

दक्षिण बिहार केन्द्रीय विश्वविद्यालय

[संसद के अधिनियम द्वारा स्थापित]

CENTRAL UNIVERSITY OF SOUTH BIHAR

[Established by an Act of Parliament]

(Accredited with Grade 'A' by NAAC)

PROSPECTUS 2021-22





CENTRAL UNIVERSITY OF SOUTH BIHAR: AT A GLANCE

The Central University of South Bihar (CUSB) is one amongst the sixteen Central Universities established in 2009 by Central Universities Act, 2009 (section 25 of 2009) of Parliament. The campus of the University is spread over about 300 acres of land located at Gaya-Panchanpur Road, about 15 kms. from Gaya railway station.



As stated in Section 5 of the Act, the objective of the University shall be: "... to disseminate and advance knowledge by providing instructional and research facilities in such branches of learning as it may deem fit; to make special provisions for integrated courses in humanities, social sciences, and technology in its educational programmes; to take appropriate measures for promoting innovations in teaching-learning process and inter-disciplinary studies and research; to educate and train manpower for the development of the country; to establish linkages with industries for the promotion of science and technology; and to pay special attention to the improvement of the social and economic conditions and welfare of the people, their intellectual, academic and cultural development."

The University started its academic journey in 2009 from the premises of BIT Patna campus by launching of a Master's programme in Development Studies and gradually added new master level courses in the year 2010-11, 2011-12, 2012-13 covering a range of Basic and Applied Sciences and Humanities. In the year 2013-14 the University started Integrated Undergraduate programmes in Education and Law and also launched Integrated M.Phil-Ph.D Programmes in selected Departments. At present a total of 03 Undergraduate, 32 Postgraduate and 25 Ph.D programmes are being offered by 32 Departments established under the approved 14 Schools. From academic year 2016-17 Ph.D. programmes in all Departments were introduced in accordance with the UGC (Minimum Standard and Procedure for Award of M.Phil/Ph.D Degree) Regulations, 2016.

With its world class faculty, high teacher-student ratio and unparalleled lab facilities in the state of Bihar, the University offers Choice Based Credit System (CBCS) with total internal evaluation of students' performance. Conducive and research oriented environment with multidisciplinary approach, innovative pedagogies, promising infrastructural facilities and effective students' support system to nurture the students' personality holistically and to prepare them for future are its main features. A good number of our students have qualified JRF/NET, GATE and GRE, and secured significant places in industry and institutes of international repute, and have also won accolades in various fields.

SALIENT FEATURES OF ACADEMIC CURRICULUM

- Semester System:** Semester system is followed for all academic programmes to enlarge curricular space and encourage accelerated learning opportunities. This system further enhances ability to accommodate diverse choices that dynamic and motivated students may like to have. As per the requirements of the academic programmes, decisions regarding student-faculty contact hours during a semester, developing the credit system determining the quantum of learning, time-distribution on class room work, elements of participatory teaching-learning process, field-work, lab-work, workshop, seminar, excursion, internship and other curricular works are taken by the academic bodies of the University. The University provides the opportunity for summer Internship in various programmes keeping in view of the important role of practice based learning and to gain experience in their field.
- Choice Based Credit System (CBCS):** CBCS has some unique features like enhanced learning opportunities, ability to match student's scholastic needs and aspirations, horizontal intra and inter School/Department mobility of students, inter-institutional transferability of students, improvement in educational quality and excellence, flexibility for working students to complete the programme over an extended period of time, and innovation and comparability of educational programmes across the country. CBCS facilitates the students to have vertical integration of knowledge and holistic development.



