pradeep Verm

Member
7. Prof. Vipin Kumar

Member
8. Prof. N. Lakshmi Aiyar
9. Ar. Ritu B Rai
10. Dr. Praveen Sahu
11. Dr. Laxmi Kant Sharma

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Ex-officio Secretary
Special Invitee:

1. Dr. Nagaraju Aitha
2. Ms. Hemlata Manglani
3. Dr. Pranta Pratik Patnaik
4. Dr. Deepesh Bhati
5. Dr. Gyana Ranjan Panda
6. Dr. Devesh Sharma
7. Dr. Anuj Sharma
8. Dr. Nicholas Lakra

Leave of absence was granted to:

1. Prof. Maithili Sharan : Member
2. Prof. Aparna Rayaprol : Member
3. Prof. R. Prasad : Member
4. Dr. Jitendra Kumar

Member
5. Dr. Subhasis Bhadra

Member

| Item No. | Particulars |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 19-1.0 | Welcome by Chairman, Academic Council. |  |  |  |
| 19-2.0 | 19-2.1 | Confirmation of the Minutes of the $18{ }^{\text {th }}$ Meeting of the Academic Council held on Thursday, 1st November, 2018 at 02:30 PM. (Annexure-A) [Page No. : 13 to 26] <br> Chairman welcomed all the members present including the special invitees. New members were also introduced later. The Chairman apprised the members about the new developments of the university. He informed about the approval of Buildings for School of Education and Department of Yoga. He also informed about the sanction of HEFA Loan for Central Instrumentation Facility at the University. |  |  |
|  | 19-2.2 | Action Taken Reports |  |  |
|  |  | Item No. | Particulars | Action Taken |
|  |  | 18-3.0 | Convocation |  |
|  |  | 18-3.1 | Proceedings of the 5th Convocation scheduled on Friday, $2^{\text {nd }}$ November, 2018. | Implemented. |
|  |  | 18-3.2 | List of Degree Awardees for Fifth Convocation. | Degrees were awarded as per the list during $5^{\text {th }}$ Convocation held on $2^{\text {nd }}$ November, 2018. |
|  |  | 18-3.3 | a) List of University Gold Medal Awardees and Certificate of Merit. <br> b) List of Endowment Medal Awardees. | Awarded, as per the list, during $5^{\text {th }}$ Convocation held on $2^{\text {nd }}$ November, 2018. |
|  |  | 18-4.0 | Evaluation \& Examination |  |
|  |  | 18-4.1 | Amendment in Clause 22 of Ordinance 3. | Notification Issued. |
|  |  | 18-4.2 | Amendment in Ordinance 9 under "SUBMISSION OF THESIS". | Notification Issued. |
|  |  | 18-4.3 | To consider incorporation of different aspects of the Massive Online Open Courses (MOOCs) in the Semester Grade Sheet. | Notification Issued. |
|  |  | 18-4.4 | Establishment of Soft Skills Development Cell in the University. | In process. |
|  |  | 18-5.0 | Course Structure and Syllabi |  |
|  |  | 18-5.1 | Approval of syllabus for Elective Course (SSS 320): Governance and Social Accountability jointly instructed by the faculty of School of Social Sciences and the Public Affairs Centre, Bangalore. | Syllabus Approved and implemented. |
|  |  | 18-5.2 | Approval of the course structure and detailed syllabus of four M.Sc. Programmes in the School of Sports Science. | Syllabus Approved and implemented. |
|  |  | 18-5.3 | Implementation of the new syllabus of Integrated M.Sc. Statistics (VII-X Semester) for existing VII Semester students. | Syllabus Approved and implemented. |


| Item No. | Particulars |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 18-6.0 | Other Matters |  |
|  |  | 18-6.1 | Academic Council member to be coopted in place of Prof. Ramakrishna Ramaswamy, under Statute 13(1)(viii). | In process. A separate agenda point is placed for consideration of Academic Council. |
|  |  | 18-6.2 | Adoption of UGC Regulations on minimum qualifications for appointment of teachers and other Academic staff for the maintenance of standards in Higher Education, 2018. | Implemented. |
|  |  | 18-6.3 | Constitution of Students' Council. | Constituted. |
|  |  | 18-7.0 | Any other item(s) with permission of the Chair. |  |
|  |  | 18-7.1 | To consider Ph.D. admission during December 2018 for unfilled approved seats of Academic Session 2018-19. | Admission process completed. 15 Ph.D. Scholars were offered admission out of which 08 Ph.D. Scholars have taken admission. |
|  |  | 18-7.2 | Minor modification in the course structure of II Semester of Integrated M.Sc. (5 year) programme. | As approved by AC, the modified course structure is implemented in the II Semester of Integrated M.Sc. (5 years) programme. |
|  |  | 18.7.3 | Approval of the course structure of III and IV Semester Integrated M.Sc. (5 year) programme. | The course structure of III and IV semester of Integrated M.Sc. (5 years) programme is discussed in the Deans Committee meeting on 7th February 2019 and the suggestions are being included in the final structure for further approval of the Vice Chancellor. |
|  |  | 18.7.4 | Approval for Course Code for PrePh.D. Course work and Approval for Evaluation /Assessment process for ED-501, Internship (8 Credits) and ED-502, Internship and Teaching Practice (12 Credits), V Semester of Integrated M.Sc. B.Ed. Programme (2018 onwards) in School of Education. | In Process. |
|  |  | 18.7 .5 | Approval of two courses: Algebra-I (04 Credits), Algebra-II (04 Credits) in Department of Mathematics for Pre-Ph.D. Coursework. | Implemented. |
| 19-3.0 | Reporting Item |  |  |  |
|  | 19-3.1 | Discontinuation of M.Des. and B.Des. Courses from Academic Session 2019-20. <br> Academic Council in its 15th Meeting (vide Agenda No. 15-3.4) held on 23.02.2017 approved collaboration with IICD and recognized IICD to execute B.Des. and M.Des. Programmes. <br> During the meeting of Joint Coordination Committee (JCC) held on 20.09.2018 at IICD, |  |  |


| Item No. | Particulars |  |
| :---: | :---: | :---: |
|  |  | Jaipur; it was informed that the Governing Board of IICD has decided to discontinue the M. Des and B. Des courses from the forthcoming Academic Session. <br> Placed before was placed before the Academic Council for information. <br> Resolution: Noted. |
| 19-4.0 | Items for ratification |  |
|  | 19-4.1 | Grade Improvement Form and its fee @ Rs. 750.00. <br> University is receiving requests from students for Grade Improvement. As per Clause 16 'Grade Improvement' of Ordinance 3, some students are eligible for improvement examination for Grade Improvement. But the Grade Improvement fee has not been included till date. Therefore, Vice Chancellor as Chairperson of the Academic Council has approved fees of Rs. 750/- per course for the purpose. <br> Placed before was placed before the Academic Council for ratification. <br> Resolution: Academic Council ratified the action taken by the Chairperson. |
|  | 19-4.2 | To start a new course in the Department of Management namely MBAInnovation, Entrepreneurship and Venture Development. <br> Department of Management in its faculty meeting held on 6th February 2019 decided that the department should apply to AICTE for approval of new Programme MBAInnovation, Entrepreneurship and Venture Development (IEV). The objective of introducing this course is to create new generation entrepreneurs. This action oriented and outcome linked credit program will admit students with innovative and problem solving mind set to work on challenging ideas and successfully build venture while simultaneously earning the Master's degree. It was also resolved that the syllabus, eligibility criteria, course credits and awarding the degree under this new programme would be in accordance with the AICTE guidelines. <br> Since the last date of filing application to AICTE was 8th February 2019, Hon'ble Vice Chancellor as Chairperson of the Academic Council approved the proposal. Accordingly, University has filed online application for approval of AICTE. In the event of receipt of approval from AICTE, the University will start the programme only after creating the necessary facilities for the programme. <br> Placed before was placed before the Academic Council for ratification. <br> Resolution: Academic Council ratified the action taken by the Chairperson. |
|  | 19-4.3 | Soft Skill Development Activities for the students of 5-Yr Integrated Studies. <br> Realizing that the students of Integrated Studies are normally lacking in Mathematical Skills and Communication Skills, it is decided in the $18^{\text {th }}$ Meeting of the Academic Council that a training programme to develop soft skills among the Integrated Students will be initiated. Keeping that in mind, the classes for development of Mathematical Skills have been initiated and the university is trying to find suitable teachers to start classes in Communication Skills. This activity is presently limited to Integrated Studies. <br> The matter was placed before the Academic Council for ratification of creation of such facilities as part of Integrated Studies. <br> Resolution: Academic Council ratified the action taken by the Chairperson. |


| Item No. | Particulars |  |
| :---: | :---: | :---: |
| 19-5.0 | Items for consideration |  |
|  | 19-5.1 | Revised Seat Matrix with Reservation for EWS. <br> Pursuant to the Government Memorandum and directions of the UGC vide letter no. UGC letter F.No.81-1/2019 (CU) dated 18 ${ }^{\text {th }}$ January 2019, a committee was constituted to finalize the Seat Matrix. The revised Seat Matrix recommended by the Committee is placed before the Academic Council for approval (Enclosed MoM with Seat Matrix -Annexure-B [Page No. 27 to 34]). <br> Accordingly, the proposed intake for various programmes is placed before the Academic Council. <br> The matter was placed before the Academic Council for approval. <br> Resolution: All the members of the Academic Council appreciated the efforts put in by the Committee Members for finalizing the Seat Matrix. Academic Council approved the Seat Matrix and the Intake for Academic Year 2019-20 with the revision proposed by the (1) Dean, School of Chemical Sciences and Pharmacy in the M.Pharm. and M.Sc. Chemistry Programmes (2) Dean, School of Humanities and Languages in M.A. (English) and M.A. (Hindi) Programmes. <br> All the Deans and Heads of the Departments were also requested to submit the proposed Intake for the Ph.D. Programme in the Academic Year 2019-20 and authorized the Vice Chancellor to approve the same. <br> It was also proposed that after filling up of the seats specified, if there is no waitlisted candidate(s) available in OBC Category, the vacant OBC Category seats may be permitted to be shown filled, by OBC Candidates initially listed against UR Category. This is restricted only to the OBC Category and not applicable to the SC / ST / EWS Category. Academic Council accepted the proposal. |
|  | 19-5.2 | Revision of Syllabi of various Courses and New Courses as suggested by different School Boards. <br> Revision of Syllabi of various courses and New Courses has been suggested by different Schools through their School Boards. The list (Annexure-C [Page No. 35 to 38]) is placed on the table. <br> The matter was placed before the Academic Council for approval. <br> Resolution: After detailed deliberations, Syllabi of various Courses and New Courses as suggested by different School Boards was approved by the Academic Council with a note to include the corrections / modifications as suggested by the concerned Heads of the Departments / Deans of the Schools. |
|  | 19-5.3 | Eligibility Criteria for Admission in different Programmes. <br> Eligibility Criteria for admission to various programmes of different schools are given in Annexure-D [Page No. 39 to 47] for the admission in Academic Session 2019-20. <br> The matter was placed before the Academic Council for approval. <br> Resolution: After detailed deliberations, Eligibility Criteria for Admission in different Programmes during Academic Year 2019-20 was approved by the Academic Council with a note to include the corrections / modifications as suggested by the concerned Heads of the Departments / Deans of the Schools. It was decided that EWS category be included with SC/ST/OBC/PWD, where relaxation in minimum marks is being given. <br> For admission in Ph.D. programmes, the candidates who are qualified for JRF in UGC/CSIR/DBT, NET, GATE and GPAT national test shall be exempted for appearing in CUCET. |


| Item No. | Particulars |  |
| :---: | :---: | :---: |
|  | 19-5.4 | Adaptation of MOOC Courses. <br> Different Schools have approved various Courses for MOOC through NPTEL SWAYAM. These are offered in the current semester. <br> The matter was placed before the Academic Council for approval. <br> Resolution: Academic Council approved adaptation of MOOC Courses. It was suggested that the complete list of courses should be kept on record. |
|  | 19-5.5 | Learning Outcome based Curriculum for different Courses. <br> Learning Outcome based Curriculum for different courses has been approved by different Schools through their School Boards. The same is placed on the table (Annexure-E [Page No. 48 to 49]). <br> The matter was placed before the Academic Council for approval. <br> Resolution: The matter was deliberated in detail. Academic Council authorized Prof. Neeraj Gupta, Dean (Academics) to make refinement in the statements of learning outcomes and also authorized the Vice Chancellor to approve the same. <br> The final list to be put in University Website. |
|  | 19-5.6 | Academic Calendar for the Academic Session 2019-20. <br> The Academic Calendar for the Academic Session 2019-20 (Annexure-F [Page No. 50 to 51]) has been prepared with dates of depositing fee for odd and even semester in total. <br> The matter was placed before the Academic Council for consideration. <br> Resolution: The matter was deliberated in detail and the Academic Calendar for the Academic Session 2019-20 was approved. It was decided to remove the word "Last" in the statements "Last date for Course Registration....". |
|  | 19-5.7 | Guidelines for the creation and utilization of Corpus Fund. <br> A Committee was constituted to frame the rules and regulations for creation of Corpus Fund and its Utilization. The committee submitted its recommendations in this regard (Annexure-G [Page No. 52-53]) which were placed in the Deans' Committee. Deans' Committee approved the proposal and recommended to place before the Finance Committee. <br> The recommendation of the committee was placed before the Academic Council for consideration. <br> Resolution: After detailed deliberations, Academic Council approved the proposal and recommended the same to be placed before the Finance Committee. |
|  | 19-5.8 | पीएच.डी. परीक्षा परिणाम की अधिसूचना हिंदी तथा अंग्रेजी दोनों भाषाओं में जारी किये जाने के संबंध में । राजभाषा अधिनियम-1963 की धारा $3(3)$ के अनुसार सभी प्रकार के सामान्य आदेश, संकल्प, नियम, अधिसूचना, प्रशासनिक या अन्य प्रतिवेदन, प्रेस विज्ञप्ति इत्यादि हिंदी तथा अंग्रेजी दोनों भाषाओं में जारी किया जाना अनिवार्य है। तदनुसार, विश्वविद्यालय से पीएच.डी. परिणाम के संबंध में जारी अधिसूचना हिंदी तथा अंग्रेजी दोनों भाषाओं में तैयार की गई है। अधिसूचना का द्विभाषी स्वरूप अकादमिक परिषद के सूचनार्थ प्रस्तुत है। <br> The matter was placed before the Academic Council for consideration. <br> Resolution: Academic Council approved the proposal. |


| Item <br> No. | Particulars |  |
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|  | 19-5.9 | System of allocating Course codes. <br> With the aim to develop a University course catalogue and to facilitate preparation of results, a system of allocating unique identifier number - Course code is developed and circulated to all Departments of the University after approval of the Competent Authority. <br> This is placed for information of the Academic Council. It is proposed that Academic section be authorized to finalize course codes for all courses to be introduced from time to time. <br> The matter was placed before the Academic Council for consideration. <br> Resolution: Academic Council ratified the decision of Chairperson and authorized Dean Academics to finalize course codes for all courses to be introduced time to time. |
|  | 19-5.10 | Appointing a Member in Academic Council. <br> As per Statute $13(1)$ (viii), six persons not in the service of the University Co-opted by the Academic Council for their special knowledge in education progress and development, are to be the members of the Academic Council. <br> Under this category 6 members were appointed as member of the Academic Council in November, 2016 vide University Notification CURAJ/R/F.83/2016/ 2717 dated 07.11.2016 for a period of 3 years. <br> Prof. Ramakrishna Ramaswamy expressed his inability to continue as member of Academic Council and accordingly action was initiated. In 18th Academic Council meeting it was deliberated at agenda item No. 18-6.1, on this matter and names of people preferably from an academic area which was not represented was suggested be sent to the Vice Chancellor. <br> Accordingly various names were suggested by the Members of AC and the name of Prof. M. R. Yadav, Faculty of Pharmacy, The Maharaja Sayajirao University of Baroda, Vadodara - 390001 was circulated to all the Members of Academic Council for their consent. After receipt of consent of the Members name of Prof. M. R. Yadav was approved the Chairman, AC to be appointed as member on AC of CU Rajasthan. <br> As per the provisions of Section 38, of Central Universities Act, 2009: <br> "All casual vacancies among the members (other than ex officio members) of any authority or other body of the University shall be filled, as soon as may be, by the person or body who appoints, elects or co-opts the member whose place has become vacant and the person appointed, elected or co-opted to a casual vacancy shall be a member of such authority or body for the residue of the term for which the person whose place he fills would have been a member." <br> As the tenure of the earlier Member is for three years and the residue period will be ending in November, 2019 (short period), the approval of Academic Council is hereby sought for appointing Prof. M.R. Yadav for the full term of 3 years. <br> The matter was placed before the Academic Council for consideration. <br> Resolution: The matter was deliberated in detail. Realizing that the residual period is only for few more months, Academic Council approved that a full term of 3 years should be given and it should not be quoted as precedence in future. |
|  | 19-5.11 | To discuss on the recommendations of the Committee constituted to examine the courses which have not been able to attract students for last $\mathbf{5}$ years. <br> The matter was deliberated in the Deans' Committee Meeting. <br> A Committee constituted for the purpose has submitted its recommendations |


| Item No. | Particulars |  |
| :---: | :---: | :---: |
|  |  | (Annexure-H [Page No. 54 to 55]), placed before the Academic Council for consideration. Resolution of Deans' Committee (Meeting No. 60 dated 06.12.2018): Deans' Committee resolved that the corresponding HoD's may be consulted for the same, their inputs may be taken and accordingly further course of action may be decided. <br> The matter was placed before the Academic Council for consideration. <br> Resolution: The matter was discussed and it was resolved that the further course of action should first be reported to the Deans' Committee and thereafter to the Academic Council. |
|  | 19-5.12 | विश्वविद्यालय में हिंदी अनिवार्य विषय करने के संबंध में । <br> विश्वविद्यालय अनुदान आयोग द्वारा विश्वविद्यालयों में राष्ट्रीय भाषा हिंदी को अनिवार्य बनाने तथा स्नातक कार्यक्रमों में हिंदी भाषा को शामिल किये जाने के संबंध में निम्नलिखित सुझाव दिये गये हैं - <br> 1. विश्वविद्यालय में स्नातक स्तर पर विद्यार्थियों को हिंदी एवं अंग्रेजी दोनों मुख्य विषय के रूप में पढ़ाये जायें। <br> 2. विश्वविद्यालय में स्नातक स्तर पर विधि एवं वाणिज्य विषयों को हिंदी में भी पढ़ाया जाये। <br> 3. विश्वविद्यालय में स्नातक स्तर पर विधि एवं वाणिज्य विषयों में हिंदी को भी पढ़ाया जाना चाहिये। <br> अधिष्ठाता समिति के विचारार्थ प्रस्तुत । <br> निर्णय :अधिष्ठाता समिति ने विचारविमर्श के बाद यह निर्णय लिया कि- आगामी सत्र से इंटीग्रेटेड कार्यक्रम में भाषा के रूप में अंग्रेजी के समकक्ष क्रेडिट के साथ हिंदी तथा संस्कृत के भी विकल्प उपलब्ध कराये जायें । इंटीग्रेटेड कार्यक्रम के समन्वयक पाठ्यक्रम आदि निर्धारित करने हेतु अग्रिम कार्यवाही करेंगे ताकि इसे आगामी अकादमिक परिषद की बैठक में रखा जा सके । <br> The matter was placed before the Academic Council for consideration. <br> Resolution: The proposal was approved by the Academic Council with a note of dissent from Head, Department of Hindi. |
|  | 19-5.13 | Course Structure of III and IV Semester of 5 Yr Integrated M.Sc. Programme. <br> Issue related to the course structure of III and IV sem. of 5 Yr Integrated M.Sc. programme: <br> As regard mismatch of course structure received from the School of Life Science as compared to the existing structure, it was decided that: <br> (a) All the students of Integrated M.Sc. (5 Y) programme except students of school of life sciences will have the following course structure of III and IV semester. <br> III Semester - Own Subject + [2 other courses out of remaining 6 subjects] + EVS + Social Science (total 18 credits) <br> IV Semester - Own Subject + [2 other courses out of remaining 6 subjects] + 1 Open Elective from Science +1 Open Elective from Social Science (total 18 credits) <br> (b) Students of School of Life Sciences will have the following combination of courses: <br> III Semester - Own Subject + Chemistry + Physics + EVS + Social Science (total 18 credits) <br> IV Semester - Own Subject + Chemistry +1 out of remaining 5 subjects +1 Open Elective from Science +1 Open Elective from Social Science (total 18 credits) <br> Regarding the open elective courses: All the students of Integrated M.Sc. (5 Y) programme may opt for available science and social science courses offered by different schools of the University in the III and IV semesters. |


| Item No. | Particulars |  |
| :---: | :---: | :---: |
|  |  | Final revised structure (Annexure-I [Page No. 56]) has also been approved by the Vice Chancellor as the Chairperson of the Academic Council. The same is placed before the Academic Council for ratification. <br> The matter was placed before the Academic Council for consideration. <br> Resolution: Academic Council approved the proposal. |
|  | 19-5.14 | Course Structure of Integrated M.Sc. 5 Yr Programme (Sem. 5 to 10). <br> Revised Course Structure for Semester 5 to Semester 10 for Integrated M.Sc. 5 Yr Programme is placed before the Academic Council for consideration. <br> The matter was placed before the Academic Council for consideration. <br> Resolution: Academic Council approved the proposal. |
|  | 19-5.15 | Discontinuation of Exit Option from the Integrated M.Sc. 5 Yr Programme. <br> 5-Yr Integrated Programmes was introduced in the university in the Academic Session 2013-14. Few years after its implementation, it was decided to have Exit Option after three years and to award B.Sc. Degree. In one of the recent Deans' Committee Meeting, general opinion emerged that the exit option may be discontinued. <br> The matter was placed before the Academic Council for consideration. <br> Resolution: Academic Council accepted the proposal to be implemented from the Batch being admitted from the Academic Session 2019-20. It was also discussed that the responsibility to improve the quality of education remains on the Heads of the Departments and the Deans of the Schools. |
|  | 19-5.16 | Progress of Research Scholars. <br> A consolidated list of all the Research Scholars and the DRC Members is given at Annexure-J [Page No. 57 to 68] It is proposed that the DRC should meet in the end of every semester regularly without fail and submit the report of progress to Research Section by the End of Semester. This will facilitate the semester registration of the Research Scholars for the next semester. <br> The matter was placed before the Academic Council for consideration. <br> Resolution: Academic Council noted the Progress of the Research Scholars. |
|  | 19-5.17 | New Programmes of Studies. <br> a) 2 Yr M.A. in Cultural Informatics - submitted by School of Social Sciences as recommended by the School Board. <br> The matter was placed before the Academic Council for consideration. <br> Resolution: Academic Council approved the proposal to start the new programme by discontinuing the Diploma in Cultural Informatics. <br> It was also informed that the School Boards have approved to start PG Diploma in Media Writing and Digital communications in Department of Culture and Media Studies, School of Social Sciences and B.Des. in School of Architecture (by discontinuing B.Voc. Programme). These proposals were also approved by the Academic Council. |


| $\begin{gathered} \hline \text { Item } \\ \text { No. } \\ \hline \end{gathered}$ | Particulars |  |
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|  | 19-5.18 | Continuation of 3 Yr B.Voc. (Interior Design) Programme as part of University's Regular Programme. <br> The B.Voc. (Interior Design) Programme is running under DDU Kaushal Kendra. As per UGC Letter, the funding for the programme is available till March 2019. A letter is being separately sent to UGC for granting permission of utilization of the available funds beyond March 2019. <br> The School Board has recommended continuation of the existing batches as University's regular programme. It is also suggested to offer admission in the Academic Year 2019-20 as part of University's Programme with admission through CUCET. <br> The matter was placed before the Academic Council for consideration. <br> Resolution: Academic Council approved the proposal to continue the existing batches of B. Voc. as University's other regular programmes. From Academic Year 2019-20 the B. Voc. (Interior Design) programme will be replaced by multiple exit (at the end of each year) B. Des. Programme. |
|  | 19-5.19 | Fee Structure to be implemented for various existing programmes of the University for Academic Session 2019-20. <br> As per the resolution passed in 10th Academic Council Meeting vide item No. 10-4.1, a revision of the fee @ $10 \%$ increase in all the components every year (fee structure) has to be made with regard to MHRD Letter No. F.5-9/2011-Desk U dated 28th March 2013. Accordingly, $10 \%$ increase has been incorporated in all components of Fee Structure (for all programmes). <br> Accordingly, the revised fee structure for various programmes being run in the University for Academic Session 2019-20 is placed .(Annexure-K [Page No. 69 to 76]) <br> The matter was placed before the Academic Council for approval. <br> Resolution: Academic Council approved the proposal and recommended that with reference to the Agenda Item No. 19-5.7, an amount of Rs. 500/- against corpus fund, should be included in the fee structure of the new students from the Academic Session 2019-20. |
| 19-6.0 | Any other | item(s) with permission of the Chair. |

There being no more points, meeting ended with vote of thanks to the Chair.