3. **Evaluation System:** Continuous Internal Evaluation is the central feature of the evaluation system of this University. The teacher who offers the course is the best person to assess the performance of his students. Appropriate mechanisms have been devised to ensure transparency and accountability in internal assessments and End-semester evaluations.
4. **Infrastructure and Ambience:** All appropriate steps are taken to create and maintain infrastructure for quality teaching and research as per requirements. The University has digitalized library, modern labs, and smart class rooms, separate hostels for boys and girls and facilities for sports and cultural activities.
5. **Faculty Members:** The University has sanctioned strength of 214 faculty members that include highly qualified eminent personalities as its senior faculties. About 95 percent faculty members are Ph.D. / D.Lit. degree holders and have postdoctoral experiences at established laboratories in India and abroad. Coming from different states of the country they form a truly pluralistic group of academics.
6. **Governance :** Central University of South Bihar has been following a decentralized and participative system of governance to achieve the mandate stated in the Act and Statutes of the University. Faculty members are involved in decision-making as members of various committees and academic bodies. The University has the Court as its apex body, the Executive Council, the Academic Council and the Finance Committee as Statutory Bodies.
The Board of Studies (BoS) is an important body of a Department in matter of curriculum development. Each Department has a Departmental Committee. Academic proposals are initiated at the Department and School level and approved by the Academic Council. University has a Planning and Development Board for the preparation of future Plans. There is a Building & Works Committee which oversees Campus Development Project.
7. **E-Governance:** The University has put its effort towards the use of E-Governance tools as bringing effectiveness into university administration to promote transparency and efficiency in administration, improve service quality to students and other stake holders and to provide better service in terms of time, governance more efficiently and more effectively.
7. **Central Universities Common Entrance Test (CUCET) 2021:** Admission to the programmes are made through a national level entrance test that is organized jointly by Central Universities together. CUCET is conducted throughout India at different centres for admission to the various programmes offered.
8. **Admission and National Character:** Having a transparent admission process and conducting the admission test on an all India basis the University has succeeded to maintain a National Character on All India Basis.
9. **Scholarships:** All research scholars get UGC scholarship. Besides, the University has several types of scholarship schemes of its own.
10. **Student Support System:** Students are facilitated with a support system in multiple forms such as computing lab, library, hostels, transportation, health care etc. There are various forums and committees such as Psychological Counselling Forum, Grievance Redressal Cell, SC/ST/OBC/Minority Cell, Anti-discrimination Cell, and Anti-ragging Committee to help students.
11. **Students' Achievement:** The University has a good track record of students qualifying for UGC-CSIR, GATE, GRE and other national and international examinations and winning awards in various educational events and other competitions. Students have been placed in many organizations of national repute, also through campus selection.
12. **Quality Management:** The Internal Quality Assurance Cell (IQAC) is established to ensure progressive improvement in efficiency of the University functioning.
13. **NAAC Ranking:** The University has been awarded with Grade 'A' in 2016 by NAAC.

**ACADEMIC PROGRAMMES, INTAKE AND ELIGIBILITY CRITERIA**

S.N.	Programme	Intake	Eligibility
1	Four-Year Integrated BA.BEd	63	10+2 or equivalent examination in any stream from any recognized Board/ University with at least 50% marks for General / OBC/EWS and 45% marks for SC / ST/PWD candidate.
2	Four-Year Integrated BSc.BEd	63	10+2 or equivalent examination in Science stream from any recognized Board/ University with at least 50% marks for General /OBC/EWS and 45% marks for SC / ST / PWD candidate.
3	Five-Year Integrated BA.LLB (Hons.)	132	10+2 or equivalent examination in any stream from any recognized Board/ University with at least 45% marks for General /OBC/EWS and 40% marks for SC / ST / PWD candidate.
4	M.A. in Journalism & Mass Communication	45	Bachelor's Degree in any discipline from recognised University with a minimum of 55% marks for General / OBC/EWS candidates and 50% marks for SC/ST / PWD candidates.
5	M.A./M.Sc. in Psychology	45	Bachelor's Degree with Psychology/Sciences/human Sciences/ Social Sciences/ Life Sciences/Medical Science/ Engineering with a minimum of 50% marks from any recognised University for General / OBC/EWS candidates and 45% marks for SC/ST / PWD candidates.
6	M.A. in English	45	Bachelor's Degree in any discipline having English as a compulsory subject (Hons./ Pass/General) with a minimum of 50% marks for General / OBC/EWS candidates and 45% marks for SC/ST / PWD category candidates from any recognised University.
7	M.A. in Hindi	45	Bachelor's Degree in any discipline from any recognised University with a minimum of 50% marks for General / OBC/EWS candidates and 45% marks for SC/ST / PWD candidates.
8	M.A. in Sociology	45	Bachelor's Degree in any subject from any recognised University with a minimum of 50% marks for General / OBC/EWS candidates and 45% marks for SC/ST / PWD candidates.
9	M.A. in Social Work	45	Bachelor's Degree in any subject from any recognised University with a minimum of 50% marks for General / OBC /EWS candidates and 45% marks for SC/ST / PWD candidates.
10	M.A. in Development Studies	45	Bachelor's Degree in any discipline with a minimum of 50% marks for General / OBC/EWS candidates and 45% marks for SC/ST / PWD candidates from any recognised University.
11	M.A. in Political Science & International Relations	45	Bachelor's Degree in any discipline from any recognised University with a minimum of 50% marks for General / OBC/EWS candidates and 45% marks for SC/ST / PWD candidates.
12	M.A. in Economics	45	Bachelor's Degree from a recognised university having Economics/Commerce/Statistics/ Mathematics as a subject (Hons./General) with a minimum of 45% marks for General / OBC/EWS candidates and 40% marks for SC/ST / PWD candidates.



13	M.Sc. in Biotechnology	45	Bachelor's degree in Biotechnology or any branch of Biological Science (Microbiology/ Biochemistry/ Bioscience/ Environmental Science/ Biomedical etc.) or B.Sc. (Hons) in Zoology/Botany/Chemistry or B.Sc. / Integrated B.Sc. B.Ed. of three year duration with any of the two subject among Zoology, Botany & Chemistry in 3rd year with a minimum of 55% marks for General / OBC/EWS candidates and 50% marks for SC/ST / PWD candidates from any recognised University.
14	M.Sc. in Bioinformatics	45	Bachelor's degree in Biological Sciences / Agricultural Science / Pharmaceutical Science/Veterinary Science/ Medical Science / Mathematics/ Physics/Chemistry/Computer Science/Information Technology or Integrated B.Sc. B.Ed. with 55% marks for General/OBC /EWS candidates and 50% marks for SC/ST / PWD candidates from any recognised University.
15	M.Sc. in Life Science	45	Bachelor's degree in any branch of Biological Sciences (Botany/ Zoology/ Microbiology/ Biochemistry/ Bioscience/ Biotechnology/ Environmental Science/ Agricultural Science/ Biomedical) or Integrated B.Sc B.Ed. with a minimum of 55 % marks for General/OBC/EWS candidates and 50% marks for SC/ST / PWD candidates.
16	M.Sc. in Environmental Science	45	B.Sc. in any basic science subjects such as Zoology/ Botany/ Physics/ Chemistry/ Life Sciences/ Geology/ Agricultural Science/ Environmental Science/ Ecology/ Biological Science/ Natural Resource Management/ Water Resource Management or Integrated B.Sc. B.Ed. with a minimum of 55 % marks for General/OBC /EWS candidates and 50% marks for SC/ST / PWD candidates from any recognised University.
17	M.Sc. in Computer Science	45	Bachelor's Degree from any recognised University in Science (CS/IT/Electronics with Mathematics) / BCA with a minimum of 55% marks for General /OBC /EWS candidates and 50% marks for SC/ST / PWD candidates and having Mathematics as a subject at 10+2 level.
18	M.Sc. / M.A. in Mathematics	45	Bachelor's Degree from any recognised University in Mathematics/ Statistics but should have studied Mathematics as a subject in all the 3 years with a minimum of 55% marks for General / OBC /EWS candidates and 50% marks for SC/ ST / PWD candidates.
19	M.Sc. in Statistics	45	Bachelor's (New UGC) Hons. Degree from any recognised University with Statistics/Bachelor's Degree with Statistics or Bachelor's (New UGC) Hons. Degree in Mathematics with at least one paper in Statistics or Bachelor's (New UGC) Hons. Degree in Computer Science with mathematics as a subject (At least one year) and at least one paper in Statistics with a minimum of 50 % marks for General / OBC / EWS candidates and 45% marks for SC/ST / PWD candidates in the qualifying degree.
20	M.Sc. in Physics	45	B.Sc. with Physics or Integrated B.Sc. B.Ed with a minimum of 55 % marks for General / OBC /EWS candidates and 50% marks for SC/ST / PWD candidates from any recognised University.
21	M.Sc. in Chemistry	45	B.Sc. degree or its equivalent with Chemistry as one of the main subject or Integrated B.Sc. B.Ed. from a recognized University with minimum of 50% of marks or equivalent grade in aggregate or in Honours for General /OBC/EWS and 45% or equivalent grade for SC/ST / PWD candidates