# CENTRAL UNIVERSITY OF RAJASTHAN 



Minutes
of

The Twentieth Meeting of the Academic Council
\(\left.\left.$$
\begin{array}{lll}\text { Meeting No. } & : & \text { Twentieth }\left(20^{\text {th }}\right) \\
\text { Venue } & : & \begin{array}{l}\text { Meeting Room } \\
\text { First Floor of Administrative Building } \\
\text { Central University of Rajasthan, }\end{array} \\
\text { Bandarsindri, NH-8, }\end{array}
$$\right] \begin{array}{l}Tehsil - Kishangarh-305817 <br>

Dist. -Ajmer (Rajasthan)\end{array}\right]\)| Mate | $:$ |
| :--- | :--- |
| Time | $:$ |
|  | 11:30 A.M. |

Minutes of the $20^{\text {th }}$ Meeting of the Academic Council held on Monday, 2nd December, 2019 at 11:30 AM in the Meeting Room, first floor of Administrative Building, Central University of Rajasthan, Bandarsindri, NH8, Tehsil-Kishangarh, District-Ajmer (Rajasthan).

The following members were present:

| 1. | Prof. Arun K Pujari | Chairman |
| :---: | :---: | :---: |
| 2. | Prof. Vipin Kumar | Member |
| 3. | Prof. Praveen Sahu | Member |
| 4. | Prof. J. K. Prajapat | Member |
| 5. | Prof. Jagdish Ulhas Jadhav | Member |
| 6. | Prof. Supriya Agarwal | Member |
| 7. | Prof. Neeraj Gupta | Member |
| 8. | Prof. Pawan Kumar Dadheech | Member |
| 9. | Prof. M. R. P. Singh | Member |
| 10. | Dr. Anjali Sharma | Member |
| 11. | Dr. Ajit Kumar Patra | Member |
| 12. | Dr. Laxmi Kant Sharma | Member |
| 13. | Dr. Subhasis Bhadra | Member |
| 14. | Dr. Arvind Pandey | Member |
| 15. | Dr. Devesh Sharma | Member |
| 16. | Prof. Amit Kumar Goyal | Member |
| 17. | Prof. S. N. Ambedkar | Member |
| 18. | Dr. Easwar Srinivasan | Member |
| 19. | Prof. Sanjib Kumar Panda | Member |
| 20. | Dr. Sanjay Arora | Member |
| 21. | Prof. N. Lakshmi Aiyar | Member |
| 22. | Prof. Rajesh Kumar | Member |
| 23. | Dr. Sanjib Kumar Patra | Member |
| 24. | Dr. Pankaj Goyal | Member |
| 25. | Dr. Chandra Shekhar Gahan | Member |
| 26. | Prof. Pradeep Verma | Member |
| 27. | Prof. D. C. Sharma | Member |
| 28. | Prof. Chandi Charan Mandal | Member |
| 29. | Dr. Mamta Rani | Member |
| 30. | Dr. Jitendra Kumar | Member |
| 31. | Ms. Ritu B. Rai | Member |
| 32. | Dr. Amit Chakraborty | Member |
| 33. | Dr. Deepesh Bhati | Member |
| 34. | Dr. Nishtha Kesswani | Member |
| 35. | Prof. Manish Dev Shrimali | Member |
| 36. | Dr. Utpal Kumar Debnath | Member |
| 37. | Dr. Vijaykumar M. | Member |
| 38. | Sh. K.V.S. Kameswara Rao | Ex-officio Secretary |

Leave of absence was granted to:

| 1. | Dr. S Kandasamy | $:$ | Member |
| :--- | :--- | :--- | :--- |
| 2. | Prof. M. R. Yadav | $:$ | Member |
| 3. | Prof. G. D. Sharma | $:$ | Member |

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| Item No. | Particulars |  |
| :---: | :---: | :--- |
| $20-1.0$ | Welcome by Chairman, Academic Council. |  |
| $20-2.0$ | Convocation |  |
|  | $20-2.1$ | Proceedings of the 6th Convocation scheduled on Tuesday, 3rd December, 2019. |
|  | $20-2.2$ | List of Degree Awardees for Sixth Convocation. |
|  | $20-2.3$ | a <br> b) List of University Gold Medal Awardees and Certificate of Merit. <br> bist of Endowment Medal Awardees. |
|  | $20-2.4$ | Allocation of colour for awarding the Degrees. |
| $20-3.0$ | Approval of the name of the Degree as Master of Social Work (MSW) from <br> MA Social Work from 2018 Batch onwards as per UGC vide its Notification "Specification <br> of Degre"" of March 2014" |  |
|  | $20-3.1$ | Nomination of External Members for the Academic Council. |
|  | $20-3.2$ | Including the component of EWS (Economically Weaker Sections) in Ph.D Seat Matrix. |
|  | $20-3.3$ | Ph.D admissions in the month of December. |

## ANNEXURES

| S. <br> No. | Item <br> No. | Annexure | Subject Title |
| :---: | :---: | :---: | :--- |
| 1. | $20-2.1$ | Annexure-A | Proceedings of the 6th Convocation scheduled on Tuesday, 3rd <br> December, 2019. |
| 2. | $20-2.2$ | Annexure-B | List of Degree Awardees for Sixth Convocation. |
| 3. | $20-2.3$ | Annexure-C | a)List of University Gold Medal Awardees and Certificate of <br> Merit. <br> b) List of Endowment Medal Awardees. |


| Item No. | Particulars |  |
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| 18-1.0 | Chairman welcomed all the members present. New members were also introduced. The Chairman apprised the members about the various development plans and the upcoming projects. |  |
| 20-2.0 | Convocation |  |
|  | 20-2.1 | Proceedings of the 6th Convocation scheduled on Tuesday, $3^{\text {rd }}$ December, 2019. <br> Resolution: The Academic Council approved the Proceedings of the Sixth Convocation scheduled on Tuesday, 3rd December, 2019 in the University. |
|  | 20-2.2 | List of Degree Awardees for the Sixth Convocation. <br> Resolution: The Academic Council approved the list of Degree Awardees for the Sixth Convocation of the University. |
|  | 20-2.3 | a) List of University Gold Medal Awardees and Certificate of Merit. <br> b) List of Endowment Medal Awardees. <br> Resolution: The Academic Council approved awarding the Gold Medal and Certificate of Merit to the toppers of all the programmes during the Sixth Convocation of the University. |
|  | 20-2.4 | Allocation of colour for awarding the Degrees. <br> This year degree is to be awarded for additional programmes viz: M.Des (Crafts and Design), M.Sc. Yoga Therapy, M. Tech., CS (Cyber Physical System). <br> It has been decided that for M.Des programme, the Uttariya colour 'Orange' allocated for School of Architecture be followed. <br> For School of Education, it has been decided to follow yellow colour (turmeric) shade Uttariya. This could also be allocated to School of Sports Sciences for which Degrees will be required to be awarded in future. <br> Placed before the Academic Council for ratification. <br> Resolution: The Academic Council approved. |
|  | 20-2.5 | Approval of the name of the Degree as Master of Social Work (MSW) from MA Social Work from 2018 Batch onwards as per UGC vide its Notification "Specification of Degree" of March 2014" <br> According to the UGC notification on "Specification of Degree" of March 2014, the name of the Degree, M.A. Social Work to be considered as Master of Social Work (MSW) (UGC notification attached as Appendix-I). <br> The same was circulated to the School Board Members through mail. The Board Members have consented upon change in the name of the Degree. <br> It is proposed to announce M.A. Social Work Programme as Master of Social Work (MSW) as proposed by UGC vide its Notification "Specification of Degree" of March 2014, for the batch admitted in 2018 and onwards. This would also help to attract more number of students. <br> Placed before the Academic Council for consideration. <br> Resolution: After detailed deliberation, the Academic Council approved that the degree may be named as Master of Social Work (MSW) prospectively. Also, this year, a line in the result can be mentioned at the bottom that the degree MA(SW) is equivalent to MSW. <br> It was suggested to all Deans that while forwarding the minutes of the School Board should submit a covering note to Dean Academics mentioning the items which are to be put in the Academic Council for approval. |
| 20-3.0 | Any other item(s) with permission of the Chair. |  |
|  | 20-3.1 | Nomination of External Members for the Academic Council. <br> External Members are to be nominated preferably from the academic areas not represented as of now under Statute $13(1)($ viii ) which says "Six persons not in the service of the |


| Item No. | Particulars |
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|  | university co-opted by the Academic Council for their special knowledge in education <br> progress and development." <br> Prof. M. R. Yadav is already appointed earlier. As per the nominations received, Prof. G. D. <br> Sharma has been appointed as another member. Same is placed for ratification. <br> After detailed deliberation, following expert names have emerged: <br> 1) Prof. Malashri Lal (English) |
| 2)Dr. Kapil Hari Paranjape (Mathematical Sciences) or Prof. Peeyush Chandra <br> (Mathematics \& Statistics) |  |
| 3) Shri Onkar Singh Lakhawat |  |
| It was suggested that after getting the consent, they may be considered for the above |  |
| mentioned category. |  |

Meeting ended with thanks to the Chair

# CENTRAL UNIVERSITY OF RAJASTHAN 



Minutes
of
The Twenty First Meeting of the Academic Council

| Meeting No. | $:$ | Twenty First (21st) |
| :--- | :--- | :--- |
| Venue | $:$ | Conference Room <br> (Through Video Conferencing) <br> Second Floor of Administrative Building <br> Central University of Rajasthan, <br> Bandarsindri, NH-8, |
| Tehsil - Kishangarh-305817 |  |  |
| Dist. -Ajmer (Rajasthan) |  |  |

Minutesof the $21^{\text {st }}$ Meeting of the Academic Council held on 07th July, 2020 at11:00 AM through Video Conferencing in the Conference Room,SecondFloor of Administrative Building, Central University of Rajasthan, Bandarsindri, NH-8, Tehsil-Kishangarh, District-Ajmer (Rajasthan).

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| Item No. | Particulars |  |
| :---: | :---: | :---: |
| 21-1.0 | Welcome by Chairman, Academic Council. |  |
| 21-2.0 | 21-2.1 | Confirmation of the Minutes of the $19^{\text {th }}$ Meeting of the Academic Council held on Friday, 22nd February, 2019 at 11:00 AM. |
|  | 21-2.2 | Action Taken Reports. |
| 21-3.0 | Reporting and Recording of matters approved by AC by Circulation. |  |
|  | 21-3.1 | Minutes of the $20^{\text {th }}$ Meeting of the Academic Council held on 02.12.2019. |
|  | 21-3.2 | Starting of the Department of Biomedical Engineering under the School of Engineering and Technology <br> and <br> Introduction of B.Tech programme (4-Years) in Biomedical Engineering in the Department from Academic Year 20-21. |
|  | 21-3.3 | Starting of the course 5-Yr Integrated M. Sc. Programme in Linguistics and Language Sciences from the Academic Session 2019-20. |
|  | 21-3.4 | Constitution of Students' Council for the Academic Year 2019-2020. |
| 21-4.0 | Approval of Action Taken by the University during the Intervening Period on approval of Deans' Committee. |  |
|  | 21-4.1 | Permission to conduct special EoSE in view of SWAYAM NTPL Course. |
|  | 21-4.2 | Starting of Summer Semester. |
|  | 21-4.3 | Finalization of draft format for the Provisional/Degree Certificate for M.Des. and B. Des. Programme. |
|  | 21-4.4 | Recognition of Dr. Vivek Verma Ramalingaswami Fellow as Research Supervisor. |
|  | 21-4.5 | Open Electives for Integrated Studies <br> Electives for Semester IV of 5-Yr Integrated MSc in academic year 2019-20 |
|  | 21-4.6 | Role of Joint Supervisor- <br> Approval of Dr. SrinivasaGopalanSampathkumar as Joint Supervisor for Mr. Shubham Parashar, Ph.D. Scholar, Department of Pharmacy. |
|  | 21-4.7 | Option for dropping the MOOC Courses. |
|  | 21-4.8 | Project-Based Assessment for EoSE- <br> Assessment of the Course- 'Project Management and Appraisal'. |
|  | 21-4.9 | Non-Net Fellowship |
|  | 21-4.10 | Proposal to introduce the Scouts/Guides activities at University Level |
|  | 21-4.11 | Introduction of M.A. (Education) and M.Ed. |
|  | 21-4.12 | Introduction of Ph.D. in Yoga |
|  | 21-4.13 | Introduction of M.Sc. (Yoga and Consciousness) in Yoga Department |
|  | 21-4.14 | Fee Structure to be implemented for various existing programmes of the University for Academic Session 2020-21. |
| 21-5.0 | Items for Consideration of matters on which University has taken action due to Lockdown (or otherwise) during the intervening period. |  |
|  | 21-5.1 | Conduct of Instruction during Lockdown. |


| Item No. | Particulars |  |
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|  | 21-5.2 | Regarding conduct of End Semester Examinations of students of Terminal Semester. |
|  | 21-5.3 | Regarding conduct of End Semester Examinations and promotion of students of Intermediary Semesters who would continue in the next Semester. |
|  | 21-5.4 | Regarding conduct of End Semester Examinations and promotion of students of Intermediary Semester of Integrated programmes who wish to exercise Exit option. |
|  | 21-5.5 | For Ph.D students -DRC/Viva-Voce etc. |
|  | 21-5.6 | Conduct of Back Paper Semester Examination for students. |
|  | 21-5.7 | Changes in the Semester Grade Sheet. |
| 21-6.0 | Items for consideration |  |
|  | 21-6.1 | Conduct of online instruction for odd Semester of Academic Year 2020-21. |
|  | 21-6.2 | Admissions 2020-21-Approval for Eligibility and Seat Matrix. |
|  | 21-6.3 | Regarding acceptance of DBT's support for M.Sc. Biotechnology 2 Years programme |
|  | 21-6.4 | Academic Calendar for the Session 2020-21. |
|  | 21-6.5 | Duration of Ph.D. Programme. |
|  | 21-6.6 | Establishment of Department of Vocational Studies and Skill Development. |
|  | 21-6.7 | Uniform course structure for2 Year MA/M.Sc./M.Tech./M.Arch. Programme. |
|  | 21-6.8 | Uniform Course Structure for 3-Yr M.Sc. B.Ed. Integrated Programmes (all 3 Dept.). |
|  | 21-6.9 | Regarding uniformity in the Time Table for Wednesday afternoons for various programmes. |
|  | 21-6.10 | Meeting of BoS, School Boards and Academic Council for Academic planning of Academic Year 2020-21. |
| 21-7.0 | Matters relating individual School of Studies. |  |
|  | 21-7.1 | Recommendation of School Board-School of Architecture. |
|  | 21-7.2 | Recommendation of School Board-School of Chemical Sciences and Pharmacy. |
|  | 21-7.3 | Recommendation of School Board-School of Commerce and Management. |
|  | 21-7.4 | Recommendation of School Board-School of Earth Sciences. |
|  | 21-7.5 | Recommendation of School Board-School of Education. |
|  | 21-7.6 | Recommendation of School Board-School of Engineering and Technology. |
|  | 21-7.7 | Recommendation of School Board-School of Humanities and Languages. |
|  | 21-7.8 | Recommendation of School Board-School of Life Sciences. |
|  | 21-7.9 | Recommendation of School Board-School of Mathematics, Statistics and Computational Sciences. |
|  | 21-7.10 | Recommendation of School Board-School of Physical Sciences. |
|  | 21-7.11 | Recommendation of School Board-School of Social Sciences. |
|  | 21-7.12 | Recommendation of School Board-School of Sports Sciences. |
| 21-8.0 | Any other item(s) with permission of the Chair. |  |


| $\begin{gathered} \text { S. } \\ \text { No. } \end{gathered}$ | Item No. | Annexure | Subject Title |
| :---: | :---: | :---: | :---: |
| 1. | 21-2.1 | Annexure-A | Confirmation of the Minutes of the $19^{\text {th }}$ Meeting of the Academic Council held on 22 ${ }^{\text {nd }}$ February, 2019 at 11:00 AM. |
| 2. | 21-3.1 | Annexure-B | Minutes of the 20th Meeting of the Academic Council |
| 3. | 21-3.2 | Annexure-C | Starting of the Department of Biomedical Engineering under the School of Engineering and Technology and to introduce B.Tech programme (4-Years) in Biomedical Engineering in the Department from Academic Year 2021. |
| 4. | 21-3.4 | Annexure-D | Constitution of Students' Council for the Academic Year 2019-2020. |
| 5. | 21-4.14 | Annexure-E | Fee Structure to be implemented for various existing programmes of the University for Academic Session 202021. |
| 6. | 21-5.7 | Annexure-F | Changes in the Semester Grade Sheet. |
| 7. | 21-6.2 | Annexure-G | Admissions 2020-21- Approval for Eligibility and Seat Matrix. |
| 8. | 21-6.4 | Annexure-H | Academic Calendar for the Session 2020-21. |
| 9. | 21-7.7 | Annexure-I | Panel of Experts for the course 5-Yr Integrated M. Sc. Programme in Linguistics and Language Sciences. |

Minutes of the 21st Meeting of the Academic Council held on 07th July, 2020 at 11:00 AM through Video Conferencing in the Conference Room, Second Floor of Administrative Building, Central University of Rajasthan, Bandarsindri, NH-8, Tehsil-Kishangarh, District-Ajmer (Rajasthan).

## MEMBERS PRESENT

## Members physically present

1. Prof. Arun K Pujari
2. Prof. M. D. Shrimali
3. Mr. Utpal Debnath, CoE
4. Mr. KVS Kameswara Rao, Registrar

Chairman
Member
Special Invitee
Ex-officio Secretary

## Present through online mode

1. Prof. M. R. Yadav
2. Prof G. D. Sharma
3. Prof. S. N. Ambedkar
4. Prof. J. K. Prajapat
5. Dr. Anjali Sharma
6. Prof. Pradeep Verma
7. Prof. N. Lakshmi Aiyar
8. Ar. Ritu B Rai
9. Dr. Praveen Sahu
10. Dr. Laxmi Kant Sharma
11. Dr. Ajit Kumar Patra
12. Prof. Supriya Agarwal
13. Prof. Someshwar Das
14. Prof. M.R.P. Singh
15. Dr. S. Kandasamy
16. Dr. Pankaj Goyal
17. Dr. ChandiCharanMandal
18. Dr. Manas Kumar Patra
19. Dr. Chandra Shekhar Gahan
20. Prof. Neeraj Gupta
21. Dr. Pawan K. Dadheech
22. Dr. JagdishUlhasJadhav
23. Dr. Bhumika Sharma
24. Dr. Sanjay Kumar
25. Dr. VijayaKumar M.
26. Prof. Amit Kumar Goyal
27. Prof. Uma Shankar Mishra
28. Dr. SubhasisBhadra
29. Dr. Deepesh Bhati
30. Dr. Arvind Pandey
31. Dr. Devesh Sharma
32. Dr. Easwar Srinivasan
33. Prof. Sanjib Kumar Panda
34. Dr. Sanjay Arora
35. Prof. Rajesh Kumar
36. Dr. Sanjib Kumar Patra
37. Prof. D.C. Sharma
38. Dr. Mamta Rani
39. Dr. Jitendra Kumar
40. Dr. Amit Chakraborty
41. Dr. Nishtha Keswani
42. Prof. A.K. Gupta
43. Prof. R. T. Pardasani
44. Prof. Subhash Dhulia
45. Prof. A.P. Singh
46. Prof. S.S. Agarwal
47. Dr. Nicholas Lakra

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## MINUTES WITH REFERENCE TO DETAILED AGENDA

| ItemNo. | Particulars |  |  |  |
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| 21-1.0 | The Chairman extended hearty welcome to all the members of the Academic Council. He also expressed gratitude towards the external members Prof G D Sharma and Prof. M. R. Yadav. It was shared with the members that the University has started a unique model of running online programmes; the syllabus has been completed on time in the month of May.As per UGC guidelines, Exams from Home were conducted for the final semester students. The teachers of the University were also engaged in research and writing projects. He also shared that one of the biggest achievements is Department of Biotechnology at CURajhas beenselected by DBT to support the M.Sc. Biotechnology Programme. |  |  |  |
| 21-2.0 | 21-2.1 | Confirmation of the Minutes of the 19th Meeting of the Academic Council held on Friday, 22nd February, 2019 at 11:00 AM.(Annexure-A). <br> Resolution: The Academic Council confirmed the minutes. |  |  |
|  | 21-2.2 | Action Taken Reports |  |  |
|  | Item No. Particula |  |  |  |
|  |  | 19-5.0 | Items for consideration |  |
|  |  | 19-5.1 | Revised Seat Matrix with Reservation for EWS. | Implemented. |
|  |  | 19-5.2 | Revision of Syllabi of various Courses and New Courses as suggested by different School Boards | Approved and implemented. |
|  |  | 19-5.3 | Eligibility Criteria for Admission in different Programmes. | Implemented. |
|  |  | 19-5.4 | Adaptation of MOOC Courses. | Implemented. |
|  |  | 19-5.5 | Learning Outcome based Curriculum for different Courses. | The matter is under process. |
|  |  | 19-5.6 | Academic Calendar for the Academic Session 2019-20. | Implemented. |
|  |  | 19-5.7 | Guidelines for the creation and utilization of Corpus Fund. | $19^{\text {th }}$ AC recommended to be placed in the $27^{\text {th }} F C$ and the same was approved in FC. |
|  |  | 19-5.8 | पीएच.डी. परीक्षा परिणाम की अधिसूचना हिंदी तथा अंग्रेजी दोनों भाषाओं में जारी किये जाने के संबंध में। | Necessary action has been taken. |
|  |  | 19-5.9 | System of allocating Course codes. | Implemented. |
|  |  | 19-5.10 | Appointing a Member in Academic Council. | Necessary action has been taken. Prof. M. R. Yadav was appointed. |
|  |  | 19-5.11 | To discuss on the recommendations of the Committee constituted to examine the courses which have not been able to attract students for last 5 years. | The respective Departments are making efforts to popularize such programmes. |
|  |  | 19-5.12 | विश्वविद्यालयमें हिंदी अनिवार्य विषय करने के संबंध में। | It was decided that Hindi and Sanskrit may be considered as optional subjectsin all Integrated M.Sc. Programmes. |
|  |  | 19-5.13 | Course Structure of III and IV Semester of 5 Year Integrated M.Sc. Programme. | Implemented. |
|  |  | 19-5.14 | Course Structure of Integrated M.Sc. 5 Year Programme (Sem. 5 to 10). | Implemented. |
|  |  | 19-5.15 | Discontinuation of Exit Option from the Integrated M.Sc. 5 Yrs. Programme. | Implemented. |
|  |  | 19-5.16 | Progress of Research Scholars. | Noted. |
|  |  | 19-5.17 | New Programmes of Studies. | PG Diploma in Media Writing and Digital Communications in Department of CMS has been started and B.Des. in School of Architecture is under consideration. |
|  |  | 19-5.18 | Continuation of 3 Year B.Voc. (Interior Design) Programme as part of University's Regular Programme. | 3 Year B.Voc. (Interior Design) Programme has been discontinued from the year 2019-20. |


| ItemNo. | Particulars |  |  |  |
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|  |  |  | Fee Structure to be implemented for var existing programmes of the University Academic Session 2019-20. | Implemented. |
|  | Resolution: Noted |  |  |  |
| 21-3.0 | Reporting and Recording of matters approved by AC by Circulation <br> (NOTE: Matters which were approved by AC on circulation are reported here for the sake of record and future reference) |  |  |  |
|  | 21-3.1 | Minutes of the 20 ${ }^{\text {th }}$ Meeting of the Academic Council. <br> Minutes of the $20^{\text {th }}$ Meeting of the Academic Council held on 2 ${ }^{\text {nd }}$ December 2019 were circulated through mail. Placed as(Annexure B). <br> Resolution: Noted. |  |  |
|  | 21-3.2 | Starting of the Department of Biomedical Engineering under the School of Engineering and Technology <br> and <br> to introduce B.Tech programme (4-Years) in Biomedical Engineering in the Department from Academic Year 20-21. <br> Academic Council approved by circulation the establishment of the Department of Biomedical Engineering under School of Engineering and Technology and to introduce B.Tech. programme ( 4 -Years) in Biomedical Engineering in the Department. <br> The detailed project report for Department of Biomedical Engineering, Course Proposal for Biomedical Engineering and Comments/approval received from AC Members were also sent. Placed as (Annexure C) <br> Placed before the Academic Council for information. <br> Resolution: Noted. |  |  |
|  | 21-3.3 | Starting of the course 5-Yr Integrated M. Sc. Programme in Linguistics and Language Sciences from the Academic Session 2019-20. <br> Department of Linguistics in School of Humanities and Languages from the Academic Year 2019-20 was to be started on approval of the Executive Council in 34th Meeting held on March 15, 2019. <br> It was proposed by the expert panel and subsequently recommended by the Dean's Committee to start 5 -Yr Integrated M.Sc. Programme in Linguistics and Language Science from the Academic Session 2019-20. Academic Council approved the proposal by circulation (mail was sent on August 1, 2019). <br> Accordingly the course 5-Yr Integrated M. Sc. Programme in Linguistics and Language Sciences has been started from the Academic Session 2019-20. 20 students took admission in the first batch. <br> The matter is placed before the Academic Council for information. <br> Resolution: Noted. |  |  |
|  | 21-3.4 | Constitution of Students' Council for the Academic Year 2019-2020. <br> The list of the elected and nominated students for the Students' Council for the year 2019-20 is placed herewith as (Annexure D) <br> Constitution of Students' Council is hereby reported to Academic Council. Resolution: Noted. |  |  |
| 21-4.0 | Approval of Action Taken by the University during the Intervening Period on approval of Deans' Committee. <br> (Note: Matters pertaining to individual school but applicable as a policy to entire university are included here. Similarly matters relating multiple schools are also included here) |  |  |  |


| ItemNo. | Particulars |  |
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|  | 21-4.1 | Permission to conduct special EoSE in view of SWAYAM NTPL Course. <br> An application dated 15/04/2019 received from Mr. ApoorvKhandelwal, M.Arch. Programme semester III for MOOC paper (City and Metropolitan Planning) where he has been declared fail and got $35 \%$ marks against the requirement of $40 \%$ by MOOC course. <br> Placed before the Deans' Committee for consideration. <br> Resolution of $63^{r d D}$ Deans' Committee held on 11th April 2019 decided that as a special case Mr. ApoorvKhandelwal may be given an opportunity to again appear in the special EoSE as back paper. The back paper examination for this will be conducted by the Department of Architecture along with EoSE April-May, 2019. It was also decided that this shall not be taken as precedence. <br> The matter is placed before the Academic Council for information. <br> Resolution: Noted and approved. |
|  | 21-4.2 | Starting of Summer Semester. <br> University has introduced summer semester for the students who appeared for their final semester examinations in the even semester Jan-June 2019 and having backlog(s) in any of the courses from their previous semesters. For this the students have to register themselves for the course(s) and are required to pay the requisite free. As such, the fee for the summer semester is proposed to be Rs. 880.00 per course/paper (i.e. Tuition Fee Rs. 630.00 plus Exam Fee Rs. 250.00 for one semester.) <br> The matter was placed in the Deans' Committee in its 63rd Meeting held on $11^{\text {th }}$ April 2019. Deans' Committee, after deliberations, resolved that all those Schools who wish to start the Summer Semester may submit the details. <br> Placed before the Academic Council for information. <br> Resolution: Noted and approved. |
|  | 21-4.3 | Finalization of draft format for the Provisional/Degree Certificate for M.Des. and B. Des. Programme. <br> MoU between Central University of Rajasthan and Indian Institute of Crafts and Design, Jaipur (IICD) is signed under which a two years programme 'Master of Design in Crafts and Design' is run at IICD Jaipur since 2017. A format for Provisional Degree Certificate as well as Degree Certificate needs to be finalized. Deans' Committee held on 21st August 2019 considered the matter. The recommendation of the committee constituted by Deans' Committee is approved and implemented. <br> The draft format for the Provisional/Degree Certificate for M.Des. and B. Des. Programme was to be placed in $20^{\text {th }}$ AC Meeting held on $2^{\text {nd }}$ December 2019. However, the same could not be placed. It is proposed for post facto approval in 21st AC Meeting to be held on 07.07.2020. <br> Resolution: The Academic Council approved the same. |
|  | 21-4.4 | Recognition of Dr. Vivek Verma Ramalingaswami Fellow as Research Supervisor. <br> An application has been received from Dr. Vivek Verma, Ramalingaswami Fellow, Department of Biotechnology to be recognized as Research Supervisor. As per the revised Ordinance No.9, an Assistant Professor, can become a Research Supervisor if he/she has a Ph.D. Degree, publication in referred journals and has put in at least 2 years of teaching/ research experience after obtaining Ph.D. degree. However, the clauses mentioned above are for faculty who are appointed on regular basis and Dr. Vivek Verma, joined as Ramalingaswami Fellow under DBT Ramalingaswami Re-entry Fellowship Programme. <br> The resolution of 21st Deans Committee vide agenda item no. 21-4.11 saysthat the faculty members appointed on temporary basis and also under the schemes such as INSPIRE Programs, etc. fulfilling the required criteria may be recognized as Research Co- |


| ItemNo. | Particulars |  |
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|  |  | Supervisor". Placed before the Deans' Committee for discussion. <br> Deans' Committee held on 23rd October 2019 approved the proposal for recognizing Dr. Vivek Verma as Research Co-Supervisor. <br> Placed before the Academic Council for ratification. <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 21-4.5 | Open Electives for Integrated Studies <br> Electives for Semester IV of 5-Yr Integrated M.Sc. in academic year 2019-20 <br> Following set of electives are offered and students are required to choose one in each group. Some courses are ongoing courses, and some are specially offered. <br> SC Group- Ecology and Evolution ; Special Topics in Chemistry; Food and Nutrition SS Group- Indian Constitution and Human Rights; Sustainable Environment and Disaster Management; Understanding Rajasthan. <br> The matter was placed in the Deans' Committee in its $66^{\text {th }}$ Meeting held on 07th January 2020 and it was resolved that henceforth, necessary action should be taken in time and new courses like Website Design, Social Networks and its implementation etc. should also be introduced. Attempts should be made to offer a greater number of choices to students. Each school should open its courses to students of other departments as electives. <br> Placed before the Academic Council for ratification. <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 21-4.6 | Role of Joint Supervisor- <br> Approval of Dr. SrinivasaGopalanSampathkumar as Joint Supervisor for Mr. Shubham Parashar, Ph.D. Scholar, Department of Pharmacy. <br> With reference to the Deans' Committee Agenda 61-3.2, comments received from the Dean, School of Chemical Sciences and Pharmacy that as approved in the Academic Council, Prof. S.G.Sampathkumar should be the Co-Supervisor. As per university Ordinance 9, having fulfilled the eligibility criteria to be the Supervisor for a Ph.D. Student, Prof. S.G. Sampathkumar may be approved to be a Recognized Joint Supervisor for Mr. Shubham Parashar along with the Supervisor Dr. KaisarRaza. <br> Placed before the 62 ${ }^{\text {nd }}$ Deans' Committee held on $211^{\text {st }}$ February 2019 for consideration. <br> It is noted that as per clause 6 of Ordinance 9, term 'Joint Supervisor' is used. It was agreed that both will be treated at par and will equally be committed for academic and research guidance to the Ph.D. Scholar. Report on thesis should be taken from both the Supervisors and on the documents both will be signing as 'Supervisor'. <br> Placed before the Academic Council for consideration <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 21-4.7 | Option for dropping the MOOC Courses. <br> For MOOC Courses, the criterion is to be decided as how the student can exercise the option of dropping the course. Placed before the $63{ }^{\text {rd }}$ Deans' Committee held on $11^{\text {th }}$ April 2019 for consideration. <br> Deans' Committee in its63rdmeeting held on 11 th April 2019approved that in case of MOOC courses, the student can exercise the option of dropping the course one week before the scheduled date of examination of the respective course or, one week before the start of EoSE in CURaj whichever is earlier. <br> Placed before the Academic Council for consideration. <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |


| ItemNo. | Particulars |  |
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|  | 21-4.8 | Project-Based Assessment for EoSE- <br> Assessment of the Course- 'Project Management and Appraisal'. <br> Guidance is sought as regards assessing the course titled 'Project Management and Appraisal (STI 407) as the course requires project work based assessment/evaluation. <br> Placed before the 63 ${ }^{\text {rd }}$ Deans' Committee held on $11^{\text {th }}$ April 2019 for consideration. <br> Deans' Committee in its $63^{\text {rd }}$ meeting held on 11th April 2019resolved that the existing distribution of weightage for EoSE be followed. However, any Instructor can test projectbased activities within the prevailing framework by including project evaluation in the form of written test. <br> Placed before the Academic Council for consideration. <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 21-4.9 | Non-Net Fellowship. <br> The matter was discussed in $66^{\text {th }}$ Deans Committee Meeting held on 07th January 2020 and it is resolved that <br> 1. Non-NET fellowship will be given only for 4 years, henceforth. <br> 2. No further release of scholarship for students who have completed $4^{\text {th }}$ year of studentship <br> Placed before the Academic Council for consideration. <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 21-4.10 | Proposal to introduce the Scouts/Guides activities at University Level. <br> With reference to the proposal received from the Scouts/Guides Organization, the matter of introducing Scouts/Guides Activities at College/University level is placed herewith for deliberation. <br> The 68th Deans' Committee held on 04th May 2020 accepted the proposal and it is to be implemented for the students of Integrated Programmes and B.Tech Programme for the first three years. <br> Placed before the Academic Council for consideration. <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 21-4.11 | Introduction of M.A. (Education) and M.Ed. <br> The $68^{\text {th }}$ Deans' Committee held on $04^{\text {th }}$ May 2020 accepted the proposal for introduction of M.A. (Education) from the ensuing Academic Session (2020-21) and M.Ed. from the Academic Session 2021-22. NCTE will immediately be approached for approval of M.Ed. Programme. <br> Placed before the Academic Council for consideration <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 21-4.12 | Introduction of Ph.D. in Yoga. <br> The 68th Deans' Committee held on $04^{\text {th }}$ May 2020 accepted the proposal. <br> Placed before the Academic Council for consideration <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 21-4.13 | Introduction of M.Sc. (Yoga and Consciousness) in Yoga Department <br> The $68^{\text {th }}$ Deans' Committee held on 04th May 2020 accepted the proposal. The programme |


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|  |  | can start from 2021-22. <br> Placed before the Academic Council for consideration <br> Resolution: The Academic Council approvedto start M.Sc. (Yoga and Consciousness) from 2021-22 as suggested by the Deans' Committee. |
|  | 21-4.14 | Fee Structure to be implemented for various existing programmes of the University for Academic Session 2020-21. <br> Fee Structure of various programmes of studies for all semesters for students registering for (or taking Admission in) Academic Session 2020-21 is prepared in a structured (and comprehensible) form as guidelines to the students(Annexure-E). This is in line with the approval of the fee structure by different statutory bodies ( $10^{\text {th }}$ Meeting of Academic Council heldon 25.10.2013, $16^{\text {th }}$ Meeting of the Executive Council held on 23.11.2013 and $30^{\text {th }}$ Finance Committee held on 29.06.2020). <br> Placed before the Academic Council for consideration. <br> Resolution: The Academic Council approved the fee structure of various programmes of studies for all semesters for the Academic Session 2020-21. It is further resolved that such semester-wise programme-wise fee structure will be prepared (as per the approval of the statutory bodies) in every academic year and will be notified during admission. The student seeking admission to a programme will be informed about the fee structure of the entire programme (semester-wise). |
| 21-5.0 | Items for Consideration of matters on which University has taken action due to Lockdown (or otherwise) during the intervening period |  |
|  | 21-5.1 | Conduct of Instruction during Lockdown. <br> In view of the Lockdown, the University resorted to Online mode of instruction from March 25 and the all instructions for all courses were conducted through different online strategies. In this condition, maintenance of attendance of students was not possible. Thus the requirement of $75 \%$ attendance was not considered mandatory for the semester examination. <br> Placed before the AC for approval. <br> Resolution: The Academic Council approved the same. |
|  | 21-5.2 | Regarding conduct of End Semester Examinations of Students of Terminal Semester. <br> In view of COVID-19 pandemic and subsequent lockdown, as per guidelines issued by the UGC, regarding conduct of Examination and as per recommendations of the Dean's Committee held on $4^{\text {th }}$ May 2020, following procedure was followed on this matter for holding the Semester Examination for final year students for Academic Year 2019-20. <br> Exam-From-Home: Students appear in the final semester exams from home / nearest internet connectivity point as per the schedule of exams. <br> A. For Theory Courses: Non-proctored, Open Book Exam of 2 hours duration in two parts - Part A and B with a short break. Students could use computer or android based phone and they would have the facility of answering straight on the portal or writing on A-4 sized papers, which are uploaded on the web portal. <br> It is to report that the examination was conducted between May 26 , and June 10 , 2020 for 200 students in 22 programs (total 72 papers). The result for the examination has been declared. <br> B. For Dissertation/Project type Courses: Students make online submission of their project-reports other documents to the supervisor as per schedule who processes them. This is followed by an online Presentation/Jury/Viva-Voce using a video conferencing platform. <br> It is to report that Viva-Voce for 211 students was held between May 26, and June 10, 2020. |


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|  |  | C. For Lab Courses: Online Viva-Voce exam using a video conferencing platform. <br> Placed before the Academic Council for ratification. <br> Resolution: The Academic Council ratified and approved the same. |
|  | 21-5.3 | Regarding conduct of End Semester Examinations and Promotion of Students of Intermediary Semesters who would continue in the next semester. <br> In view of COVID-19 pandemic and subsequent lockdown, as per guidelines issued by theUGC, regarding conduct of End-Semester Examination and as per recommendations of theDean's Committee held on $4^{\text {th }}$ May 2020, following procedure was followed on this matter. <br> - All students are promoted to the next semester. <br> - The final results of current semester courses are declared on the basis of two internal assessments done during the semester. <br> - The SGPA of the present semester will not be considered while calculating the Final Grade Point Average and deciding the merit for the purpose of award of Gold Medal. (Modified Grade Sheet is proposed as separate item- Item No. 21-5.7) <br> - A student would have an option - In case he/she is not satisfied with the grade awarded by the formula or she/he would like to consider the grade of this to be part of Grade Point Calculation, she/he can write that paper (traditional exam) after the situation becomes normal <br> Placed before the Academic Council for ratification. <br> Resolution: While approving the above, it is resolved that the optional EoSE will be conducted in Face to Face conventional paper mode at University Campus when the normalcy returns. <br> With regard to missing CIA-I internal evaluation, the concerned Dean in consultation with the course instructor and HoD can decide an appropriate method for conducting CIA-I Examination. |
|  | 21-5.4 | Regarding conduct of End Semester Examinations and Promotion of Students of Intermediary Semester of Integrated Programmes who wish to exercise exit option <br> In view of COVID-19 pandemic and subsequent lockdown, as per guidelines issued by theUGC, regarding above-mentioned matter and as per recommendations of theDean's Committee held on $4^{\text {th }}$ May 2020, following procedure was followed on this matter. <br> The students of Integrated Masters' Programmes who are eligible to take exit with a B.Sc. degree after six semesters are facilitated to exercise this option anytime within next semester. In case they exercise this option before July, their results will be prepared as being done for the students of intermediary semesters. <br> Placed before the Academic Council for ratification. <br> Resolution: The Academic Council ratified and approved the same. |
|  | 21-5.5 | For Ph.D. Students - (a) DRC/Viva Voce etc. <br> In view of COVID-19 pandemic and subsequent lockdown, as per guidelines issued by the UGC, regarding conduct of Ph.D. Viva-Voce Examination and as per recommendations of the Dean's Committee held on $4^{\text {th }}$ May 2020, following procedure was followed to conduct of Ph.D. Viva-Voce Examinations through Video conferencing (VC). <br> 1. The one of the external examiner as recommended by the Vice Chancellor will be invited (preferably in person or through VC to be a member of Ph. D. Viva-voce examination Board along with the Head of the Department, Dean of the School and Supervisor as Convener of the Board. <br> 2. In case, the external examination of Ph.D. Viva-voce Examination Board is attending through VC, other examiner may also be invited through VC as special invitee. |


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|  |  | 3. The Viva-Voce shall be held in a hall/room which is equipped with necessary infrastructure to hold Viva-Voce examination through VC. <br> 4. The Ph. D. Student, Supervisor, Head of the Department, and Dean of the School should be present in person during the Viva-voce examination. <br> 5. While conducting the Viva-Voce Examination through VC using electronic means or otherwise, it may be ensured that it is recorded and will be open to be attended by members of the DRC, all faculty members of the department, research scholars and other interested experts/researchers. <br> 6. During the Viva-voce examination, while recording, the report is readout and all members in VC explicitly speak out their consent. The external examiner(s) may submit her/his signed report/recommendation through e-mail or in person. A printout of this report/recommendation shall be signed and certified by the supervisor - Convener of the viva-voce board, Head of the Department, and the Dean of the School. <br> The university adopted the above guidelines and 02 viva voce have so far been held. <br> (b) Extension of Registration Period. <br> The Ph.D. students whose maximum period of submission of Ph.D. Thesis prescribed under relevant rules/regulations/ordinance is expired/expiring during the COVID-19 period (till July 2020) may be allowed to submit their thesis including completion of pending formalities, within six months from the date of expiry of regular prescribed period. <br> Placed before the Academic Council for ratification. <br> Resolution: It was noted that so far as per the guidelines issued by the UGC, Ph.D. Viva-Voce Examination has been conducted online. However, the Academic Council resolved that while the Viva-voce continued to be conducted online as per the guidelines of UGC, the Research Scholar may also be allowed to make presentation and respond to the questions in the online mode i.e. the physical presence of the scholar in the University Campus is not mandatory. |
|  | 21-5.6 | Conduct of Back-paper Semester Examination for students. <br> In view of COVID-19 pandemic and subsequent lockdown, as per guidelines issued by the UGC, regarding semester examination, the Dean's Committee held on 4th May 2020, considered the matter of students who have completed the programme and not able to graduate due to back-paper in semesters other than the final semester (where Examination-From-Home was conducted). As reported in 21-5.3, Semester-examinations were not held and regular students were promoted. <br> Deans' Committee constituted a committee to look into this matter. The committee discussed and deliberated the matter related to all back-paper examinations. Considering the present situation and the exam matter, it is recommended that all backpaper examinations for terminal as well as continuing students may be deferred till normalcy arises and accordingly students will be informed well in advance about the decision of the University about examinations of all back papers. <br> The matter is placed in AC for consideration of an appropriate mode of examination for these cases. <br> Placed before the Academic Council for ratification. <br> Resolution: Considering the UGC revised guidelines on Examination and Academic Calendar for the Universities in view of the COVID-19 Pandemic dated July 06, 2020, the Back Paper Examination and special EoSE will be conducted in offline (pen and paper) mode by the end of September 2020. |
|  | 21-5.7 | Changes in the Semester Grade Sheet. <br> The result of current semester courses for intermediary students was declared on the basis of two internal assessments done during the semester. The SGPA of the current semester will not be counted while calculating the Final Grade Point Average and |


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| $\mathbf{2 1 . 6 . 0}$ | Items for consideration | $\begin{array}{l}\text { deciding the merit for the purpose of award of Gold Medal. The grade sheet indicates the } \\ \text { course for which the grades were calculated based on past performance. } \\ \text { Accordingly, the new format of Semester Grade Sheet for all intermediary/final semester } \\ \text { students is prepared Placed as (Annexure-F). } \\ \text { Placed before the Academic Council for ratification. } \\ \text { Resolution: The Academic Council ratified and approved the same. }\end{array}$ |
| $\mathbf{2 1 - 6 . 1}$ | $\begin{array}{l}\text { Conduct of online instruction for Odd Semester of Academic Year 2020-2021 } \\ \text { It is proposed to have the major part of instruction for the forthcoming semester in } \\ \text { Online mode. Lecture/Demonstration part of Lab Courses will also be imparted through } \\ \text { Online mode. However, the semester examinations will be conducted in face-to-face } \\ \text { mode. Respective instructor may design multiple assignments as part of internal } \\ \text { continuous evaluation and thus 40\% of Internal Evaluation can be in the form of } \\ \text { Assignments, Tests, Term-papers as considered appropriate by the instructor. } \\ \text { Unlike the previous semester, attendance should be mandatory. }\end{array}$ |  |
| In order to reinforce the Online instruction, Contact Classes for at least a week for each |  |  |
| batch be conducted after return of normalcy (but not earlier than October 15) in a |  |  |
| staggered manner. |  |  |
| Placed before the AC for Consideration. |  |  |
| Resolution: It was resolved that conduct of instruction for the odd semesters for |  |  |
| ongoing students be started from July 15 in Online mode. |  |  |
| Online mode should be a mixture of lecture by live Video-Conferencing mode and |  |  |
| sharing the video recordings of lectures together with a Discussion Board. Live |  |  |
| online lectures must be mandatorily recorded. Attendance, recorded |  |  |
| automatically, during live video lecture will be counted for semester attendance |  |  |
| (75\% is mandatory). Internal evaluation will be in the form of Assignments, Open- |  |  |
| book-tests, term paper equally distributed over the period for a total 40\%. |  |  |$\}$