22	M.A. in History	45	Bachelor's Degree in any discipline from recognized university with minimum of 50% marks for General / OBC / EWS candidates and 45% marks for SC/ ST / PWD candidates.
23	LLM	38	Passed with 50% marks in the final examination of Bachelor's Degree in Law, approved by the Bar Council of India, conducted by a University/ College duly recognized by the UGC.
24	M.Com.	45	Bachelor's in Commerce from any recognised University with a minimum of 50% marks for General / OBC / EWS candidates and 45% marks for SC/ST / PWD candidates.
25	M.Ed.	63	B.Ed. Or Four Year Integrated B.A B.Ed/B.Sc. B.Ed. Degree from any recognised University/institution with atleast 50% marks or equivalent grade for General/OBC /EWS candidates and 45% marks for SC/ST / PWD candidates.
26	M.Sc. Geology	45	Bachelor's degree in Geology from any recognized University with a minimum of 55% marks for General / OBC candidates and 50% marks for SC/ST/PWD candidates.
27	M. Pharm. (Pharmaceutics)	15*	Bachelor's degree in Pharmacy from any recognized University approved by Pharmacy Council of India with 55% marks for General / OBC /EWS candidates and 50% in case of SC/ST/PWD candidates. However preference will be given to candidates having valid GPAT score. Note: It may be noted that no scholarship shall be given to any candidates.
28	M. Pharm. (Pharmacology)	15*	Bachelor's degree in Pharmacy from any recognized University approved by Pharmacy Council of India with 55% marks for General / OBC /EWS candidates and 50% in case of SC/ST/PWD candidates. However preference will be given to candidates having valid GPAT score. Note: It may be noted that no scholarship shall be given to any candidates.
29	PG Diploma in Petroleum Geosciences	30	Master's Degree in science discipline or Bachelor's in engineering from any recognised university or equivalent examination of other academic institution with a minimum of 55% marks for General / OBC/EWS candidates and 50% marks for SC/ST/PWD candidates.
30	PG Diploma in Yoga	30	Bachelor's Degree in any discipline from any recognised university or equivalent examination of other academic institution with a minimum of 45% marks for General / OBC/ EWS candidates and 40% marks for SC/ST/PWD candidates.
31	Ph.D in Bio-Informatics @	3	Master's Degree from any recognised University in Biological Sciences/Agricultural Science/ Pharmaceutical Science/ Veterinary Science/ Medical Science/ Physical Science/ Chemical Science/ Computer Science/IT with 55% in aggregate or its equivalent Grade B in UGC 7 point scale. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ ST/ OBC(Non creamy layer)/ Differently abled candidates. Candidates having Master Degree in any of the above discipline with specialisation in Bio-Informatics or having Master 's Degree in Bio-Informatics will be given preference.
32	Ph.D in Biotechnology @	4	Master's Degree from any recognised University in Biotechnology / Pharmaceuticals Science/Medical