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|  |  | Biotechnology Programme. Following is placed before the Academic Council: <br> 1. Acceptance of the DBT support for M.Sc. Biotechnology in the Department of Biotechnology, School of Life Sciences. <br> 2. Allocation of 10 seats per annum under the DBT support out of the total approved seats for the programme. Total approved seats for the Academic Year 2020-21 is 23 and thus 13 admissions will be through CUCET. The reservation of seats will be done taking 23 seats. Accordingly, out of 23,3 seats (15\%) ( 2 through CUCET +1 through DBT) are reserved for SC, 2 seats ( $7.5 \%$ ) (1+1) for ST, 6 seats $(27 \%(3+3)$ for OBC, 2 seats $(10 \%)(1+1)$ for EWS and 10 seats $(6+4)$ for UR Category. <br> 3. Approval of the syllabus for the programme as approved by the School Board. <br> Placed before the Academic Council for ratification. <br> Resolution: The Academic Council ratified and approved the same. |
|  | 21-6.4 | Academic Calendar for the Session 2020-21. (Annexure-H). <br> Placed before the Academic Council for ratification. <br> Resolution: The Academic Council ratified and approved the same with minor modifications. <br> It was recommended that in order to have sufficient time, in the initial days of Exams, Integrated studies can be done and the last week of Exam can be kept for elective courses. It was also suggested that the date for submitting the result can be considered by the CoE office on case to case basis. |
|  | 21-6.5 | Duration of Ph.D. Programme. <br> With reference to item No. 66-4.5 of $66^{\text {th }}$ Deans' Committee, There are few Ph.D. Students who have completed 5 years of registration after coursework. These students are admitted in 2013 and the registration date is January 2015. These students may be granted post facto approval of maximum one year extension as per the recommendation of the DRC and the concern School Board. (January 2021). <br> Placed before the Academic Council for ratification. <br> Resolution: The Academic Council ratified and approved the same. |
|  | 21-6.6 | Establishment of Department of Vocational Studies and Skill Development. <br> With reference to UGC Letter No. 4-2/2020 (NSQF) dated 17.02.2020 and the proposal submitted by Central University of Rajasthan vide Letter No. CURAJ/R/F.119/2020/5453 dated 18.03.2020; UGC granted establishment of Department of Vocational Studies and Skill Development has been established at Central University of Rajasthan. <br> It is proposed to run different programmes in the proposed department including B.Voc., Diploma in Ayurvedic Pharmacy, Diploma in Sports Coaching, Diploma in Yoga and Geriatric Care, Diploma in Yoga and Pain Management and Masters Programme in Skill Development. <br> Placed before the Academic Council for ratification. <br> Resolution: The Academic Council ratified and approved the same. |
|  | 21-6.7 | Uniform Course Structure for 2-Yr MA/M.Sc./M. Tech./M.Arch. Programme. <br> As per Ordinance 3-21.3: <br> "The Board of Studies with approval of the School Board and keeping in view the CBCS shall do the distribution of credits for different programmes. As a guideline: Core Courses would be $60 \%$, Discipline Specific Elective would be $20 \%$, and AECC would be $10 \%$." <br> It is proposed to have uniform course structure for all $2-\mathrm{Yr}$ Programmes following guidelines. The individual departments are to follow broadly the guidelines keeping the academic needs and characteristics of the department. <br> Types of Theory Courses are Core Courses, Elective Courses (Disc), Elective Courses (Ex- |


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|  |  | Disc), Skill Enhancement Courses and Dissertation. Credits vs Contact hours are Lecture course with assessment (1 hour a week for 1 credit), Lab courses with assessment (2 hour a week for 1 credit) and Practicum without assessment ( 4 hour a week for 1 credit). There will be 9 Core Courses, 2 Electives, 6 Discipline Electives, 1 Fitness and 1 Societal in whole. <br> Discipline specific electives- There shall be Multiple Elective Options, List of electives to be given on time by the faculty, Electives may change from time to time, Should not have tight constraint to prevent change, Each teacher must design one elective of his/her specialization, An Assistant Professor must get chance to teach one elective in a year, if willing. <br> Dissertation - Dissertation should be of at least 12 credits, it can be Mandatory or Optional, it is similar to any research supervision, no specific class hours will be defined by the Department. <br> Course on Fitness is of 2 Credits with 8 contact hours a week, distributed over 4 semesters, 30 minutes for 4 days in a week. It can be in the form of Yoga/Games/FIT-Walk. Registration should be done in the beginning of semester. $75 \%$ attendance is compulsory and the students will be given Grade-S (satisfactory) OR NS on the basis of attendance and performance. <br> Societal Course is of 2 Credits, 8 contact hours a week, Distributed over 4 semesters, 30 minutes for 4 days in a week. It can be in the form of NSS/EBSB/UBA/Village Outreach, Registration in the beginning of semester, $75 \%$ attendance is compulsory and the students will be given Grade-S (satisfactory) OR NS on the basis of attendance and performance. <br> Internship is of 2 Credits, During Vacation, Discipline Specific Internship, Department may provide a PBL, alternatively, $75 \%$ attendance is compulsory and the students will be given Grade-S (satisfactory) OR NS on the basis of attendance and performance. <br> Placed before the Academic Council for consideration. <br> Resolution: After discussion, it was resolved that <br> - Dissertation should be of minimum 8 credits. <br> - 'Fitness Course' is of 2 Credits consisting of a total 120 hours of fitness enhancement activities distributed over the 4 semesters. These activities can be in the form of Yoga/Games/FIT-Walk/Athletics or any other fitness related activity as announced by the University for which registration shall be done by the student. $75 \%$ attendance is compulsory and the students will be given Grade-S (satisfactory) OR NS on the basis of attendance and participation. For Programmes (like Yoga or Sports Sciences) where fitness related activities are part of the curriculum, the course related activities shall not be counted and the fitness activities will be additional. <br> - 'Community Service Course' is of $\mathbf{2}$ Credits consisting of a total of $\mathbf{1 2 0}$ hours distributed over the 4 semesters. It can be in the form of NSS/EBSB/UBA/Village Outreach or other such activities announced by the University, for which students will be required to register. 75\% attendance is compulsory and the students will be given Grade-S (satisfactory) OR NS on the basis of attendance and performance. For Programmes (like MSW) where societal work is part of the curriculum, the course related work shall not be counted and these specific community activities will be additional. <br> - Academic Council instructs the Deans to modify the syllabi accordingly and the Vice Chancellor is authorized to approve the same. |
|  | 21-6.8 | Uniform Course Structure for 3-Yr Integrated M.Sc. B.Ed. Programmes (all 4 Dept.) <br> It is proposed to have uniform course structure for all the 4 programmes of $3-\mathrm{Yr}$ Integrated M.Sc. (B.Ed.) Programmes in Chemistry, Physics, Mathematics and Economics. Uniformity will be maintained in the following way: <br> - Total credits of the courses will be 133 credits in each of 4 programmes, out of which 29 credits of Education Courses, 8 credits of internship and 12 credits of teaching practices. |


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|  |  | - Philosophy of Science will be one course common to all programmes. <br> - There will be single dissertation of 16 credits in the final semester for all programes. <br> - The dissertation should be preferably a collaborative one with joint involvement of Department of Education and respective Department. <br> Placed before the Academic Council for consideration. <br> Resolution: The Academic Council approved the same and further instructs the Deans to modify the syllabi accordingly and the Vice Chancellor is authorized to approve the same. |
|  | 21-6.9 | Regarding Uniformity in the Time Table for Wednesday afternoons for various programmes. <br> It was discussed in the 65 ${ }^{\text {th }}$ Deans' Committee held on $23^{\text {rd }}$ October 2019 and agreed that from the forthcoming semester while framing the time table for various programmes, Wednesday afternoons be allocated for seminars, student's presentations, discussion forums and other such Academic Activities. The preferred day for distinguished lectures would also be on Wednesday. In such case all the students and faculty members, instead of attending the scheduled departmental activity could attend the Distinguished Lectures. <br> Placed before the Academic Council for consideration. <br> Resolution: The Academic Council approved the same. |
|  | 21-6.10 | Meetings of BoS, School Boards and Academic Council for Academic Planning of Academic Year 2020-21. <br> For the purpose of bringing uniformity in function of Board of Studies and School Board of various Departments and Schools respectively, it was resolved in the 66a Deans' Committee Meeting held on 21st January 2020 that the following practices be adopted in the Board of Studies and School Board: <br> 1. In the meeting of Board of Studies matters related to and not limited to the following be discussed - Course Structure, Course Syllabus, Electives, Course-Teacher Allocation, Course Load, Procurement of Books, Laboratory development. <br> 2. In the meetings of the School Board the matters related to and not limited to the following be discussed - <br> General Academic Policy, Minutes of BoS, Progress of Research Scholars, Constitutionof DRC, Allocation of Supervisors, Recognition of Supervisors, Research Publications, Research Projects, Panel of Examiners (Ratification/Approval), Panel of Experts, final recommendation of matters to be placed in Academic Council. <br> 3. Minutes of the Board of Studies to be prepared by the Department and to be approved by the Dean before implementation. Matters for consideration by School Board will be implemented only after the approval of School Board. <br> 4. Minutes of the School Board to be prepared by the respective School and to be approved by the Dean (Academics) before implementation. Matters for consideration by Academic Council will be implemented only after the approval of Academic Council. <br> The recommendations of the School Board on the matters that are to be placed in the Academic Council are to be sent to Dean (Academics) well in advance on approval of School Board. The recommendations of the Board of Studies on the matters that are to be placed in the School Board are to be sent to respective Dean well in advance on approval of Board of Studies. <br> Placed before the Academic Council for consideration. <br> Resolution: The Academic Council approved the proposal.Further, the Academic Council resolved that as per Ordinance 32 (School Board), Meeting of the School Board should be held at least twice a year (once in each semester). All the Deans should ensure the same. |


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| 21-7.0 | Matters relating individual Schools of Studies. <br> Note: School Boards have submitted their course structures but the same are not as per the uniform course structure as resolved in Agenda item no 21-6.7 and 21-6.8. Hence, while approving the course structure/syllabi, Academic Council instructs the Deans to modify the syllabi as resolved in Agenda Item No. 21-6.7 and 6.8 and the Vice Chancellor is authorized to approve the same. |  |
|  | 21-7.1 | Recommendation of School Board - Schoolof Architecture Approval of Course Structure and Curriculum for <br> - M. Arch. (Sustainable Architecture) <br> Resolution: Academic Council approved the proposal. |
|  | 21-7.2a | Recommendation of School Board - Schoolof Chemical Sciences and Pharmacy Approval of Course Structure and Curriculum for <br> - M. Pharm. (Pharmaceutics) and M.Pharm. (Pharmaceutical Chemistry), <br> - M. Sc. Chemistry including Int. M. Sc. Chemistry, and Int. M. Sc. B. Ed. Chemistry. <br> Resolution: Resolution: Academic Council approved the proposal. |
|  | 21-7.2b | Biochemistry Course meant for 5 ${ }^{\text {th }}$ semester 5-Yr Integrated M.Sc. Chemistry (2019-20) <br> Bio-Chemistry course is a prescribed course for $5^{\text {th }}$ semester of 5-year Integrated MSc Chemistry students. But the course was not offered to the batch completed $5^{\text {th }}$ Semester in Sem-I of 2019-20 academic year. There are students who intend to Exit by the end of their $6^{\text {th }}$ semester and the same course is to be offered in the current semester. <br> The matter is placed before the Deans' Committee for consideration in its meeting 66 ${ }^{\text {th }}$ Meeting held on January 7, 2020. <br> Resolution: It is resolved to offer this course in the current semester. Dean, School of Life Science is requested in consultation with Dr. S P Singh, whether Dr. Singh can teach this course in this semester along with the other course on Pharmacology in Dept. of Pharmacy. <br> Placed before the Academic Council for ratification. <br> Resolution: The Academic Council ratified and approved the same. |
|  | 21-7.3 | Recommendation of School Board - Schoolof Commerce and Management Approval of Course Structure and Curriculum for <br> - M.Com <br> - MBA <br> Resolution: Academic Council approved the proposal. |
|  | 21-7.4 | Recommendation of School Board -Schoolof Earth Sciences. <br> Approval of revised syllabus for <br> - Integrated M.Sc. M.Sc. and Ph.D. programme in Environment Science <br> - M.Sc, and Ph.D. programme of Atmospheric Science <br> - Progress of Ph.D scholars and ratification of constituted DRC committees of Ph.D. candidates of Environmental Science and Atmospheric Science <br> - Approval of the online courses (i.e. NPTEL, SWAYAM and MOOC's for M.Sc. Environment Science <br> - Panel of Experts for Environmental Science and Atmospheric Science <br> Resolution: Academic Council approved the proposal. The Academic Council also accepted the proposed panel of experts in addition to the existing panel. |
|  | 21-7.5 | Recommendation of School Board - Schoolof Education Approval of Course Structure and Curriculum for <br> - M.A. Education <br> - M.Sc. Yoga Therapy <br> - Ph.D. Yoga |


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|  |  | Resolution: Academic Council approved the proposal. |
|  | 21-7.6a | Recommendation of School Board - Schoolof Engineering and Technology Approval of Course Structure and Curriculum for <br> - M.Tech. CSE and M.Tech. CPC <br> - B.Tech. CSE, B.Tech. ECE and B.Tech. Biomedical Engineering <br> Resolution: Academic Council approved the proposal. |
|  | 21-7.6b | Approval of the syllabus of ECS 102: Engineering, Drawing, Graphics and Design for B.Tech. (CSE and ECE) $1^{\text {st }}$ Semester. <br> Students of $1^{\text {st }}$ Semester of B.Tech. (CSE and ECE) admitted in July 2019 were to be offered courses on Engineering, Drawing, Graphics and Design (ECS 102). Syllabus was prepared in consultation with the faculty of the CSE and ECE Department and Dean, School of Architecture. <br> Placed before the Academic Council for ratification. <br> The Academic Council ratified and approved the same. |
|  | 21-7.7a | Recommendation of School Board - Schoolof Humanities and Languages Approval of <br> - Course structure and revised syllabus for Department of English <br> - Course structure and revised syllabus for Department of Hindi <br> - Extension of four Research Scholars <br> - Approval of panel of examiners for the Research Scholars <br> - Syllabus of PGDFHT and development of MOOC by Department of Hindi <br> - Panel of experts for Department of Linguistics <br> Resolution: Academic Council approved the proposal. |
|  | 21-7.7b | Course Structure and Syllabus of two courses for the course 5-Yr Integrated M. Sc. Programme in Linguistics and Language Sciences. <br> Course Structure of 5-Yr Integrated M. Sc. Programme in Linguistics and Language Sciences and the syllabus of two courses for the first two semester was prepared with the help of the experts who were invited to the Brainstorming Session. <br> Placed before the Academic Council for consideration <br> Resolution: Academic Council approved the proposal. |
|  | 21-7.7c | Panel of Experts for the course 5 -Yr Integrated M. Sc. Programme in Linguisticsand Language Sciences. <br> In order to facilitate the recruitment process, a Panel of experts for Linguistics wasapproved by the EC Members by circulation. The list is placed as (Annexure-I). It is now proposed to expand the panel for which suggestions are invited from the members of the Academic Council. <br> Placed before the Academic Council for consideration. <br> Resolution: The Academic Council accepted the proposed panel of experts in addition to the existing panel. |
|  | 21-7.8 | Recommendation of School Board - Schoolof Life Sciences <br> Approval of Course Structure and Curriculum for <br> - M.Sc. Biochemistry <br> - M.Sc. Microbiology <br> - Syllabus of M.Sc. Biotechnology is placed as separate Agenda Item at 21-6.3 <br> - Inclusion of new elective course in pre Ph.D. syllabus of Biotechnology |


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|  |  | - Adoption of NPTEL Swayam course as an Elective course in Biotechnology <br> Resolution: Academic Council approved the proposal. |
|  | 21-7.9a | Recommendation of School Board - Schoolof Mathematics, Statistics and Computational Science <br> (School Board meeting not held) <br> Resolution: The Academic Council noted the same. However, as per Ordinance 32 (School Board), it was resolved that the Meeting of the School Board should be held at least twice a year (once in each semester). |
|  | 21-7.9b | Regarding re-consideration of application for recognition as a research supervisor of Dr. Deepesh Bhati. <br> As deliberated in the meeting, the agenda point has been rewritten as follows: <br> Dr. Deepesh Bhati, Assistant Professor, Department of Statistics had submitted applicationto be recognized as Research Supervisor. The matter was placed before Deans' Committee in its 58th Meeting held on 24th August 2018 for consideration and the Committee resolved that "as per Ordinance 09, Dr. Deepesh Bhati can't be recognized as Research Supervisor." Dr. Deepesh Bhati has requested for re-consideration of his application for recognition with supporting documents related to his teaching and research in CURaj and in the University of Mysore during his Ph.D. tenure and in view of the UGCs Gazette Notification, in view of the UGC's Gazette notification, the matter is placed before Deans' Committee for consideration. <br> 61 ${ }^{\text {st }}$ Deans' Committee held on $17^{\text {th }}$ January 2019 after detailed deliberation resolved that Dr. Deepesh Bhati may guide the research student admitted prior to this date as a Co-Supervisor as a special case. He may guide the research student(s) as Supervisor henceforth. This cannot be quoted as precedence in future. <br> Placed before the Academic Council for information. <br> Dr. Deepesh Bhati recused himself from the meeting. <br> Resolution: The Academic Council approved the resolution of the 61 ${ }^{\text {st }}$ Deans' Committee as mentioned above. |
|  | 21-7.9c | Regarding UGC Grievance of Mr. Sumit Kumar, student of M.Sc. Computer Science (Big Data Analytics) on change of Grading System in Semester - III due to declaration of Professional Course. <br> A grievance has been raised by Mr. Sumit Kumar, student of M.Sc. Computer Science (Big Data Analytics) regarding the subject cited above. The student had stated that he is a student of Batch 2017-2019 and result of his first two semesters were declared by having $35 \%$ marks as passing score. However, on the basis of Notification No. CURAJ/R/F.102/2018/2220 dt. 05/09/2018, M.Sc. Computer Science (Big Data Analytics) is considered as Professional Course with 45\% passing marks. Accordingly, the result of M.Sc. Computer Science (Big Data Analytics) for III semester was declared with passing marks $45 \%$, due to which the student had failed in one Paper. <br> As per University practice any new/revised ordinance normally applicable on the new batch without affecting Grade System of any programme of the Old Batch. In the above matter, it is proposed that the Grading System be applicable for Batch 2017-19 as per the existing terms at the time of admission. Accordingly M.Sc. Computer Science (Big Data Analytics) may be considered as non - professional course for the Batch 2017-19. The matter is placed before Deans' Committee for consideration. <br> The matter was discussed in length in $62^{\text {nd }}$ Deans' Committee meeting held on $21^{\text {st }}$ February 2019 and it was decided that the grading system as applicable for the batch 2017-19 for I and II semester with $35 \%$ passing marks must be applicable for III and IV semester also for M.Sc. Computer Science (Big Data Analytics) batch 2017-2019. It was |


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|  |  | also suggested that the new rules should be clearly informed to all the teachers that for the new batch, these rules are to be ensured. Staff members of section of COE, Dean (Academics) should be aware of these rules. COE should send a proper Circular in this regard. <br> Placed before the Academic Council for ratification. <br> Resolution: The Academic Council ratified and approved the same. |
|  | $\begin{gathered} \text { 21- } \\ 7.10 a \end{gathered}$ | Recommendation of School Board -Schoolof Physical Sciences. <br> Approval of <br> - Ratification of courses <br> - Extension beyond five years for another semester of three Ph.D. students <br> - Revised course structure and syllabi <br> - Panel of experts for Physics <br> Resolution: Academic Council approved the proposal. The Academic Council accepted the proposed panel of experts in addition to the existing panel. |
|  | $\begin{gathered} \text { 21- } \\ \text { 7.11a } \end{gathered}$ | Recommendation of School Board -School of Social Sciences Approval of Course Structure and Curriculum for <br> - M. Sc. Digital Society. <br> - MSW <br> - List of MOOC Courses to be offered to the students as elective. <br> School Board Meeting not held for Department of PPLG, CMS and Economics. <br> Resolution: Academic Council approved the proposal. <br> The Academic Council was also apprised that the course structure of Economics is being restructured due to which it could not be placed in the Academic Council. The Academic Council authorized the Vice Chancellor to approve the same. |
|  | $\begin{gathered} \text { 21- } \\ 7.11 b \end{gathered}$ | New Course offered for M.Sc. in Digital Society in Semester III from July 2019 to December 2019. <br> The M.Sc. in Digital Society in the Department of Society-Technology Interface is considering STI506 - DataAnalytics for Social Sciences as a core course in place of the current STI506 ICT Lab Project Course. The same was approved and implemented in July 2019. <br> Placed before the Academic Council for ratification. <br> The Academic Council ratified and approved the same. |
|  | 21-7.12 | Recommendation of School Board-School of Sports Sciences. <br> Approval of Course Structure and Curriculum for <br> - M.Sc. Sports Biochemistry <br> - M.Sc. Sports Nutrition <br> - M.Sc. Sports Physiology <br> - M.Sc. Sports Biomechanics <br> - M.Sc. Sports Psychology <br> - Assessment of the Learning Outcome based Curriculum Framework (LOCF) for five M.Sc. courses. <br> - Panel of experts for Sports Biomechanics and Sports Psychology. <br> Resolution: Academic Council approved the proposal. |
| 21-8.0 | Any other item(s) with permission of the Chair. |  |

# CENTRAL UNIVERSITY OF RAJASTHAN 



Minutes
of

The Twenty Second Meeting of the Academic Council

Meeting No. : Twenty Second ( $\mathbf{2 2}^{\text {nd }}$ )

| Venue $:$ | Through Video Conferencing |
| :--- | :--- |
|  | From Conference Room |
|  | Second Floor of Administrative Building |
|  | Central University of Rajasthan, |
|  | Bandarsindri, NH-8, |
|  | Tehsil - Kishangarh-305817 |
|  | Dist. - Ajmer (Rajasthan) |

Date : 9 ${ }^{\text {th }}$ December 2020

$$
\text { Time } \quad: \quad 11: 30 \mathrm{AM}
$$

Minutes of the $22^{\text {nd }}$ Meeting of the Academic Council to be held on $9^{\text {th }}$ December 2020 at 11:00 AM through Video Conferencing from Conference Room, Second Floor of Administrative Building, Central University of Rajasthan, Bandarsindri, NH-8, Tehsil-Kishangarh, District-Ajmer (Rajasthan).

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|  | 22-3.3 | Regarding UGC Guidelines on Academic Calendar for the First Year of UnderGraduate and Post - Graduate students of the Universities for the session 202021 in view of COVID -19. |
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|  | 22-5.1 | Regarding admission of University employee(s) in the Ph.D. and other programmes of the University. |
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| 22-6.0 | Items for Consideration |  |


| Item No. | Particulars |  |
| :--- | :--- | :--- |
|  | $22-6.1$ | Panel of Experts for the School of Sports Science |
|  | $22-6.2$ | Extension of the TLC@CURaj beyond FY 2020-21 with financial support from <br> the University |
| $\mathbf{2 2 - 7 . 0}$ | Any other item(s) with permission of the Chair. |  |
|  | $22-7.1$ | Approval of Syllabus of 3 programmes running under Dept. of Economics |
|  | $22-7.2$ | Regarding Additions/Changes in Ordinance 9: Doctor of Philosophy (Ph.D.) <br> Programme |
|  | $22-7.3$ | To start certain certificate courses by Department of Social Work, in collaboration <br> with other University Departments and Civil Society Organizations |
|  | $22-7.4$ |  <br> Engineering) under School of Engineering and Technology. |
|  | $22-7.6$ | Approval of the course structure and syllabus of B. Tech (Bio Medical <br> Engineering) under School of Engineering and Technology |
|  | Approval of Ph.D. Syllabus and Course Structure along with Elective papers to <br> be offered from the School of Sports Science |  |

ANNEXURES

| S. <br> No. | Item <br> No. | Annexure | Subject Title |
| :---: | :--- | :--- | :--- |
| 1. | $22-2.1$ | Annexure-A | Confirmation of the Minutes of the $21^{\text {st }}$ Meeting of the <br> Academic Council held on Tuesday, $7^{\text {th }}$ July 2020 at <br> $11: 00$ AM. |
| 2. | $22-3.2$ | Annexure-B | Admission and Hostel Fee for SC/ST students. |
| 3. | $22-3.3$ | Annexure-C | Regarding UGC Guidelines on Academic Calendar for <br> the First Year of Under-Graduate and Post - Graduate <br> students of the Universities for the session 2020-21 in <br> view of COVID -19. |
| 4. | $22-3.4$ | Annexure D,E | Admissions for Sessions 2020-21. |
| 5. | $22-3.9$ | Annexure-F | Regarding ongoing admissions for UG / PG / Integrated <br> Programmes of the University. |
| 6. | $22-4.4$ | Annexure-G | Approval of Diploma programmes under Department of <br> Vocational Studies and Skill Development. |
| 7. | $22-5.3$ | Annexure-H | Panel of Experts for the School of Sports Science |
| 8. | $22-7.1$ | Annexure-I | Approval of Syllabus of 3 programmes running <br> under Dept. of Economics |
| 9. | $22-7.2$ | Annexure-J <br> Revised Annexure-J-1 | Ordinance - 9 |

Minutes of the 22 ${ }^{\text {nd }}$ Meeting of the Academic Council held on 09th December, 2020 at 11:30 AM through Video Conferencing from the Conference Room, Second Floor of Administrative Building, Central University of Rajasthan, Bandarsindri, NH-8, Tehsil-Kishangarh, District-Ajmer (Rajasthan).

## MEMBERS PRESENT

Members physically present

1. Prof. Neeraj Gupta (VC I/c)
2. Prof. D. C. Sharma
3. Mr. Chandrakant Dash, CoE
4. Mr. KVS Kameswara Rao, Registrar

Members present online

1. Prof. G D Sharma : External Member
2. Prof. Jatinder Grover
3. Prof. M R Yadav
4. Prof. Niyaz Ahmed
5. Dr. S. Suresh Babu
6. Ar. Ritu B Rai
7. Prof. Aditya Kumar Gupta
8. Prof. Amit Kumar Goyal
9. Dr. Ajit Kumar Patra
10. Dr. Anjali Sharma
11. Dr. Arvind Pandey
12. Prof. Chandi Charan Mandal
13. Dr. C S Gahan
14. Dr. Deepesh Bhati
15. Dr. Devesh Sharma
16. Dr. Easwar Srinivasan
17. Dr. Hemanga Dutta
18. Prof. Inshad Ali Khan
19. Dr. Jitendra Kumar
20. Prof. J K Prajapat
21. Prof. Jagdish Ulhas Jadhav
22. Dr. Laxmi Kant Sharma
23. Prof. M R P Singh
24. Prof. Manish Dev Shrimali
25. Dr. Mamta Rani Singh
26. Prof. N. Lakshmi Aiyar
27. Dr. Nishtha Kesswani
28. Prof. Pawan Kumar Dadheech
29. Prof. Pradeep Verma
30. Prof. Praveen Sahu
31. Dr. Pankaj Goyal
32. Prof. Rajesh Kumar
33. Dr. S. Kandasamy
34. Dr. Sanjay Arora
35. Prof. Sanjib Kumar Panda
36. Dr. Kashinath G Metri (representing HoD Yoga)
37. Prof. S. N. Ambedkar
38. Prof. Shyam Sundar Agrawal
39. Prof. Supriya Agarwal
40. Prof. Uma Shankar Mishra
: Chairman
: Member
: Special Invitee
: Ex-officio Secretary
: External Member
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41. Dr. Vijaya Kumar M.

Members to whom leave of absence granted:

1. Prof. Anil Rai (expressed in his inability to attend : External Member the meeting due to unavoidable circumstances)
: Member :

## MINUTES WITH REFERENCE TO DETAILED AGENDA

| $\begin{aligned} & \text { Item } \\ & \text { No. } \end{aligned}$ | Particulars |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 22-1.0 | The Chairman extended hearty welcome to all the members of the Academic Council. He also expressed gratitude towards the external members Prof. G. D. Sharma, Prof. M. R. Yadav, Dr. S. Suresh Babu, Prof. Niyaz Ahmed and Prof. Jatinder Grover who were present for the meeting. The Chairperson on behalf of the University acknowledged with gratitude immense contribution made by Prof. Arun K Pujari towards establishing of research facilities, greening of campus, new innovative programmes, enhancing quality of education and capacity building of teachers. The Chairperson apprised the members about recent developments including successful conduct of back paper exams and proposed EoSE in Exam from Home mode. He also informed about online admission process for the AY 2020-2021. He complimented the team of teachers and non-teaching staff who worked relentlessly to successfully manage online admission process and exams. |  |  |  |
| 22-2.0 | 22-2.1 | Confirmation of the Minutes of the $21^{\text {st }}$ Meeting of the Academic Council held on Tuesday, $7^{\text {th }}$ July 2020 at 11:00 AM. (Annexure-A) |  |  |
|  | 22-2.2 | Action Taken Reports |  |  |
|  | Item No. Particulars Action Taken <br> 21-5.0 Items for consideration  <br> 215   |  |  |  |
|  |  |  |  |  |
|  |  | 21-5.2 | Regarding conduct of End Semester Examinations of Students of Terminal Semester. | Approved and implemented |
|  |  | 21-5.3 | Regarding conduct of End Semester Examinations and Promotion of Students of Intermediary Semesters who would continue in the next semester. | A circular has been issued in this regard. |
|  |  | 21-5.4 | Regarding conduct of End Semester Examinations and Promotion of Students of Intermediary Semester of Integrated Programmes who wish to exercise exit option | Implemented |
|  |  | 21-5.5 | For Ph.D. Students - (a) DRC/Viva Voce etc. | Approved and implemented. |
|  |  | 21-5.6 | Conduct of Back-paper Semester Examination for students. | Examination has been held during November 2020 in online mode. |
|  |  | 21-5.7 | Changes in the Semester Grade Sheet. | Revised grade sheet issued to intermediary students. |
|  |  | 21-6.1 | Conduct of online instruction for Odd Semester of Academic Year 2020-2021 | Online classes for old students started from $15^{\text {th }}$ July 2020. |
|  |  | 21-6.2 | Admission 2020-2021 - Approval for Eligibility and Seat Matrix. | Implemented and accordingly admission has been ongoing for A.Y. 2020-21. |
|  |  | 21-6.3 | Regarding acceptance of DBT's support for M.Sc. Biotechnology 2 Years programme. | Implemented and accordingly admission has been done for A.Y. 2020-21. |
|  |  | 21-6.4 | Academic Calendar for the Session 2020-21. | The same was issued for old students, however, separate |



| Item <br> No. | Particulars |  |
| :---: | :---: | :---: |
|  | (Note: Matters pertaining to individual school but applicable as a policy to entire university are included here. Similarly matters relating multiple schools are also included here) |  |
|  | 22-3.1 | Academic Support Programme for SC students. <br> As per the UGC directives, to provide a special thrust for the welfare of SCs, Allocation for Welfare of SCS" (AWSC), a provision was made in the budget (Statement 1OA of the Budget) and from this fund, an Academic Support Programme in HEIs may be launched. Under this programme, the students' academic deficiencies may be identified through a welldesigned test and academic support programmes from two months to six months depending on the requirements of the students may be devised for each student in accordance with their actual requirement. <br> The committee has suggested the following: <br> 1. In order to identify the deficiencies of the students, a well-designed test of all SC students of the University may be conducted. <br> 2. Based on the outcome of the above test and availability of fund for session 2020-21, the students may be divided into three groups and to be registered in anyone of the following programmes: <br> a) Short term Programme - Duration of two months. <br> b) Mid-term Programme - Duration of four months. <br> c) Full term Programme - Duration of six months <br> 3. After completion of each Programme, a well-designed test may be conducted to evaluate the improvement in the student and to measure the achievable outcomes. <br> Placed before the Deans' Committee for consideration. <br> Resolution of 70 ${ }^{\text {th }}$ Deans' Committee held on $1^{\text {st }}$ September 2020: Approved and it was resolved that the Equal opportunity Cell may initiate a letter to be written to UGC regarding the budget earmarked for the same and then accordingly the further course of action may be decided. <br> The matter is placed before the Academic Council for information. <br> Resolution: Noted and approved. |
|  | 22-3.2 | Admission and Hostel Fee for SC/ST students. <br> The $\mathrm{SC} / \mathrm{ST}$ students who are getting admission in various academic programmes in the university are paying same Academic fees and same Hostel fees along with other students. It is observed that some universities are extending some concession in fess and hostel accommodation for reserved category students. UGC guidelines are also attached as Annexure-B. <br> Based on the information received about concessions in Academic and Hostel fees for marginalized communities in various Central Universities and UGC guidelines, the matter was discussed in the meeting. <br> The committee recommends that : <br> a) Additional percentage of seats may be provided for the girl students of SC/ST community in the University hostels, if required. <br> b) No Hostel rent shall be charged from the students of SC/ST community. <br> Placed before the Deans' Committee for consideration. |


| Item No. | Particulars |  |
| :---: | :---: | :---: |
|  |  | Resolution of 70 ${ }^{\text {th }}$ Deans' Committee held on $1^{\text {st }}$ September 2020: It was resolved that at present adequate accommodation is available in the hostels for all girl students. In future, if there is any shortage of hostel accommodation for SC/ST girl students, additional percentage may be considered and no Hostel rent (room rent) shall be charged from the students of SC/ST community as per the UGC guidelines. <br> Accordingly a notification was issued that no Hostel rent (room rent) shall be charged from the students of SC/ST community as per the UGC guidelines. <br> The matter is placed before the Academic Council for information and ratification. <br> It was apprised by the Chairman that new girls hostel is also under construction which is supposed to be completed by March 2021. Infrastructure for 100 hostel room are also proposed to be completed by March 2021 depends upon the availability of funds. <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 22-3.3 | Regarding UGC Guidelines on Academic Calendar for the First Year of UnderGraduate and Post - Graduate students of the Universities for the session 2020-21 in view of COVID -19. <br> UGC had issued guidelines approved in its meeting held on 21.09.2020. These guidelines are placed as (Annexure C). <br> The key points are as under: <br> 1. Completion of the admission process by 31.10.2020. The last date for admission to fill up remaining vacant seats to be 30.11.2020. <br> 2. Commencement of classes for fresh batch from 01.11.2020. The teaching learning process may continue in offline/online/blended mode. <br> 3. Following the six day pattern for the Academic Session 2021-201 and 2021-22. <br> 4. The entire fee including all charges to be refunded in totality on account of cancellation/migration up to 30.11.2020. <br> 5. Curtailing the breaks/vacations so that new batch of the students gets their final results and award of degree in timely manner. <br> Resolution of $71^{\text {st }}$ Deans' Committee held on $\boldsymbol{9}^{\text {th }}$ October 2020: The Committee resolved to accept the UGC Guidelines. For operational purposes, the following were resolved: <br> - The first round of admissions will be completed by 31st October 2020. Last date for filling in vacant seats to be 30.11.2020. The admission committee will decide the schedule of dates for intermediary processes. <br> - The odd semester for the new batch of students will commence from Monday $2 n d$ November 2020. The online classes for the new batch will start from 4th November 2020 (Wednesday) with a time table of 6 days per week in the online/blended mode till further decision. <br> - It was also decided that all departments shall prepare the time table for various programmes that will be made available to the office of Dean Academics latest by 25th October. |


| Item <br> No. | Particulars |  |
| :---: | :---: | :---: |
|  |  | - Admission Committee will detail the process so that the refund of fees is done in a time bound manner. <br> - A committee of Prof. Supriya Agarwal and Prof. J. K. Prajapat is constituted to prepare the Academic Calendar as per the UGC Guidelines. <br> Following action has been taken as per the above resolution <br> i. Admission has been done for UG \& PG students. <br> ii. Online classes for new batch have been started from $4^{\text {th }}$ November 2020 in online mode with 6 days per week timetable. <br> iii. An Academic Calendar for new batch of 2020-21 is prepared and placed on the website of the University. <br> The matter is placed before the Academic Council for information and ratification. <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 22-3.4 | Admissions for Sessions 2020-21. <br> 1. General Instructions for admission in Integrated and PG programmes (Annexure D). <br> 2. Guideline for admissions in Ph.D. programmes (Annexure E). <br> Resolution of $71^{\text {st }}$ Deans' Committee held on $9^{\text {th }}$ October 2020: The Deans' Committee in principle approved the Annexure $D$ and $E$ and resolved that the Central Admission Committee is authorized to prepare detailed instructions and upload them on university website with approval of the Vice Chancellor. <br> The matter is placed before the Academic Council for information and ratification. <br> It was informed that the revised detailed instructions were prepared by the Central Admission Committee and same was uploaded on University website after approval of the Vice Chancellor. 923 admissions were done in UG/PG programmes and Interview for PhD admission is still going on. Vice Chancellor applauses the Central Admission Committee, All HoDs, Faculty Members and departmental committees for their hard work for admission process. <br> Resolution: The Academic Council ratified and approved the same. |
|  | 22-3.5 | Phase wise entry of the current students for contact classes and End of Semester Examination (EoSE). <br> Resolution of $7 \mathbf{1}^{\text {st }}$ Deans' Committee held on $\mathbf{9}^{\text {th }}$ October 2020: The Deans' Committee discussed the matter including the issues raised with reference to Back Papers of students who have passed the final semester. It was resolved as under:- <br> 1. It was noted that many students who had passed their final semesters were not able to complete the programme due to back papers of various semesters. It was decided that for such students, back papers could be conducted on the same pattern as was done for final semester students during May-June, 2020. It was also resolved that same agency may be entrusted the task of exam from home. |


| Item <br> No. | Particulars |  |
| :---: | :---: | :---: |
|  |  | 2. For phased entry and EoSE of current semester the Committee constituted to examine the UGC Guidelines on Examinations and Academic Calendar and suggest course of action, headed by Prof. Shrimali, will deliberate on the matter and convey the decision keeping in view the suggestions of Deans / HoDs. <br> The matter was again considered in $72^{\text {nd }}$ Deans Committee Meeting and accordingly Back Paper Examination has been held in November 2020 in Exam from Home mode. <br> The matter is placed before the Academic Council for information and ratification. <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 22-3.6 | Establishment of Placement and Career Counseling Cell. <br> Placement Cell was established in 2012-13 and a Placement Committee for every Academic Session is constituted, however, there is a lack of full-fledged Placement Office/ Placement Officer. The University constituted a Placement Committee for the session 2019-20, with composition of the following members: Dr. S. Kandasamy (Incharge), Dr. Sanjay Kumar Garg, Mr. Ravi Saharan, Mr. Sunil Sharma, Dr. Kaisar Raza and Mr. Swayam Prakash. <br> Dr. Kandasamy has been-handling placement activities for the last two years. Mr. Swayam Prakash (Secretary) has been relieved on 02.06.2020. <br> Presently, no placement committee has been constituted for the session 2020-21. Further, there is need to establish a full fledge Placement Cell to take care and coordinate the activities of Placement Cell. Also, to carry out various activities of Placement Cell, there is a need of office space having interview room, exam room, meeting rooms, office room, etc. <br> It is also felt to have a dedicated official as Placement Officer who can interact with industries to take care the various activities of Placement Cell. It is proposed to engage a Placement Officer on contract basis against any vacant position of Assistant Professor/Nonteaching position or under EWS grant. <br> Resolution of $71^{\text {st }}$ Deans' Committee held on $9^{\text {th }}$ October 2020: <br> - The existing team of the Placement Committee continues till further orders. Additional members may be coopted. <br> - A competent person may be engaged as Placement Officer on temporary /contract basis against any vacant position of Assistant Professor/Non- teaching position or under EWS grant to augment the Placement Cell. <br> - Budgetary provision may be made to support the Placement Cell. The budget and modalities of fund control be decided by the Vice Chancellor in consultation with the Finance Officer. <br> - All HoDs should also endeavor to work actively towards placement and create students committee guided by faculty co-ordinator for placement activities. The faculty coordinator will maintain the record of the placements and provide the same to the Central Placement Committee. <br> The matter is placed before the Academic Council for information and ratification. <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |


| Item <br> No. | Particulars |  |
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|  | 22-3.7 | Matters related to Exams. <br> Resolution of 72 ${ }^{\text {nd }}$ Deans' Committee held on 29 ${ }^{\text {th }}$ October 2020: After deliberations in the matter it was resolved to adopt a blended mode for the EoSE of the Current semester i.e. the EoSE of the current semester's theory and project-based courses for all programmes be conducted in the Exam-From-Home mode as was done in May-June, 2020 for the students of terminal semesters. The laboratory-based exams for practical courses may be conducted in the next semester as and when the students can be called to the campus. The committee to be nominated by the Vice Chancellor will operationalize the examination process. <br> The matter is placed before the Academic Council for information and ratification. <br> It was informed that the selection of service vendor for conducting Exam from Home is under process and once the vendor is finalized the same will be conducted in January 2020. <br> Resolution: The Academic Council ratified and approved the same. |
|  | 22-3.8 | Matters related to Admission. <br> Resolution of 72 ${ }^{\text {nd }}$ Deans' Committee held on $\mathbf{2 9}^{\text {th }}$ October 2020: The committee approved the proposal of the Central Admission Committee to hold additional rounds of admission including open round if required for filling the vacant seats. This will be done immediately after the internal sliding mechanisms as per students' choices are complete. <br> As proposed by the SC ST Cell, it was resolved to open the process of admission to all eligible candidates of SC/ST category who had appeared in the CUCET exam. The Deans committee acknowledged the efforts made by $\operatorname{Dr} S N$ Ambedkar in terms of assisting the University to implement various welfare measures for the SC / ST community. <br> It was resolved to authorize a committee consisting of Admission Committee Chairman Prof. Pradeep Verma, Dean Academics, Prof. D. C. Sharma and the committee member Prof. S. N. Ambedkar to take all decisions and decide the process to fill in vacant seats. With reference to the Admissions in the Department of Pharmacy, it was resolved to adopt the past practice of giving preference to the candidates having valid GPAT score. For this, the process will be executed by the Departmental Admission Committee. The service provider will send a message to all students to submit their GPAT score and accordingly the merit list will be prepared. <br> It was decided that the HoDs and faculty members of respective departments must make efforts to verify the documents as per schedules and be in contact with the applicants to complete the process. <br> The matter is placed before the Academic Council for information and ratification. <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 22-3.9 | Regarding ongoing admissions for UG / PG / Integrated Programmes of the University. <br> As per the decision taken in the last meeting of the Deans Committee, for the SC/ST category the admission was open to all eligible candidates who had appeared in the CUCET exams. This has facilitated few more candidates to get admission against the vacant seats. |


| Item <br> No. | Particulars |  |
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|  |  | It is seen that few of the programmes have not been able to attract students. There have been audit objections about continuing of such programmes by the university. While the departments have made efforts to enhance awareness about such programmes, they have not been able to attract admissions this year also. Last year, in a few programmes where one or two students took admission, they were given option to shift to other programmes of the university where they may be eligible or withdraw their admissions with full refund of the fee paid. The matter regarding audit para is mentioned below: <br> ज्ञापन संख्या 9 दिनांक 19.12.2019 के अनुसार वर्ष 2018-19 के लेखों की लेखा परीक्षा के दौरान पाया गया कि राजस्थान केन्द्रीय विक्वविध्यालय के 17 पाठ्यक्रमों में प्रवेशित छात्रों की संख्या स्वीकृत सीटों से 50 प्रतिशत से भी कम रही हैं जिसके कारणों से लेखा परीक्षा को अवगत करना अनिर्णीत हैं। The detailed observation is placed as (Annexure F). <br> Placed before the committee for suggestions with reference to above. <br> Resolution of $73^{\text {rd }}$ Deans' Committee held on $10^{\text {th }}$ November 2020: The Committee resolved as under: <br> 1. In all the programmes there was likelihood of withdrawal of admissions. These vacancies need to be filled in from the available wait-list. This list will be provided by the Admission Committee to the HoDs for filling up the seats falling vacant as a result of withdrawal / cancellation. The Deans must supervise this process and ensure adherence to the merit list. <br> 2. In the following Programmes very little number of students are admitted: <br> a. PG Diploma in Media Writing and Digital Communication <br> b. M.A. PPLG <br> c. M.A. CMS <br> d. M.A. Cultural Informatics <br> e. M.Sc Sports Physiology <br> f. M.Sc Sports Biochemistry <br> g. M.Sc Sports Nutrition <br> h. M.Sc Sports Psychology <br> i. M.Sc Sports Biomechanics <br> j. M.Tech. Computer Science (Cyber-Physical Systems) <br> k. Integrated M.Sc Linguistics <br> l. M.A. Education <br> During discussions, the HoDs and Deans informed that there was possibility of filling in seats if all eligible candidates who appeared in the CUCET were permitted to be considered. It was decided that for such programmes another round of admission be held after 20 th November 2020 including all eligible candidates who appeared in the CUCET. This process will be managed by the HoDs under supervision of the Dean of School. The list of CUCET candidates may be given to the HODs for making their efforts, preparing the merit list and putting it up before the Dean Academics for approval before offering admission. It is advised that respective admission committees and HoDs shall exercise due diligence in the process and no admission to be confirmed before approval. <br> The matter is placed before the Academic Council for information and ratification. <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 22-3.10 | Admission for Ph.D. programmes. |