			Science/Agricultural Science/Chemistry/Physics/any branch of Biological Science (Microbiology/ Biochemistry/ Molecular Biology/ Bioscience/ Environmental Science/Zoology/Botany/Biomedical) with 55% in aggregate or its equivalent Grade B in UGC 7 point scale. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.
33	Ph.D in Life Science @	15	Master's Degree from any recognised University in any branch of Biological Sciences (Botany/ Zoology/ Microbiology/ Biochemistry/ Biosciences/ Biotechnology/ Environmental Science/ Biomedical/ Bioinformatic/ Agricultural Science/Plant Science) with 55% in aggregate or its equivalent Grade B in UGC 7 point scale. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.
34	Ph.D. in Environmental Science @	7	M.Sc. in Environmental Science/ Chemistry/ Physics/Biological Science/ Life Science/Zoology/ Botany/ Geology/Marine Biology/ Oceanography / Agricultural Science/Ecology/ Geophysics/ Atmosphere Science/Water Resource Management and other allied subjects with 55% in aggregate or its equivalent Grade B in UGC 7 point scale. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.
35	Ph.D. in Geology @	14	M.Sc. Or M.Sc.(tech) in Geology, M. Tech. Applied Geology & M. Sc./M.Tech. in Remote Sensing and Geospatial Technology, P.G. pertaining inter-& intra-disciplinary subject with 55% in aggregate or its equivalent Grade B in UGC 7 point scale. A relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.
36	Ph.D. in Pharmacy @	12	Master's Degree in any Pharmacy with 55% in aggregate or its equivalent Grade B in UGC 7 point scale. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy Layer)/Differently abled candidates.
37	Ph.D. in Physical Education @	12	Master's Degree in _____with 55% in aggregate or its equivalent Grade B in UGC 7 point scale. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy Layer)/Differently abled candidates.
38	Ph.D. in Mathematics @	9	Master's Degree in Mathematics from any recognised University with 55% in aggregate or its equivalent Grade B in UGC 7 point scale. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.
39	Ph.D. in Statistics @	16	Master's Degree in Statistics from any recognised University with 55% in aggregate or its equivalent Grade B in UGC 7 point scale. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.
40	Ph.D. in Computer Science @	6	Master's Degree in Computer Science /MCA/Equivalent with a minimum of 55 % in aggregate or its equivalent Grade B in UGC 7 point scale from any recognised University. A Relaxation of 5% of marks from 55 to 50% or



			equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.
41	Ph.D. in Chemistry @	10	M.Sc. Degree or its equivalent in Chemistry/applied Chemistry or allied subjects (including biochemistry, medical chemistry, industrial chemistry, nanoscience, environmental science) from a recognized University with 55% in aggregate or its equivalent Grade B in UGC 7 point scale. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.
42	Ph.D. in Physics @	12	M.Sc. Degree in Physics from a recognized University with 55% in aggregate or its equivalent Grade B in UGC 7 point scale. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.
43	Ph.D in Psychology @	6	Master's Degree in Psychology with 55% in aggregate or its equivalent Grade B in UGC 7 point scale. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.
44	Ph.D in Clinical Psychology @		Master's Degree in Psychology and M.Phil in Clinical Psychology from an Institute/University recognised by Rehabilitation Council of India, with 55% in each in aggregate or its equivalent Grade B in UGC 7 point scale. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.
45	Ph.D. in English @	10	M.A in English (Literature / Linguistics) from any recognised University with 55% in aggregate or its equivalent Grade B in UGC 7 point scale. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.
46	Ph.D. in Hindi @	7	M.A. in Hindi from any recognised University with 55% in aggregate or its equivalent Grade B in UGC 7 point scale. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.
47	Ph.D. in Communication & Media Studies @	6	M.A./M.Sc. in Mass Communication or Journalism or Advertising and Public Relations with 55% in aggregate or its equivalent Grade B in UGC 7 point scale from any recognised University. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.
48	Ph.D. in Development Studies @	6	Master Degree in any Social Science discipline from any recognised University with 55% in aggregate or its equivalent Grade B in UGC 7 point scale. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.
49	Ph.D. in Economics @	8	M.A/M.Sc. in Economics/Applied Economics /Business Economics/Financial Economics/Development Economics/Development Studies with 55% in aggregate or its equivalent Grade B in UGC 7 point scale from any recognised University. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.
50	Ph.D. in Political Science & International	4	Master's Degree in any discipline with 55% in aggregate or its equivalent Grade B in UGC 7 point scale from any recognised