| Item <br> No. | Particulars |  |
| :---: | :---: | :---: |
|  |  | The admission process for the Ph.D. programmes for the current batch will commence immediately after semester break as per the approved seat matrix as notified on the University Website. <br> In order to further streamline the admission to PhD programmes, few suggestions are offered to have admissions twice in a year as is the prevalent practice in a large number of Universities and Institutions. <br> Though the University implements the reservation policies in letter and spirit, concern has been expressed by the Convener SC ST Cell about lower number of admissions in the Ph.D. programmes under the reserved category. <br> This matter is placed before the Deans' Committee for consideration. If the matter of Ph.D. admissions twice in a year is approved in principle, an empowered committee may be constituted to work out the modalities of admissions twice in a year while taking measures to admit scholars under the reserved categories. <br> Placed before the Deans' Committee for consideration. <br> Resolution of 73 ${ }^{\text {rd }}$ Deans' Committee held on $10^{\text {th }}$ November 2020: It was resolved that admissions in Ph.D. programmes will be done twice a year. The seat matrix will be decided on yearly basis with reservation as per GoI policies. During the selection process all care must be taken to implement the reservation policies in letter and spirit. <br> It was also resolved to constitute a committee to work out the draft operational details for the admission process. Dr. Sanjib Kumar Panda is nominated as Chairperson of a committee and he could choose his team. Dr. Anand Kumar will provide inputs regarding reservation policies of the GOI. Prof. Manish Dev Shrimali and Prof. S. N. Ambedkar were requested to provide their valuable guidance to the committee as and when required. <br> The matter is placed before the Academic Council for information and ratification <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 22-3.11 | Reviving the programmes under the MoU with Indian Institute of Crafts and Design (IICD). <br> On request of Director IICD an online discussion was held on $28_{\text {th }}$ October which was attended by the VC, Dean Academics, CoE ( $\mathrm{i} / \mathrm{c}$ ), HoD, Vocational Studies and Skill Development. IICD has expressed the desire to restart B.Des and M.Des programmes in collaboration with CURAJ. The committee approved the idea <br> Resolution of $73^{\text {rd }}$ Deans' Committee held on $10^{\text {th }}$ November 2020: The Deans' Committee approved the proposal to start collaborative programmes as per the MoU that is valid till 2021. <br> It was informed that these programmes need approval from AICTE. University is approaching AICTE for approval of the programmes. Once the approval is given, these programmes will be continued by the University. <br> The matter is placed before the Academic Council for information and ratification |


| Item | Particulars |  |
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|  |  | Resolution: The Academic Council ratified and approved the same. |
| 22-4.0 | Items for Consideration of matters on which University has taken action due to Lockdown (or otherwise) during the intervening period |  |
|  | 22-4.1 | Regarding approval to shift the internship of M.Sc. B.Ed. V semester to VI semester and undertake Courses of VI semester in the ongoing semester. <br> The M.Sc. B.Ed. Programme offered by different departments of CURAJ includes Internship in the V semester. In view of the challenges of conducting internship during the current pandemic, it was decided that: <br> (1) Internship of V semester which is due in July-December, 2020 be shifted to the VI semester i.e. in Jan-June, 2021 <br> (2) The Courses of VI semester due in Jan-June, 2020 be taken up in the semester in July-Dec, 2020. <br> Placed before the Academic Council for ratification. <br> Resolution: The Academic Council ratified and approved the same. |
|  | 22-4.2 | Regarding $7^{\text {th }}$ semester courses of 5 Years Integrated M.Sc. Programme <br> The courses of 7th semester Integrated M.Sc. Programme have combined classes with $1^{\text {st }}$ semester of the 2 Year M.Sc. Programme and 3 Years M.Sc. B.Ed. Programme. The Academic Council in its 21st Meeting held on July 07th, 2020 has approved the revised programme structure and curriculum prepared by the departments. <br> In order to provide updated course curriculum to all the students it is decided that the new approved curriculum of the 2 Year M.Sc. Programmes is also offered to the ongoing batches of the 5 Years Integrated M.Sc. Programme from 7th semester onwards. <br> Placed before the Academic Council for ratification. <br> Resolution: The Academic Council ratified and approved the same. |
|  | 22-4.3 | Concession for the wards of Kashmiri Migrants and Kashmiri Pandit / Kashmiri Hindu Families (Non-Migrants) living in Kashmir Valley for admission in Higher Educational Institutions - regarding. <br> A letter dated 15.10.2019 was received from Sr. Economic Advisor (Higher Education), GOI, MHRD, Dept. of Higher Education on the subject cited. As mentioned in letter, it is decided by the Ministry to allow the same concession (as per letter attached) to the wards of Kashmiri Migrants and Kashmiri Pandit/Kashmiri Hindu Families (Non-Migrants) living in Kashmir Valley for admission in Higher Educational institutions from the Academic Year 2020-21 and onwards till further order. The same is implemented for the admissions from Academic Year 2020-21. <br> Placed before the Academic Council for ratification. |


| $\begin{array}{l}\text { Item } \\ \text { No. }\end{array}$ | Particulars |  |
| :--- | :--- | :--- |
|  |  | 22-4.4 |
|  | $\begin{array}{l}\text { Resolution: The Academic Council ratified and approved the same. } \\ \text { Approval of Diploma programmes under Department of Vocational Studies and Skill } \\ \text { Development. } \\ \text { UGC has approved the establishment of separate department of Vocational Studies and } \\ \text { Skill Development in Central Universities vide its letter dt. Feb 2020. UGC has also asked } \\ \text { to submit the detailed proposal including budget estimates to UGC for establishing the } \\ \text { Department of Vocational Studies and Skill Development in our University. With reference } \\ \text { to this, a letter has been sent by University to UGC to utilize the fund amounting to Rs, } \\ \text { 82.00 Lakhs available under Deen Dayal Upadhyay Kaushal Kendra for establishment of } \\ \text { separate department of Vocational Studies and Skill Development, reply for which is } \\ \text { awaited. }\end{array}$ |  |
| $\mathbf{2 2 . 5 . 0}$ | $\begin{array}{l}\text { Further, Department of Vocational Studies and Skill Development had applied for getting } \\ \text { approval of various diploma programmes under this department to NSQF/UGC. NSQF has } \\ \text { approved the PG Diploma in Ayurvedic Pharmacy/Life Sciences, Diploma in Yoga and Pain } \\ \text { AC/EC. }\end{array}$ |  |
| $\mathbf{2 2 - 5 . 1}$ | $\begin{array}{l}\text { Management/Health Care, Diploma in Yoga and Geriatric Centre/Health Care, Diploma in } \\ \text { Sports Coaching/Health Care. Accordingly, these programmes were planned to be started } \\ \text { and HoDs were directed to prepare a detailed course structure for approval by circulation. }\end{array}$ |  |
| $\begin{array}{l}\text { It was also decided that the existing B. Voc. (Interior Design) will henceforth come under } \\ \text { this Department with coordinating department as Department of Architecture. }\end{array}$ |  |  |
| the University. |  |  |
| University encourages growth of its employees and has given NOC and study leave in past |  |  |$\}$


| Item No. | Particulars |  |
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|  |  | for pursuing higher studies in other Universities. <br> One faculty member has requested for NOC to be given for admission to Ph.D. programme at CURAJ. However, since this is the first case of an employee seeking admission to University's Ph.D. programme and more may follow in coming times; instead of deciding individual cases, it is proposed to have a uniform policy that could be applicable to all employees not only for $\mathrm{Ph} . \mathrm{D}$. but also other programmes. <br> Many institutions encourage their employees to upgrade their academic profile within the university. In many NITs and Institutes of National importance, there is provision that permit continuation of Ph.D. as part time candidate (without fellowship) on completion of minimum residency of one year. These institutions also have provisions to allow the regular faculty members to pursue Ph.D. in own institution while performing their regular teaching duties (i.e. without any study leave). <br> The matter is placed before the committee for deliberation and consideration. <br> Resolution of $73^{\text {rd }}$ Deans' Committee held on $10^{\text {th }}$ November 2020: The committee approved to allow the regular faculty members of CURAJ to pursue Ph.D. at Central University of Rajasthan while performing their regular teaching duties (i.e. without any study leave). For such candidates the DRC will be extended by including two experts (related to the research area) from outside the University. During the DRC at least one such external subject expert must be present. <br> It was decided that necessary changes, if any required in the ordinance 9 in respect to agenda and the bi-annual admissions to the PhD programme will be initiated by the Dean Research and Dean Academics and placed for approval of AC and EC. <br> Placed before the Academic Council for consideration. <br> Resolution: Members noted that there is a separate agenda for Ordinance 9 which is an independent matter. Members wholeheartedly appreciated the proposal. The Academic Council approved the resolution of Deans' Committee, 'The Committee approved to allow the regular faculty members of CURAJ to pursue Ph.D. at Central University of Rajasthan while performing their regular teaching duties (i.e. without any study leave). For such candidates the DRC will be extended by including two experts (related to the research area) from outside the University. During the DRC at least one such external subject expert must be present." |
|  | 22-5.2 | Regarding supernumerary seats in various programmes (other than Ph.D.) of the University for children of non-teaching staff (up to AR level) of the University. <br> As a welfare measure for the non-teaching staff (up to AR level) of the University, it is proposed to allocate one supernumerary seat in each of the programmes (other than PhD ) of the University. The eligibility for the admission to the programme and the fee structure, and the admission process including the CUCET etc. will be same as applicable to any other candidate. Notwithstanding the merit in the entrance exam, in case there are more than two eligible candidates for a seat, preference in admission will be given to the employee who has lower pay-band. Within the same pay-band the first preference will be for the girl child. <br> The matter is placed before the committee for consideration. If the committee approves the proposal, it will be placed before the AC and EC for final decision in the matter. <br> Placed before the Deans' Committee for consideration. <br> Resolution of $73^{\text {rd }}$ Deans' Committee held on $10^{\text {th }}$ November 2020: The committee approved the proposal and recommended that the same may be put up in the forthcoming meetings of |


| $\begin{array}{l}\text { Item } \\ \text { No. }\end{array}$ | Particulars |  |
| :--- | :--- | :--- |
|  |  | $\begin{array}{l}\text { AC and EC for approval. } \\ \text { Placed before the Academic Council for consideration. } \\ \text { Resolution: The matter was discussed and minor changes were made as the phrase } \\ \text { "non-teaching staff (up to AR level)" is replaced by "Employees" and further the phrase } \\ \text { "(other than Ph.D.)" is also removed. It was also suggested that for the programmes } \\ \text { approved by the External Statutory Bodies such as AICTE, NCTE etc. provisions of } \\ \text { respective statutory bodies must be followed. }\end{array}$ |
| $\mathbf{2 2 . 6 . 0}$ | Items for consideration |  |
| $\mathbf{2 2 - 6 . 1}$ | $\begin{array}{l}\text { Panel of Experts for the School of Sports Sciences. } \\ \text { In order to facilitate the recruitment process, a Panel of experts for the School of Sports } \\ \text { Sciences is prepared. The list is placed as (Annexure-H). }\end{array}$ |  |
| $\mathbf{2 2 - 7 . 0}$ | Any other item(s) with permission of the Chair. |  |
| Placed before the Academic Council for consideration. |  |  |
| Reporting items |  |  |
| Resolution: The Academic Council approved the proposed panel. It was also decided to |  |  |
| consider additional names if any suggested by the external members later. |  |  |$\}$


| Item <br> No. | Particulars |  |
| :---: | :---: | :---: |
|  | 22-7.1 | Approval of Syllabus of 3 programmes running under Dept. of Economics <br> Reference is made to the AC meeting held on 07.07.2020, wherein it was apprised that the course structure of Economics is being restructured due to which it could not be placed in the Academic Council and the Academic Council authorized the Vice Chancellor to approve the same. <br> Accordingly, the structure and curriculum of all the three different academic programmes of Department of Economics, School of Social Sciences was restructured and approved by Hon'ble Vice Chancellor (Annexure-I). The same has been implemented from the current Semester, Academic Year 2020-21. <br> The matter is placed before the Academic Council for information. <br> Resolution: The Academic Council ratified and approved the same. |
|  | Items for consideration |  |
|  | 22-7.2 | Regarding Additions/Changes in Ordinance 9: Doctor of Philosophy (Ph.D.) Programme <br> In order to implement the reservation policies while carrying out admissions to PhD programmes in every semester, to enhance industry-academia collaborative work and to be abreast with changing times, few additions/changes are necessary in the provisions of the Ordinance 9 dealing with research. These are placed as Annexure-J. <br> The matter is placed before the Academic Council for consideration and approval. <br> Resolution: The matter was discussed in detail and the draft was approved after minor changes/ modifications. Annexure-J and revised Annexure-J-1 are attached. |
|  | 22-7.3 | To start certain certificate courses by Department of Social Work, in collaboration with other University Departments and Civil Society Organizations <br> New Education Policy, 2020 envisages vocationalization of higher education to make young people socially relevant, economically employable and nationally-globally competent. NEP, 2020 also emphasizes on vibrant university-society interface and proactive community engagement. Central University of Rajasthan is committed to implement the NEP, 2020 in letter and spirit. In this context, Department of Social Work, in collaboration with other University Departments and Civil Society Organizations intends to start few certificate courses by following blended form of learning. As an example following course are suggested: <br> 1. Certificate Course in Yoga and Well-being. <br> 2. Certificate Course in Administration of Civil Society Organizations. <br> 3. Certificate Course in Counseling and Life Skills Management. <br> 4. Certificate Course in Disaster Management and Preparedness. <br> For all above courses tailor-made syllabus is available but that needs to be redesigned in tune with University framework. <br> Matter is placed before the Academic Council to consider the proposal in principal to start the process of designing certificate courses that may be placed before the School Board and then the Academic Council. |


| Item <br> No. | Particulars  <br>  The matter is placed before the Academic Council for consideration and <br> approval. <br> Resolution: The Academic Council approved in principle the idea of offering vocational <br> courses by the Department of Social Work. It was resolved that other departments <br> could also suggest skill based courses that could be offered as electives. It was resolved <br> that consolidated proposals for skill based courses be considered by the university as <br> per availability of resources. <br> $22-7.4$  <br> Engineering) under School of Engineering and Technology. <br> $22-7.5$ Course Structure and syllabus of the 4-Yr B. Tech. (Computer Science and <br> Engineering) programme was prepared and the same is approved by the School <br> Board through circulation by mail. <br> The matter is placed before the Academic Council for consideration and approval. <br> Resolution: The Academic Council approved the same. <br> Approval of the course structure and syllabus of B. Tech (Bio Medical Engineering)  <br> under School of Engineering and Technology.  <br> Course Structure and syllabus for the 4-Yr B. Tech. (Bio Medical Engineering)  <br> programme was prepared and the same was circulated to the School Board  <br> Members by mail. Suggestion was received from the School Board members for  <br> syllabus. The Dean has requested to approve the syllabus of 1st semester only and  <br> syllabus from 2nd semester onwards will be modified according to the suggestion  <br> received and put up for its approval later on.  |
| :--- | :--- | :--- |
| $22-7.6$ | The matter is placed before the Academic Council for consideration and approval. |
| Approval of Ph.D. Syllabus and Course Structure along with Elective papers to be |  |
| offered from the School of Sports Science |  |
| School of Sports Science proposed to start Ph.D. programmes in its 3 departments. |  |
| Resolution: The Academic Council approved the same. |  |
| programmes may start from the next AY. |  |

## CENTRAL UNIVERSITY OF RAJASTHAN



Minutes
of

The Twenty Third Meeting of the Academic Council

| Meeting No. | $:$ | Twenty Third $\left(23^{\text {rd }}\right)$ |
| :--- | :--- | :--- |
| Venue | $:$ | Conference Room <br> (Through Video Conferencing) |
|  | First Floor of Administrative Building <br> Central University of Rajasthan, <br> Bandarsindri, NH-8, <br> Tehsil - Kishangarh-305817 <br> Dist. - Ajmer (Rajasthan) |  |
| Date | $: \quad 15^{\text {th }}$ June 2021 |  |
| Time | $:$ | $11: 30$ AM |

Minutes of the $23^{\text {rd }}$ Meeting of the Academic Council to be held on $15^{\text {th }}$ June at 11:30 AM through Video Conferencing in the Conference Room, First Floor of Administrative Building, Central University of Rajasthan, Bandarsindri, NH-8, Tehsil-Kishangarh, District-Ajmer (Rajasthan).

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|  | 23-5.2 | Adoption and incorporation of the new provisions and regulations of SWAYAM based online courses by CURaj with reference to the Gazette Notification. |
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| Item No. | Particulars |  |
| :---: | :---: | :---: |
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| 23-8.0 | Any other item(s) with permission of the Chair. |  |


| S. No. | Item No. | Annexure | Subject Title |
| :---: | :---: | :---: | :---: |
| 1. | 23-2.1 | Annexure-A | Confirmation of the Minutes of the $22^{\text {nd }}$ Meeting of the Academic Council held on $09^{\text {th }}$ December, 2020 at 11 $A M$. |
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| 7. | 23-5.2 | Annexure- $G-1, G-2$ | Adoption and incorporation of the new provisions and regulations of SWAYAM based online courses by CURaj with reference to the Gazette Notification. <br> \{Extraordinary, Part III Section 4\} No. 120 dated 25 March, 2021 |
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Minutes of the $22^{\text {nd }}$ Meeting of the Academic Council held on 09th December, 2020 at 11:30 AM through Video Conferencing from the Conference Room, Second Floor of Administrative Building, Central University of Rajasthan, Bandarsindri, NH-8, Tehsil-Kishangarh, District-Ajmer (Rajasthan).

## MEMBERS PRESENT

## Members physically present:

1. Prof. Neeraj Gupta (VC I/c)
2. Prof. D. C. Sharma
3. Prof. S. N. Ambedkar
4. Mr. Chandrakant Dash, CoE
5. Mr. KVS Kameswara Rao, Registrar
: Chairman
: Member
: Member
: Special Invitee
: Ex-officio Secretary

## Members present online:

1. Prof. G D Sharma
2. Prof. M R Yadav
3. Prof. Niyaz Ahmed
4. Dr. S. Suresh Babu
5. Prof. Anil Rai
6. Ar. Ritu B Rai
7. Prof. Aditya Kumar Gupta
8. Prof. Amit Kumar Goyal
9. Dr. Ajit Kumar Patra
10. Dr. Anjali Sharma
11. Dr. Arvind Pandey
12. Prof. Chandi Charan Mandal
13. Dr. C S Gahan
14. Dr. Deepesh Bhati
15. Dr. Devesh Sharma
16. Dr. Easwar Srinivasan
17. Dr. Jitendra Kumar
18. Prof. J K Prajapat
19. Prof. Jagdish Ulhas Jadhav
20. Dr. Laxmi Kant Sharma
21. Prof. Manish Dev Shrimali
22. Dr. Mamta Rani Singh
23. Prof. N. Lakshmi Aiyar
24. Prof. Pawan Kumar Dadheech
25. Prof. Pradeep Verma
26. Prof. Praveen Sahu
27. Dr. Pankaj Goyal
28. Prof. Rajesh Kumar
29. Dr. S. Kandasamy
30. Dr. Sanjay Arora
31. Prof. Sanjib Kumar Panda
32. Prof. Uma Shankar Mishra
33. Dr. Vijaya Kumar M.
34. Dr. Subhasish Bhadra
35. Dr. Inshad Ali Khan
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Members to whom leave of absence granted:

1. Prof. Jatinder Grover
: External Member

## DETAILED AGENDA

| Item | Particulars |  |  |  |
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| 23-1.0 | Welcom <br> The Cha <br> Before departed untimely <br> He also Prof. Niy about the the Seco held in la | by Chair <br> man exten <br> king up the souls of Pro <br> xpressed g az Ahmed activities d wave of st week of J | an, Academic Council. <br> ed hearty welcome to all the members of the <br> agenda the Members observed 2 minutes si . M R P Singh, Dr. Nagaraju Autha and Dr. <br> atitude towards the external members Prof. and Prof. Anil Rai who were present for the 1 ld in the past 6 months when the last Acade pandemic hits, the classes are continuing in une-21 in EFH mode. | Academic Council. <br> lence praying for the peace of the Hemanga Dutta, who passed away <br> G. D. Sharma, Dr. S. Suresh Babu, meeting. The Chairperson informed mic Council Meeting was held. As Online mode and the EoSE will be |
| 23-2.0 | 23-2.1 | Confirma Wednesd <br> Resolutio | ion of the Minutes of the $22^{\text {nd }}$ Meeting of y, 09 ${ }^{\text {th }}$ December, 2020 at 11:00 AM. (Ann <br> : The Academic Council confirmed the m | f the Academic Council held on exure-A) <br> nutes. |
|  | 23-2.2 | Action Taken Reports |  |  |
|  | $\begin{array}{\|c\|} \hline \text { Item No. } \\ \hline \mathbf{2 3 - 2 . 2} \\ \hline 22-5.1 \\ \hline \end{array}$ |  | Particulars | Action Taken |
|  |  |  | Items for consideration |  |
|  |  |  | Regarding admission of University employee(s) in the Ph.D. and other programmes of the University. | Approved and implemented. Necessary circular has been issued in this regard. |
|  |  | 22-5.2 | Regarding supernumerary seats in various programmes (other than Ph.D.) of the University for children of non-teaching staff (up to AR level) of the University. | The matter was placed in Executive Council and the same was deferred by EC. |
|  |  | 22.6-1 | Panel of Experts for the School of Sports Sciences. | Approved and implemented. |
|  |  | 22-6.2 | Extension of the TLC@CURaj beyond FY 2020-21 with financial support from the University | The extension of TLC has not been received from GoI as yet. The matter regarding organizing paid training programmes by the university is placed as separate agenda. |
|  |  | 22-7.2 | Regarding Ordinance Additions/Changes in (Ph.D.) Programme. | The matter related to change in ordinance were placed before the EC and the same was deferred by EC |
|  |  | 22-7.3 | To start certain certificate courses by Department of Social Work, in collaboration with other University Departments and Civil Society Organizations. | The matter is under process. Will be taken up as and when there is better clarity about financial and other resources. |


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|  |  | 22-7.4 | Approval of the course structure and syllabus of B. Tech (Computer Science \& Engineering) under School of Engineering and Technology. | Approved and implemented. |
|  |  | 22-7.5 | Approval of the course structure and syllabus of $B$. Tech (Bio Medical Engineering) under School of Engineering and Technology. | Syllabus of $1^{\text {st }}$ semester only was approved and the same is implemented. |
|  |  | $22-7.6$ | Approval of Ph.D. Syllabus and Course Structure along with Elective papers to be offered from the School of Sports Science | Elective Courses were approved and implemented. PhD courses will start from AY 2021-22. |
|  |  | Resolution: Noted. |  |  |
| 23-3.0 | Approval of Action Taken by the University during the Intervening Period on approval of Deans, Committee. |  |  |  |
|  |  | Exams from Home mode starting from 15th January 2021. <br> Resolution of the $74^{\text {th }}$ Deans' Committee meeting held on $12^{\text {th }}$ January 2021: <br> CoE briefed the committee about EFH 2021. It was noted by the committee that Exams from Home mode are to be conducted for nearly 1100 students plus students who have back papers of current semester. It was pointed out that through the service provider who was L 1 in the tendering process was awarded the work. The portal being prepared by the service provider is yet to be tested and made fool proof for which efforts are being made by the team of faculty members from CS and CSE Department and ICT cell. The data given by all HoDs has been entered by the team including ICT. The mock exam to test the portal is scheduled on 13th. Regarding the students who have not paid the fees for the current semester, it was resolved that such students may be encouraged to deposit the fees. A mail from Dean Academics may also be sent giving a last chance to deposit the fee without any fine. It was resolved that students should not be barred from writing the EoSE. However, their result will not be declared till such time the fee is paid by the students. <br> Action Taken: The vendor could not provide proper and reliable solution and hence his work order was cancelled. However, the exams were conducted using ZOOM Platform with the support of in house team of the university. <br> Placed before the Academic Council for information and ratification. <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. Members appreciated the efforts made by team of the CoE and ICT Staff and the Faculty Members for smooth and timely conduct of the examinations while maintaining the quality of the assessment. |  |  |
|  | 23-3.2 | Proposals for ICT enabled infrastructure for online learning and e-resources. <br> Resolution of the $74^{\text {th }}$ Deans' Committee meeting held on $12{ }^{\text {th }}$ January 2021: <br> A proposal of 147 lakhs was shared by Dr. Janmejay Pandey which was accepted by the |  |  |


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|  |  | members with slight modifications. The Finance Officer informed that funds are available at present under this Head. He urged that the procurement must be done fast so that all bills are made available by around 10th March 2021. Accordingly it was resolved to take up the procurement on priority through GEM and tendering process as per applicable rules. Committees may be constituted by the VC to take up this task on priority. In case there is shortage of funds the allocated amount for miscellaneous ICT items and the fund allocated for procurement of Desktops and Laptops may be reduced. <br> Action Taken: The procurement for equipment for upgrading ICT enabled infrastructure for online courses and e-resources was initiated. Orders were placed wherever the compliances could be done. Thus only part of this proposal could be processed. <br> Placed before the Academic Council for information and ratification. <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 23-3.3 | Matter regarding extension of services of Dr. Shailendra Pratap Singh, Assistant Professor, Department of Biomedical Engineering. <br> Dr. S.P. Singh was appointed as Assistant Professor in Department of Biotechnology on contract basis for a period of one year extendable for one more year till the vacancies are filled on regular basis or till further orders, whichever is earlier, w.e.f. his date of joining i.e. 20.01.2020. Dr. S.P. Singh has been moved to the Department of Bio-Medical Engineering for his residual period of one year w.e.f. his date of joining i.e. 20.01.2020. It is to mention that the Department of Bio-Medical Engineering has been started from the Academic session 2020-21. <br> The Department is running a 4 Years Programme namely B.Tech - Bio Medical Engineering. It may be noted that his engagement was made as per approval of Deans' Committee initially for one year and extendable for another one year on contract basis in the Dept. of Biotechnology and later, he was transferred to Department of Bio Medical Engineering. At present, all the sanctioned posts (01-Professor, 02-Associate Professor, 04- Assistant Professor) are vacant and have not been advertised till date. Dr. S.P. Singh is the only faculty member in the Department of Bio-Medical Engineering and he is also taking classes in the Department of Biotechnology. <br> Dean, School of Engineering and Technology Prof. U. S. Mishra and HoD, Department of Biomedical Engineering Prof. A. K. Gupta has recommended the same for consideration. In view of the above, the matter of extension of engagement of Dr. S.P. Singh for another one year w.e.f. 20.01.2021 is placed before the Deans' Committee for consideration and approval. <br> Resolution of the $74^{\text {th }}$ Deans' Committee meeting held on $12{ }^{\text {th }}$ January 2021: <br> After detailed deliberation, it was resolved that the position of one faculty member may be advertised for temporary appointment in the Department of Bio-Medical Engineering. The term of Dr. S.P. Singh may be extended for a period of six months or till the temporary position is filled or till further orders. <br> Action Taken: Extension was given and also the advertisement issued. <br> Placed before the Academic Council for information and ratification. |


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|  |  | Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 23-3.4 | UGC's mandate to make two credit course entitled "Research and Publication Ethics" to be made compulsory for all Ph.D. students. <br> UGC as per the letter DO letter No. F.1-1/2018(Journal/CARE) of December, 2019 course entitled "Research and Publication ethics" to be made compulsory for all Ph.D. students from the forthcoming academic session. <br> UGC has provided a detailed syllabus of 30 hours which includes 15 hours of theory and 15 hours of practice. It is proposed to adopt the syllabus as given for the $\mathrm{Ph} . \mathrm{D}$ coursework. The courses can be offered in workshop mode to all Ph.D. scholars in blended mode with the help of in-house and external experts. <br> Resolution of the $74^{\text {th }}$ Deans' Committee meeting held on $12^{\text {th }}$ January 2021: <br> After detailed deliberation, it was resolved to adopt the syllabus given by UGC. The committee suggested that the $\mathrm{VC}(\mathrm{i} / \mathrm{c}$ ) could approve the syllabus in his capacity as Chairperson of the AC so that it could be implemented in the current semester. It was also resolved that subject experts may be invited to offer online lectures and facilitate learning. These lectures could be recorded with prior permission of the speakers and could be used in future also. It was also pointed out by the Chairperson that the intent of UGC's letter is to provide this as an additional course of 2 credits, as there is no reference to reduction in mandatory 12 credits courses. The respective departments may accordingly take up this matter in their respective BoS and School Boards. <br> Action Taken: Departments have initiated the process of offering this course as per decision of the Deans Committee. The possibility of using Online courses available on SWYAM is also being considered. <br> The overall framework of PhD coursework including the proposals to implement NEP is placed as a separate agenda. <br> Placed before the Academic Council for information and ratification <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 23-3.5 | Approval of the Calendar for upcoming semester. <br> Resolution of the $\mathbf{7 5}^{\text {th }}$ Deans' Committee meeting held on $10^{\text {th }}$ February 2021: <br> As the Semester for old students has been completed, matter for starting the new semester for these students was discussed. It was decided to start the semester for these students from 15th February 2021 in online mode. The Academic Calendar prepared by the Dean Academics was put up for the approval of the Deans Committee. Deans Committee approved the calendar. The time table shall be prepared for six days a week as also approved earlier. <br> Action Taken: The calendar approved is implemented. Due to COVID19 second wave it is decided to extend the last date of classes up to $25^{\text {th }}$ June instead of $4^{\text {th }}$ June as approved |


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|  |  | in the calendar. <br> Placed before the Academic Council for information and ratification <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 23-3.6 | Inviting the final year students in a phased manner. <br> Resolution of the $\mathbf{7 5}^{\text {th }}$ Deans' Committee meeting held on $10{ }^{\text {th }}$ February 2021: <br> The matter of calling final year students was discussed and it was decided that the students may be called in the Campus in a phased manned w.e.f. 25th February 2021. Availability of Hostel rooms was also informed that as per information received from Chief Warden Office, 150 rooms are available in Boys and Girls Hostels for occupation. Thus it was decided that in the first phase those students of science stream who are having practical or project may be called. Further, it was decided that a Committee may be constituted by the Vice Chancellor to work out the modalities of calling the students in University campus. <br> Action Taken: The schedules for calling students were implemented. All final year students of science streams came to university to complete the laboratory/project related courses. However, the second batch consisting of other than science stream students could not be called due to COVID19 second wave. The classes and assessments for these students are going on in the online mode. <br> Placed before the Academic Council for information and ratification. <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 23-3.7 | Establishment of Computer Centre for online examinations and learning. <br> Proposal of establishment of a Centre having about 50 computers was put up for conducting Online examination / teaching. Fund of approximate 37.5 lakhs will be provided for the same and the space will be identified by a Committee to be constituted by the Vice Chancellor. <br> While taking up this matter, the Chairman informed that Prof. Manish Dev Shrimali is playing an important role in various meetings of UGC \& NTA for conducting the centralized exam. The Committee applauded the efforts of Prof. Shrimali and noted that it is a matter of pride for the University. <br> Resolution of the $75^{\text {th }}$ Deans' Committee meeting held on $10{ }^{\text {th }}$ February 2021: <br> The Committee approved the proposal to establish Computer Centre for online exam and learning. <br> Action Taken: The procurement process for computer systems and related equipment was initiated. However, the final orders could not be placed as the bidders could not fulfill the mandatory requirements like certification about 'country of origin' etc. It is proposed to take up this matter in the current financial year. |


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|  |  | Placed before the Academic Council for information and ratification and approval to take up this matter in the current financial year. <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. It was suggested that the university must take all possible steps for enhancing digitization and use of ICT for exams and other academic activities. |
|  | 23-3.8 | Calendar and schedule of exams for the batch started from 15th February 2021. <br> Resolution of the $76^{\text {th }}$ Deans' Committee meeting held on $13^{\text {th }}$ May 2021: <br> In view of the current pandemic it was resolved that the last date for completion of classes may be extended to 25th of June 2021 instead of 4th June as mentioned in the approved calendar. This will allow course instructors to disperse the online classes and complete the courses and CIAs etc. <br> The course instructors in consultation with their respective HoDs and Deans must complete the EoSE before 9th July 2021. Where essential, for courses related to dissertation/project work/internship, the respective HoD / Dean may carefully assess the logistics and other requirements and consider to schedule the exam after 9th July. This will be intimated to CoE and Dean Academics. <br> All operational modalities in this regard and detailed instructions will be finalized by COE in consultation with Dean Academics and circulated to all after approval of VC (i/c). <br> Action Taken: The last date of classes is extended to $25^{\text {th }}$ June 2021. It is proposed to hold exams in July using ICT in Exam-from-Home mode. For some courses where the requirements for completion of courses is not complete the exams will be scheduled in end of July / August. <br> Placed before the Academic Council for information and ratification. <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 23-3.9 | IPR Policy <br> The IPR policy was considered in an earlier Deans' Committee meeting. This was circulated to all. The final document incorporating few comments is now placed before the Deans' Committee (Annexure-B). <br> Resolution of the $\mathbf{7 6}^{\text {th }}$ Deans' Committee meeting held on $13^{\text {th }}$ May 2021: <br> After detailed deliberation, the Deans' Committee approved the IPR Policy Document. The portion related to constitution of IPR Cell will be revised to have adequate representation from all disciplines. <br> It was also resolved that need based services of a patent attorney may be taken by the Cell. <br> The Deans' Committee also resolved that the Vice Chancellor ( $\mathrm{i} / \mathrm{c}$ ) is authorized for the finalizing of the constitution and operational modalities of the IPR Cell. <br> Action Taken: The final document is being fine-tuned as per decision of the Deans' Committee and is proposed to be implemented immediately thereafter. |


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|  |  | Placed before the Academic Council for information and ratification. <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 23-3.10 | Creation of Consultancy Cell. <br> With the increasing work of projects and need of generating revenue for the University, facilitation of consultancy work is becoming necessary. <br> Many faculty members have expressed the need for developing a consultancy cell with policy that can enhance the ease of taking up consultancy projects. <br> In this reference suggestions are invited from the members. <br> Resolution of the $7 \mathbf{7 6}^{\text {th }}$ Deans' Committee meeting held on $13^{\text {th }}$ May 2021: <br> The Deans' Committee suggested that the old policy drafted by the earlier committee may be re-visited and a new Committee may be constituted which will suggest the guidelines for the Consultancy Cell. <br> Action Taken: The operational modalities for Consultancy Cell will be worked out by a separate Committee and implemented. <br> Placed before the Academic Council for information and ratification <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. It was suggested that consultancy work can generate revenue for the university and as such needs to be encouraged. It was suggested to have operational modalities that facilitate and empower the faculty members to undertake consultancy work. |
|  | 23-3.11 | Regarding holding End of Semester Examination for graduating final semester students and Intermediary semester students. <br> In view of the COVID crisis it is proposed that the End of Semester Examination (EoSE) for graduating final semester students will be conducted in online mode (Exam-fromHome) using simple information and communication technology. <br> Similarly for the ongoing batches it seems that the decision to conduct EOSE with EFH mode need to be considered. Students of final semester who have back paper in earlier semester including those who got ' $F$ ' grade due to extrapolation of CIA marks will also be given opportunity for writing EoSE in online mode (Exam-From-Home). <br> Resolution of the $\mathbf{7 6}^{\text {th }}$ Deans' Committee meeting held on $13^{\text {th }}$ May 2021: <br> The Committee approved conducting End of Semester Exams from Home using ICT for students of final semester and ongoing batches including back papers as proposed. <br> The online exams will be conducted using platforms like ZOOM / Google Meet/ Webex as per the convenience of the course instructors and will be managed at the department level. To facilitate communication and recording of exam sessions, separate mail id for exams will be created by ICT cell for each department. |


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|  |  | The question papers will be designed on the pattern of open book exam and HoDs may consider to have a system of review and moderation of question papers. The course instructors must thus turn in the question papers to the HoDs well in time. <br> All other operational modalities in this regard and detailed instructions will be finalized by COE in consultation with Dean Academics and circulated to all after approval of VC (i/c). <br> Action Taken: It is proposed to hold exams in July using ICT in Exam-from-Home mode. This will be done for all courses including back papers. This will also help final semester students and those who wish to exit to complete the programme requirements and obtain the degrees. The detailed modalities are being worked out by the CoE in consultation with Dean Academics and will be implemented with approval of $\mathrm{VC}(\mathrm{i} / \mathrm{c})$. <br> Structure of Question paper for theory courses will remain same as in earlier Exam-FromHome (EFH) held in January 2021 (Annexure-C). The Question paper structure was recommended by the empowered Committee for EFH and approved by the Chairman, Academic Council. <br> Placed before the Academic Council for information and ratification <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 23-3.12 | Procurement of software for facilitation of complete process from Registration to Result Preparation/Declaration. <br> There is a requirement of a software for student examination related activities. All the examination related works starting from course registration to issuing mark sheets in the University are currently running in manual mode which will be not possible in case of large number of students. To overcome this issue, the office of CoE has proposed to procure examination management ERP software, which will help to perform the examination related work (from course registration and printing mark sheets) smoothly. This will also help the reduction in support staff involvements and obtaining flawless documents. Tentative costs for procuring software will be more than 2.5 Lakhs. If approved by the Deans committee, a committee will be constituted for deciding all operational modalities related to procurement of the software. <br> Resolution of the $76^{\text {th }}$ Deans' Committee meeting held on $13^{\text {th }}$ May 2021: <br> The Committee approved the proposal. It was also suggested that a software package may also be prepared internally if possible or procured for clearance of dues and issue of 'NoDues Certificate' online. <br> Action Taken: The process is being initiated. <br> Placed before the Academic Council for information and ratification <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. |
|  | 23-3.13 | Undertaking from Students / Scholars to seek documents without submitting NoDues Certificate in view of Pandemic. |


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|  |  | Students are requesting mark sheets/ other documents regarding completion of the courses. However, no dues are required for such documents. In the present situation of COVID-19, it is not possible for students/scholars to complete the formality of No-Dues. As such it is proposed that an Undertaking may be taken from the students in place of NoDues and the required documents may be issued by the concerned office. Format of the Undertaking is attached (Annexure-D). <br> Resolution of the $76^{\text {th }}$ Deans' Committee meeting held on $13^{\text {th }}$ May 2021: <br> The Committee approved the proposal and application format to issue provisional certificates and mark sheets etc. as essentially required for making applications for job/admission. It was noted that once the process of no dues becomes web based it will be easily possible for students to get No dues. <br> Action Taken: The decision is being implemented. <br> Placed before the Academic Council for information and ratification <br> Resolution: The Academic Council ratified and approved the decision taken by the Deans' Committee. It was suggested that this should be given priority. |
|  | 23-3.14 | Implementation of National Education Policy (NEP 2020) <br> Discussion: It was informed that the process of implementing NEP in the University has been initiated in different form. Compulsory courses for holistic development like fitness and community service are already included. Similarly, work is going on for developing new framework for courses for PhD scholars. The matter regarding Exit option for integrated programmes is placed as separate agenda. <br> Resolution of the $76^{\text {th }}$ Deans' Committee meeting held on $13^{\text {th }}$ May 2021: <br> It was decided that all the HoDs / Deans should go through the policy meticulously and specific suggestions may be given within a week that could be placed in the Academic Council for consideration. <br> The proposed framework for PhD coursework and the courses on Pedagogy being designed by Dean School of Education will be circulated to all in the coming week and then placed in the AC for consideration <br> Action Taken: The proposed framework for PhD coursework and the courses on Pedagogy being designed by Dean School of Education was circulated to all. This is placed as a separate item for consideration of the AC. <br> The University has been taking few steps for implementation of the NEP 2020 ever since the same was formally announced. A brief list of these was also sent to MoE with reference to review meeting with Hon'ble Minister. This is enclosed as Annexure-E. <br> TLC of the University also conducted various FDPs on NEP 2020. <br> Placed before the Academic Council for information and ratification. |


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|  |  | implementation of NEP2020 and ratified and approved the same. |
| 23-4.0 | Items for Consideration of matters on which University has taken action due to Lockdown (or otherwise) during the intervening period. |  |
|  | 23-4.1 | Conduct of Online Instructions, Internal Assessments and Attendance Waiver due to COVID-19 pandemic. <br> Considering the COVID19 Pandemic, the Academic Council in its meeting held on $7^{\text {th }}$ July 2020 approved the conduct of instructions in online mode and also waived off the mandatory requirement of attendance in the courses for appearing in the EoSE. Given the gravity of situation in the second wave it is proposed to waive off the minimum requirement of attendance in classes to appear for the currently scheduled End of Semester Exams. <br> Now with the second wave which has impacted a large number of students / faculty members and families the course instructors have been advised to disperse the classes and schedules of internal assessments. The internal assessments are being taken by the respective course instructors using platforms like google meet, zoom etc. in the multiple forms like Assignments/Open-book-tests/ Term-papers/project presentations/ viva-voce etc. The course instructors are also advised to hold repeat assessment for those students who aren't able to appear in the scheduled internal assessments. <br> Placed before the Academic Council for ratification and approval. <br> Resolution: The Academic Council ratified and approved the action taken. AC also approved the proposal to waive off the minimum requirement of attendance to appear in the EOSE for the ongoing semesters. |
|  | 23-4.2 | Fee Structure for foreign students to be implemented for various existing programmes of the University for Academic Session 2021-22. <br> Fee Structure of various programmes of studies for all semesters for foreign students registering for (or taking Admission in) Academic Session 2021-22 is prepared with an increase of $10 \%$ (Annexure-F). As the schedule of ICCR has been received for foreign admission the fee structure is required to upload on University website, hence, the same was approved by the competent authority. <br> Placed before the Academic Council for ratification and approval. <br> Resolution: The Academic Council ratified and approved the same. |
| 23.5.0 | Items for consideration on the matters recommended by the Deans Committee for placing before AC/EC. |  |
|  | 23-5.1 | Exit option for the students of Integrated Masters Programmes (to be admitted) and for students of continuing batches. <br> The exit option for five year Integrated programmes was discontinued from Academic Year 2019 as per the resolution of 19th Academic Council meeting held on 22nd February 2019. |


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|  | Students of the batch 2019 citing provisions of NEP have made representations requesting <br> exit option after 6 ${ }^{\text {th }}$ semester as was the practice in earlier batches. A Committee was <br> constituted to discuss on the matter and subsequently the matter was placed in the 76 <br> Deans Committee meeting and the decision is given hereunder. |
| Resolution of the 76 ${ }^{\text {th }}$ Deans' Committee meeting held on 13 ${ }^{\text {th }}$ May 2021: |  |


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|  |  | Placed before the AC for consideration and approval. <br> Resolution: The Academic Council approved to adopt the gazette notification as recommended by Deans' Committee. The AC also authorized Dean (Academics) to approve the online credit courses of SWAYAM platform for credit transfer keeping in view overall academic structure and need of the programme. |
|  | 23-5.3 | MoU between ICMR-NIREH Bhopal and Central University of Rajasthan. <br> ICMR-NIREH Bhopal desires to have a MoU with CURaj for jointly undertaking various programmes in the field of Pharmaceutical and allied Sciences. The MoU will provide opportunities to researchers of allied sciences to undertake the research at NIREH Bhopal. This will not only strengthen the research potential of both the institutes but will also generate opportunities to carry out the research work of mutual interest from faculty of CURaj and NIREH in research areas of Science and Tecnology which may lead to award of Doctorate Degrees and Diplomas which may be awarded by the Central University of Rajasthan. NIREH focuses on the issues of environmental health research aimed at becoming a Centre of Excellence in capacity, building for research and health interventions to meet challenges in Environmental Health in the Country. <br> This matter was placed in $76^{\text {th }}$ Meeting of the Deans' Committee and the resolution was as given below: <br> The Committee approved the proposal and resolved that the process of signing MoU may be taken ahead as per due procedure. <br> The nitty-gritties of the MoU will be worked out once in-principle approval is given by the Academic Council. <br> Placed before the Academic Council for consideration and approval. <br> Resolution: The Academic Council approved in-principle, the proposal to sign MoU between CURAJ and ICMR-NIREH. It was resolved the after legal vetting the university may go ahead and sign the MoU. However, the proposal for the new academic programmes and the degree to be awarded will be placed before the AC as and when the same are offered as per the MoU. |
| 23-6.0 | Items for consideration to be placed directly before Academic Council. |  |
|  | 23-6.1 | Proposal regarding Implementation of National Education Policy (NEP 2020). <br> - Vocational Programmes Proposed by the Department of Yoga <br> Keeping in view the mandate of NEP2020, to promote holistic development, and multi-exit option vocational programme the Department of Yoga has designed few programmes. This includes certificate courses and B.Voc. (Yoga) programme with multiple exit options. The programme structure and curriculum is approved by the BoS of the Department. Once these are considered and approved by the AC the proposal will be sent to the UGC after which the programmes will be offered in the current AY. It is proposed that admissions to the vocational certificate courses are offered twice in a year. <br> - Proposal for revised Framework for PhD course work to implement National |