	Relations @		University. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.
51	Ph.D. in History @	6	Master's Degree in History with minimum 55% in aggregate or its equivalent Grade B in UGC 7 point scale. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.
52	Ph.D. in Sociology @	2	Master's Degree in any Social Science discipline with 55% in aggregate or its equivalent Grade B in UGC 7 point scale from any recognised University. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.
53	Ph.D in Education @	21	M.Ed./ M.A. (Education) from any recognized University with 55% marks or equivalent Grade B in UGC 7 point scale. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.
54	Ph.D. in Law @	7	LL.M from any recognised University with 55% in aggregate or its equivalent Grade B in UGC 7 point scale. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.
55	Ph.D. in Commerce @	11	Master's Degree in Commerce/Management with minimum 55% in aggregate or its equivalent Grade B in UGC 7 point scale. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC(Non creamy layer)/Differently abled candidates.

@ A candidates who is qualified in a national level test such as National Eligibility Test (NET-JRF), NET-LS (without fellowship), Graduate Aptitude Test for Engineering (GATE), State Level Eligibility Test (SLET) accredited by UGC/Central or State Government are exempted from appearing in the CUCET 2021 Entrance Test for admission to the Ph. D. Programme. However, such candidates have to apply for the programme on CUCET portal and pay the requisite fees and appear for interview for admission.

ज्ञान सेवा विमुक्तये

FACILITIES

Library

Central University of South Bihar has developed a well-equipped Central Library to cater to the information requirements of students and faculty for their academic accomplishments. The library has built a collection of more than 31,000 books to support academic curricula, teaching and research in various science and social science subjects including encyclopedias, Handbooks, miscellaneous Reports, dissertations, bound volume journals, Newspapers and its archives etc. All the books are barcoded and are organized on shelves using Dewey Decimal Classification Scheme (DDCS). An Online Public Access Catalogue (OPAC) of library books along with a Digital Library is made available for reader on every computer in the University premises.





Journals and Databases

The library subscribes to 108 quality print journals and magazines of renowned publishers from across the world and more than 8,000 online journals. Access of National Digital Library and e-PG Pathshala in the University are available, being a member of UGC-INFONET Digital Library Consortium now merged in e-ShodhSindhu: Consortium for Higher Education Electronic Resources, more than 4000 e-journals are available to the library from Annual Reviews, Economic and Political Weekly, Oxford University Press, Project Muse, Springer Link 1700 Collection and