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|  |  | Education Policy 2020 for PhD Entrant along with the syllabus of two courses "Pedagogy for Higher Education" and "Practice- based Teaching" <br> In the context of implementing NEP recommendation(15.9) concerning PhD scholars: <br> Extract from NEP 2020P <br> https://www.education.gov.in/sites/upload files/mhrd/files/NEP Final English 0.pdf <br> "15.9. All fresh PhD entrants, irrespective of discipline, will be required to take creditbased courses in teaching/education/pedagogy/writing related to their chosen PhD subject during their doctoral training period. Exposure to pedagogical practices, designing curriculum, credible evaluation systems, communication, and so on will be ensured since many research scholars will go on to become faculty or public representatives/communicators of their chosen disciplines. PhD students will also have a minimum number of hours of actual teaching experience gathered through teaching assistantships and other means. PhD programmes at universities around the country will be reoriented for this purpose." <br> School of Education has prepared a new revised framework for PhD coursework and syllabus of two courses "Pedagogy for Higher Education" and "Practice-based Teaching". The syllabus of two courses is approved by BOS, Department of Education and School Board of School of Education. The framework for Ph.D. coursework and designed syllabus is attached herewith (Annexure-H). <br> - Exit option for the students of Integrated Masters Programmes (to be admitted) and for students of continuing batches. <br> The matter is already placed vide agenda item no. 23-5.1. <br> Placed before the Academic Council for consideration and approval. <br> Discussion: The HoD Yoga presented the programme structure and courses offered in the design of B.Voc. (Yoga) programme as approved by the BoS and also the School Board. It was noted by the members that the multiple exits will be in tune with the NEP and with the substantial inputs of scientific knowledge the programme will be unique and first of its kind in the country. Members suggested University must design and offer a B.Sc. (Yoga) programme and also explore the option of an integrated programme leading to M.Sc. (Yoga). With these suggestions the AC approved the proposal to start B.Voc. (Yoga) programme and its curriculum as recommended by the BoS and SB. <br> The proposed framework for the PhD programme and the detailed syllabus was discussed in detail and approved as proposed. Members appreciated the efforts of the Dean, School of Education towards design of the curriculum. <br> Resolution: Members appreciated the efforts being made by the University to implement the NEP. It was resolved to approve the proposal of B.Voc. (Yoga Programme and Revised Framework for PhD course work. <br> The EXIT option as proposed vide the agenda 23.5.1 was also approved. |
|  | 23-6.2 | Academic Calendar for the Session 2021-22. <br> The office of Dean academic has prepared Academic Calendar for the Academic Year |


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|  |  | 2021-22. As of now, two calendars have been prepared, one is for the students admitted in A.Y. 2020-21 and the second one is for the students admitted earlier (Annexure-I). <br> It is proposed that looking into the pandemic situation of COVID-19, Dean Academics may be authorized to make minor changes in the dates of the Academic Calendar and the same will be reported to the Academic Council in its next meeting. <br> Placed before the Academic Council for consideration and approval. <br> Resolution: The Academic Council approved the same and authorized Dean (Academics) to make minor changes in the calendar as per the requirement of the given condition/situation. It was suggested to create a single table of academic calendar by merging the schedules as presented in two tables. |
|  | 23-6.3 | Admission 2021-2022 - Approval for Eligibility and Seat Matrix. <br> The eligibility criteria and seat matrix of all courses was circulated to all the Departments for confirming the same. Some minor changes were made in eligibility and seat intake was increased by some departments. All the departments had confirmed the eligibility criteria and Seat Matrix. The complete Seat Matrix and eligibility for the courses offered in Academic Year 2021-22 is annexed at (Annexure-J). <br> Placed before the Academic Council for consideration and approval. <br> Discussion: The Chairman apprised the members that some of the departments had revised the eligibility criteria of their programmes and seats were marginally increased by only a few departments. The Chairman informed that the student strength of the University directly affects the revenue resources. This is important in view of mandate to the University to enhance student strength. As such, the Departments must consider increasing the intake within the given resources. <br> The matter about eligibility of the MA Hindi programme as proposed by HoD Hindi was also discussed. The revised eligibility is as follows: <br> "Bachelor's degree with Hindi as one of the subjects from any recognized University with a minimum of $50 \%$ marks or equivalent grade in aggregate for general category and 45\% or equivalent grade for SC/ST/OBC/PWD/EWS candidates. or <br> Bachelor's Degree (in any discipline) from any recognized University with a minimum of $50 \%$ marks or equivalent grade in aggregate from social science stream studied in Hindi medium." <br> External member Prof Anil Rai opined that allowing all students admission to MA Hindi programme may ultimately dilute the quality of students passing out with the master's degree in Hindi. As such the department may need to put in extra effort to bridge the knowledge gap by some additional courses. <br> HoD Hindi also brought up the issue of start of PG Diploma in Hindi, which according to her was approved by the BoS. Dean Academics mentioned that the detailed proposal for starting a new PG Diploma Programme is not available with Dean Academics office. HoD Hindi reiterated that the programme is approved by the BoS and sent earlier. HoD English mentioned that as per his understanding the programme is primarily about English to Hindi translation. While welcoming the |


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|  |  | idea of PG Diploma programme in Hindi, Prof Anil Rai mentioned the need for clarity about the aim, objectives and learning outcomes of the proposed programme. He also mentioned that Delhi University offers such PG Diploma Programmes, which could be referred before offering the new programme. <br> It was noted that the proposal to start a new PG Diploma programme in Dept. of Hindi was not taken up as a separate agenda item in the earlier meeting of AC. However, by virtue of approval of the minutes of the meeting of the School Board, the syllabus is approved by the AC. The commencement of a new programme demands a proper proposal including the requirement of financial and human resources and the fee structure etc. to be considered by Academic Council. <br> Resolution: After detailed deliberation it was resolved as under: <br> 1. It was noted that there was possibility of increasing the seats in many programmes within the given resources. The Dean (Academics) is authorized to discuss with the Deans/HoD about the possibility of increasing the seat intake in various programmes and decide the revised enhanced intake with approval of the Chairman AC. <br> 2. Revised eligibility for MA Hindi as proposed by the HoD Hindi was approved. Efforts will be made to include and offer additional courses to bridge the knowledge gap of the students, who join the Masters without Bachelors in Hindi. <br> 3. After discussion as recorded above, it was decided that a PG Diploma Programme in Hindi Translation is approved in principle. Accordingly it was decided that the HoD Hindi and the Dean of the School will submit a complete proposal which may be examined for operational aspects by the Dean Academics. If required, opinion of the external experts of the AC, BoS and School Board may be taken. After this the proposal to start the new programme may be considered by the Chairperson, Academic Council and then submitted to the UGC. |
|  | 23-6.4 | Admission procedure for UG/PG and Ph.D. programmes. <br> CUCET is being held for admission to UG/PG and Ph.D. Programmes every year, but this year NTA has been given this responsibility. As it came to know that NTA is conducting these exams for UG/PG programmes only, University has appointed a Central Admission Committee to coordinate the process of admission. Since NTA has not yet decided any exam for admission to $\mathrm{Ph} . \mathrm{D}$. programmes, the University has to decide the process of admission for these programmes. <br> 1. Since NTA is conducting CUCET for UG/PG programmes, the admission to these programmes will be done through that only. Operational part for admission will be prepared by the committee accordingly. In case NTA is not conducting any entrance exam, then the committee may decide the course of action for admission to UG/PG programmes. <br> 2. For Ph.D. Programmes, the committee has recommended the following: <br> i. Departments will be asked to declare their vacancies annually for such programmes that is from July 2021 to June 2022. As per the ordinance 9 of the University, admission for Ph.D. will be twice in a year, therefore, remaining vacancies for such programmes can be filled up in case of |


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|  |  | admission in January 2022. <br> ii. For the ensuing semester, only the CUCET exempted categories such as Candidates who have qualified any national level examination like NET/JRF of UGC/CSIR, GATE, ICMR, ICAR, GPAT and DBT-JRF etc., sponsored candidates, teacher fellowship holder including teachers of the Universities will be considered for Ph.D. Admission. <br> iii. Department running Ph.D. Programmes will also be asked for broad area of research they are offering admission along with vacancies in their department, so that only interested candidates may apply. <br> iv. Broadly for the process of admission of these students, departments will ask these students for presentation in the research area of their interest and viva voce. <br> v. Operational details will be finalized by the Central Admission Committee in consultation with the departments. <br> In this context, it is proposed that the Academic Council may authorize the Chairperson/Vice Chancellor to decide the operational part of the admission process as proposed by the Committee. <br> Placed before the Academic Council for consideration and approval. <br> Resolution: The Academic Council approved the proposal and authorized Chairperson/Vice Chancellor (i/c) to approve the modalities of admission process as proposed by the Central Admission Committee. |
|  | 23-6.5 | Fee Structure to be implemented for various existing programmes of the University for Academic Session 2021-22. <br> Fee Structure of various programmes of studies for all semesters for students registering for (or taking Admission in) Academic Session 2021-22 is prepared in a structured (and comprehensible) form as guidelines to the students (Annexure-K). This is in line with the approval of the fee structure by different statutory bodies (10th Meeting of Academic Council held on 25.10.2013) and UGC rules. <br> Placed before the Academic Council for consideration and approval. <br> Discussion: The Chairman apprised the Members that fee is proposed to be increased by as per earlier decisions. However, there are some changes in the Fee Heads as displayed on the screen. <br> Resolution: The Academic Council approved the proposed increase in the fee and also the revised fee structure. |
|  | 23-6.6 | Regarding promotion of students from Even Semester to next Odd Semester for ongoing batches. <br> As per ordinance 3-15.1: <br> "All students admitted to an Odd Semester shall be eligible for promotion to the next Even Semester of the programme. To be eligible for promotion from an Even Semester to the next Odd Semester of the programme, a student shall be required to successfully complete at least $70 \%$ of total credits allotted to all the courses registered by him/her so far excluding the audit courses." |


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|  |  | In view of COVID-19 pandemic, and subsequent lockdown etc, and considering the guidelines of UGC the calendar for the AY 2020-21 and AY 2021-22 is staggered for the new batches admitted in 2020-21 and ongoing batches of earlier admitted students. The even semester is delayed about 2-3 months for newly admitted students. The forthcoming (Odd) semester has to start soon after the End of Semester Examinations (EoSE) of the current (even) semester. In this condition, the result preparation by the departments and subsequent related process by the office of CoE will not be completed before the start of new semester. Thus it is proposed to promote all the students in ongoing batches to next semester, relaxing the minimum credit requirement of successfully completing $70 \%$ of credits for promotion to odd semester. The students can appear in the back papers, if any, in the forthcoming semesters. <br> Placed before the Academic Council for consideration and approval. <br> Resolution: The Academic Council approved the same and it was resolved that this relaxation will be applicable for the students of ongoing batches of the current academic session only. |
|  | 23-6.7 | Standard Operation Procedure (SOP) for Retention and Disposal of CIA and EOSE Answer Booklets <br> A committee was constituted to decide the procedure for retention and disposal of CIA and EOSE Answer Booklets. The committee had drafted the SOP for the same. The same is placed at Annexure-L. <br> Placed before the Academic Council for consideration and approval. <br> Resolution: The Academic Council approved the proposal and the Standard Operation Procedure (SOP). It was decided that operational challenges that may emerge during implementation of the SOP may be reviewed and revised by the committee with approval of the Chairperson AC. |
|  | 23-6.8 | Approval of Dr. Srinivasa R Chakravarthy as Joint Supervisor for Ms. Alka Choudhary, Ph.D. Scholar, Department of Mathematics. <br> Department of Mathematics had requested for approval of Dr. Srinivasa R Chakravarthy as Joint Supervisor for Ms. Alka Choudhary, Ph.D. Scholar, Department of Mathematics. <br> A similar Agenda item was proposed in $17^{\text {th }}$ Academic Council Meeting and the Academic Council has resolved that "School Board recommended outside Experts can be considered as Guide/Co-Guide with the condition that the External Guide should get approval as recognized Guide as per CURaj norms". <br> The School Board had already approved the name of Dr. Srinivasa R Chakravarthy as Joint Supervisor for Ms. Alka Choudhary by circulation through mail. <br> Placed before the Academic Council for consideration and approval. <br> Resolution: The Academic Council approved the proposal to have Dr. Srinivasa R Chakravarthy as Joint Supervisor for Ms. Alka Choudhary. |
|  | 23-6.9 | MoU between Tripura University and Central University of Rajasthan. |


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|  | $\begin{array}{l}\text { Department of Physics, Tripura University (A Central University) desires to have a MoU } \\ \text { with the Department of Environmental Science, Central University of Rajasthan for } \\ \text { Installation of Indian Lightning Detection Network (ILDN) Receiver System and Data } \\ \text { Collection. } \\ \text { TU-Physics will be involved in the design and development of the Indian Lightning } \\ \text { Detection Network. The individual receiver at each host location is designed to collect } \\ \text { lightning spherics data in the Very Low Frequency (VLF) band as its primary operation. } \\ \text { The host receiver may be programmed optionally with the consent of the host for parallel } \\ \text { observation VLF based for monitoring the Earth's electrical environment and the lower } \\ \text { ionosphere whereas, CURaj will be involved in the collection of the data using ILDN } \\ \text { receiver and transfer the data through the internet to the Central Processing Server } \\ \text { (hereinafter referred to as "CPS") in a secured mode and have access to the data from the } \\ \text { entire network to use it for non-commercial research purpose. } \\ \text { Depending upon the requirement, certain scientific experiments may be planned and } \\ \text { executed within the overall MoU umbrella. } \\ \text { The MoU has been examined; required changes have been made and have been agreed } \\ \text { upon by Tripura University. This MoU will be effective from the date of its signing and } \\ \text { will be valid for a duration of 05 (Five) years from the date of signing. (Annexure-M) }\end{array}$ |
| Placed before the Academic Council for consideration and approval. |  |$\}$| 23-6.11 |
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| Resolution: Dean School of Earth Sciences described in detail the need and |
| importance of the MoU. After discussions, the Academic Council approved the |
| proposal. |


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|  |  | Placed before the Academic Council for consideration and approval. <br> Resolution: The Academic Council approved the proposal in-principle. However, it was resolved that the release of fellowship may be considered after receiving the recommendations of the DRC. The AC authorized the Chairperson to approve the same to allow expeditious release of fellowship to the concerned. |
|  | 23-6.12 | Extension of date for submission of theses for terminal M.Phil/Phd. Students <br> As per UGC public notice ref. no. F.No. 1-10/2020(CPP-II) dated 16.03.2021 "Extension of date for submission of thesis for terminal M.Phil./Ph.D. Students. In continuation to UGC Public Notice dated 3rd December, 2020 on the above mentioned subject, and keeping in view the larger interest of the research scholars, a further extension of six months beyond 30.06.2021, i.e., till 31st December 2021, for submission of thesis by M.Phil./Ph.D. students may be granted by the Universities. Extension of six months, as mentioned above, may also be granted for submitting evidence of publication and presentation in two conferences. However, tenure offellowship will remain upto five years only". <br> Therefore, it is submitted that In-principle approval may be given for the extension of date for submission of thesis for terminal Ph.D. students till 31 Dec 2021 as per UGC guidelines (F.No. 1-10/2020/(CPP-II) 16 March 2021) after recommendations/remarks (if any) as per Ordinance 09 as and when received by the Department. <br> Placed before the Academic Council for consideration and approval. <br> Resolution: The Academic Council approved the proposal in-principle. However, it was resolved that the release of fellowship may be considered after receiving the recommendations of the DRC. Individual cases will be scrutinized as per applicable guidelines issued from time to time. AC authorized the Chairperson to approve the same to allow expeditious release of fellowship to the concerned. |
|  | 23-6.13 | Proposal for 2-Credit course on Community Service <br> A decision was taken in the Academic Council in its 21 st meeting on 7th July 2020 to introduce a 2 -credit course on Community Services which will be consisting of a total 120 hours of NSS/EBSB/UBA/Village Outreach or other such activities announced by the University, distributed over the 4 semesters. A committee was constituted to prepare the proposal for the same. (Annexure-N) <br> Placed before the Academic Council for consideration and approval. <br> Resolution: The Academic Council approved the proposal. It was also resolved that activities beyond the ones listed in the proposal including online activities may be offered from time to time. These could be considered as per the need of the hour and approved by the Dean Academics. |
|  | 23-6.14 | Proposal for 2-Credit course on Fitness <br> A decision was taken in the Academic Council in its 21st meeting on 7th July 2020 to introduce a 2 -credit course on Fitness which will be consisting of a total 120 hours of fitness enhancement activities distributed over the 4 semesters. A committee was |


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|  |  | constituted to prepare the proposal for the same. (Annexure-O) <br> Placed before the Academic Council for consideration and approval. <br> Resolution: The Academic Council approved the proposal. It was also resolved that activities beyond the ones listed in the proposal including online activities may be offered from time to time. These could be considered as per the need of the hour and approved by the Dean Academics. |
| 23-7.0 | Matters relating individual Schools of Studies. |  |
|  | 23-7.1 | Recommendation of School Board - School of Architecture. <br> Meeting was held on 10.06.2021 and there was no proposal requiring approval in the AC. <br> Resolution: Noted. |
|  | 23-7.2 | Recommendation of School Board - School of Chemical Sciences and Pharmacy Meeting not held. <br> Resolution: Noted. |
|  | 23-7.3 | Recommendation of School Board - School of Commerce and Management <br> - Consideration of CA / ICWAI / CS qualification equivalent to Post Graduate degree (as per UGC notification), for PhD admission in Dept. of Commerce and Dept. of Management. <br> - Inclusion of a course on "Teaching Skills" as an essential component of Ph.D. scholars of both Commerce Department (as per suggestion of the NEP). <br> - Inclusion of a course on "Teaching and Communication Skills" as an essential component of Ph.D. scholars of Management Department in Pre-doctoral coursework (as per suggestion of the NEP). <br> - Inclusion of a course on "Research and Publication Ethics" as an essential component of Ph.D. scholars of Management Department in Pre-doctoral coursework (as per suggestion of UGC). <br> - Revision of Ph.D. course code and curriculum for Dept. of Commerce and Dept. of Management. <br> - Skill Development Courses recommended to offer in M.Com.-I and M.Com-II Semester <br> - Specialization in M.Com. program <br> - Regarding the Approval of Courses to be conducted through SWAYAM for JulyOctober Semester, 2021 for Dept. of Commerce and Dept. of Management. <br> Resolution: The Academic Council approved the same. |
|  | 23-7.4 | Recommendation of School Board -School of Earth Sciences. <br> Meeting not held. <br> Resolution: Noted. |
|  | 23-7.5 | Recommendation of School Board - School of Education |


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|  |  | - Approval of the Revision in Existing Course Structure of Education component of Three-Year Integrated M.Sc. B.Ed. w.e.f. the batch 2021-24 onwards. <br> - Approval of the Revision in Existing Syllabus of individual courses of Education component of Three-Year Integrated M.Sc. B.Ed. Programme w.e.f. the batch 2021-24 onwards. <br> - Approval of the Education Project of 06 Credits (Review of literature) in Three Year Integrated M.Sc. B.Ed. programme w.e.f. current session. <br> - Approval for Introducing New Revised Framework for Ph.D. Coursework and introducing Pedagogy for Higher Education and Practice based teaching, each of 03 credits. <br> - Approval for Introducing New course (Inclusive Education) in Ph.D. Course work of Education <br> - Approval of the increased Intake in M.A. (Education) from 23 to 35 from the session 2021-22. <br> - Approval for introducing a six months certificate programme on 'Yoga and Wellness' on blended mode <br> - Approval for starting a Bachelor of Vocational studies (B.Voc.) programme under the School of Vocational studies <br> - Approval for introducing two Diploma programmes on 'Yoga for Geriatric care' and 'Yoga for Pain management' under the department of Skill and vocational studies. <br> - Approval for increasing the number of seats from 20 to 40, in MSc Yoga therapy. <br> - Approval for concretizing the number of maximum seats for the six months certificate programme as 40 . <br> - Approval for making a course mandatory with a title 'Fundamental of Yoga', for all the students getting enrolled in MSc Yoga therapy having no prior exposure Yoga. <br> Resolution: The Academic Council authorized the Dean (Academics) to discuss the course code and the structure with the respective deans of schools and submit the recommendations of the School Boards for the approval to the chairman of the AC. |
|  | 23-7.6 | Recommendation of School Board - School of Engineering and Technology <br> - Opening of Ph.D. programme in the department of ECE <br> - Approval of B.Tech syllabus (CSE and Bio-Medical Engineering) <br> - Inclusion of the subject "Operating Systems" as one of the elective papers in M. Tech. (CSE) <br> - Approval of modified course scheme in PhD programme of CSE dept. <br> Resolution: The Academic Council authorized the Dean (Academics) to discuss the course code and the structure with the respective deans of schools and submit the recommendations of the School Boards for the approval to the Chairman of the AC. |
|  | 23-7.7 | Recommendation of School Board - School of Humanities and Languages <br> - Linguistics M.Sc. Integrated Syllabus of Semester V and VI <br> - Linguistics Department Ph.D. Coursework Syllabus <br> Resolution: The Academic Council approved the same. |
|  | 23-7.8 | Recommendation of School Board - School of Life Sciences |


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|  |  | - Revision of eligibility criteria for admission in M. Sc. (2 years) course (Biotechnology, Biochemistry and Microbiology) running under the School of Life Sciences from the AY 2021-22. <br> Resolution: The Academic Council approved the same. |
|  | 23-7.9 | Recommendation of School Board - School of Mathematics, Statistics and Computational Science <br> - Revision of course code of the programmes running under the Dept. of Mathematics as per resolution of the Academic Council in its 19th meeting dt. $22^{\text {nd }}$ February 2019. <br> - Revised course structure and syllabus of Integrated M.Sc. Statistics and M.Sc. Statistics. <br> Resolution: Revised course codes submitted by the Dept. of Mathematics were approved. For revised syllabus, the Academic Council authorized the Dean (Academics) to discuss the course code and the structure with the respective Deans of schools and submit the recommendations of the School Boards for the approval to the Chairman of the AC. |
|  | 23-7.10 | Recommendation of School Board -School of Physical Sciences. <br> Meeting not held. <br> Resolution: Noted. |
|  | 23-7.11 | Recommendation of School Board -School of Social Sciences <br> - Revised Syllabus of Department of CMS for MA in Culture and Media Studies and PG Diploma in Media Writing and Digital Communication under the School of Social Sciences. <br> - Revised Pre-PhD Course work Syllabus of Dept. of Economics, Social Work, CMS and PPLG. <br> Resolution: The Academic Council authorized the Dean (Academics) to discuss the course code and the structure with the respective deans of schools and submit the recommendations of the School Boards for the approval to the Chairman of the AC. |
|  | 23-7.12 | Recommendation of School Board-School of Sports Sciences. <br> - Major Revision of Syllabus of <br> (a) M.Sc. Sports Biomechanics - Department of Sports Biomechanics <br> (b) M.A./ M.Sc. Sports Psychology - Department of Sports Psychology <br> - Revision of Eligibility Criteria for M.Sc. Sports Biochemistry, M.Sc. Sports Physiology, M.Sc. Sports Nutrition, M.Sc. Sports Biomechanics and M.A./M.Sc. Sports Psychology. <br> - Minor revision of Syllabus of three M.Sc. Program in the Department of Sports Bioscience <br> (a) M.Sc. Sports Biochemistry <br> (b) M.Sc. Sports Physiology and |


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|  |  | (c) M.Sc. Sports Nutrition |
|  |  | Resolution: The Academic Council approved the same. |
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    Controller of Examinations

[^1]:    = Techniques of taking various anthropometric measurements
    To define and illustrate various body landmarks
    Gross body measurements: Body weight ( Kg ), Stature, sitting height, Height of interior superior Iliac spine, Subischial length.
    = Diameters or Breadths (cms): Bicristal diameter (Shoulder Breadth), Transverse chest diameter, Antero-posterior chest diameter, Femur bicondylar diameter (knee breadth), Humerus Bicondylar diameter (elbow Breadth)
    = BMI Estimation with and without software

    - Assess Energy and Nutrient intake from Diet using suitable Software

[^2]:    $\frac{1}{3}$