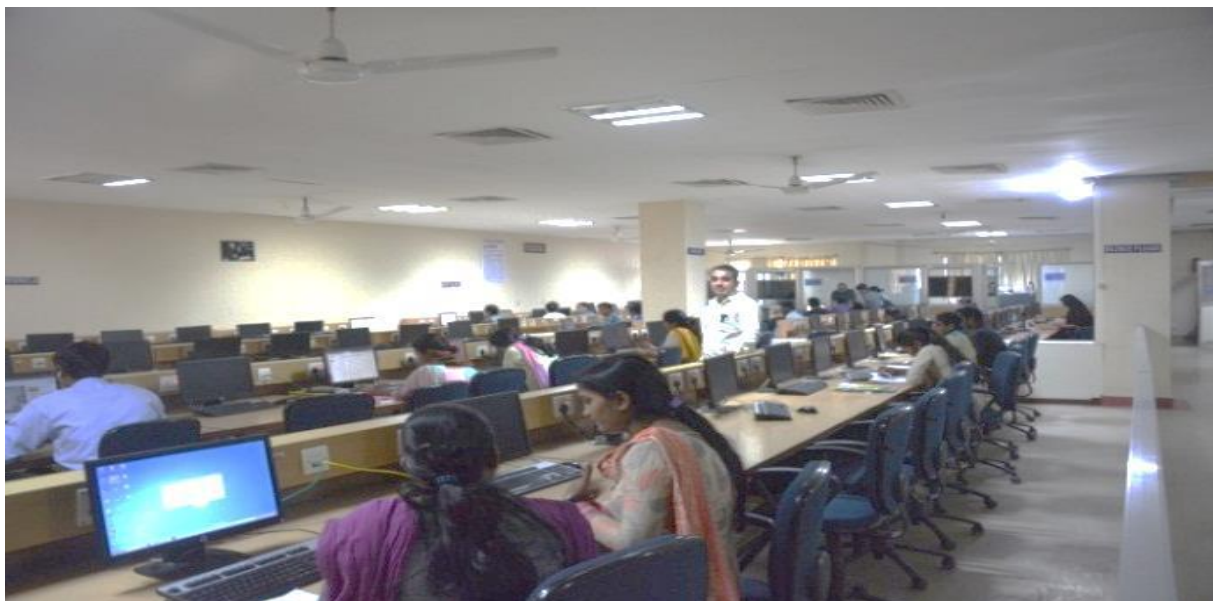
Natural Journals, Taylor and Francis. The library also subscribes to various e-journals packages i.e. SCC Online (Platinum Plus Edition), Hein Online Academic Core Collection, WestLaw India, AIR Online Institutional Version, IEEE (ASPP) from IEEE and Digital Library Package from ACM, Royal Society of Chemistry Journals (RSC), American Physical Society, Emerald 312 title Collection, Wiley Blackwell, EWPRF India Time Series, ProwessIQ (CMIE), SIAM Journals, Cambridge University Press and Sage Education Journals. Besides, the library also subscribes to many online databases i.e. ISID database, World E-Book Library (WeB), South Asia Archive (SAA), Manupatra -(full text database for Law), AIR Supreme Court Database, AIR High Court Database, Criminal Law Journal Database, India stat –a statistical database for Development Studies, JSTOR -full-text database mainly for Social Sciences.

Library Services

The library is open from 9:00 am to 6:00 pm on all working days and Saturdays. Library services include circulation (issue/return) of books, Inter-Library Loan through DELNET, New Delhi, Current Awareness Service (CAS) for books and journals, photocopy etc. Using OPAC, users can search for availability of books in library, current status of books, due date of return, reserve/hold book, etc. Access to all electronic information resources is available for students, faculty and officials on their computer within the university premises through intranet using <http://10.0.4.211:8081> . Recently, access to these resources has been extended through Virtual Private Network (VPN). Faculty members can access online resources from anywhere. This facility is proposed to be extended, in near future, to students as well.

Common Computer Lab

Computer system facilitates a common computational resource for the academic programmes as well as computing resources in the University. The computer lab provides a central computing facility to the students, teachers and staff of the University for their assignments, projects, dissertation and research related works. In the computer lab, printing and scanning facilities are provided.



Internet & Intranet

Internet connectivity is provided under the scheme of National Mission on Education through Information and Communication Technology (NME-ICT) project of Government of India. All computers are connected through 1 GBPS Internet connectivity. The Intranet network, consisting of gigabyte Ethernet and OFC backbone provides connectivity to departments, library, classrooms and administration. World class networking product of CISCO has been installed in campus network to provide stable and hassle free computing. All class rooms are equipped with smart class room devices with Internet access.

Wi-Fi Facility

Students can avail Wi-Fi facility at our campus. CUSB has dedicated internet leased line connected to all buildings throughout the campus. Students, Research Scholar and faculty members are free to access the Wi-Fi internet.

Resources

At present, there are over 500 high performance computers in the University. All computers are equipped with latest operating system and application software to cater to the academic needs. Computers are protected by firewall and reliable antivirus software against computer virus, malware and unauthorized access. University has licensed copies of software such as SPSS, MATLAB, MINITAB, Adobe Creative Suite, QuarkXPress, KOHA, Windows Server 2008R, and Red Hat etc. The University has powerful online UPS to protect the computer and other sensitive devices from power fluctuation and surge.

Website & E-mail Facility

A fully functional website of the university has been developed. It is maintained and updated regularly. URL of website is www.cub.ac.in or www.cusb.ac.in. The University has a powerful e-mail system with group mail IDs of students and faculty members.

Accommodation

Two well-furnished and aesthetically designed separate hostels for girls and boys have been constructed within campus of the University with a view to provide best possible facilities to the students. For leisure and recreation, both indoor and outdoor sports facilities are made available in the hostels. Allotments of accommodation in Hostels are made in according with the norms, procedure and administration stipulated in the “Rules and Regulations Governing Hostel Administration and Residency” approved by the Statutory Bodies of the University.



Health Centre

The University is having a health centre in the campus with a view to provide treatment for general ailments under the supervision of resident doctors.

Vidyarthi Mediclaim Policy

Vidyarthi Mediclaim for students is a unique policy of National Insurance Company designed to provide health and personal accident cover to the students. All the students of the Central University of South Bihar are insured under this scheme whereby they are eligible for cashless treatment in authorized hospitals as well as for reimbursement of cost of treatment (IPD) in other hospitals within the limit of ₹ 50,000.

STUDENT SUPPORT

Scholarships Schemes

A number of scholarship schemes, as given below, are available for deserving and needy students:

Merit Scholarship to CUCET/ Semester Toppers

The University offers performance based Merit Scholarship to CUCET/ semester toppers under each programme in the University. Merit Scholarship @ ₹ 1,000 pm is awarded subject to minimum 75% class attendance in the following semester.

Merit-cum-Means Scholarship

The University encourages and supports the meritorious students who are in need of financial assistance to pursue their studies smoothly through Merit-cum-Means Scholarship. The scholarship is awarded in the form of waiver of tuition fee up to 20% of students in each programme

Earn While You Learn (EWYL) Scheme

EWYL is a unique scheme of the University aimed to encourage and support students to make them self-reliant and also develop better cooperation and leadership skills. Under the scheme, a student with relevant qualification/experience may be assigned a task for a maximum of 10 hours per week. This includes assistance in library, computer lab, laboratory, faculty, centre/department, office, placement section and other specific requirements.

Attendance Based Merit Scholarship

An innovative scheme to increase classroom attendance is available for the students. Students achieving 100% attendance during a semester are provided book(s) of their choice/need or reimbursed up to Rs. 1,000 at once.

Psychological Counselling and Guidance Services

Like physical health, mental health determines efficiency and productivity. Mental health is critically important for teaching-learning process, creativity, and congenial environment in academic institutions. The University adopts a forward looking approach and institutes psychological counselling and guidance services for students, faculty and employees. Innovative programmes like 'Crises Intervention Programmes' and 'Community Mental Health Programme' are planned to be developed. To facilitate learning, the motto of 'Learning Together' is encouraged and practiced.

Career Counselling and Placement Cell

The University has a Career Counselling and Placement Cell which takes care of the campus placements and job opportunities for the students enrolled in various courses under different Centres / Departments. Some of the key responsibilities of the Career Counselling and Placement Cell are:

1. To organise the job-oriented awareness related workshops time-to-time for the university students.
2. To provide placement training to students with sessions on Resume / CV writing, conducting mock interviews, group discussion, etc.



3. To invite the experts from corporate organisation for interactive sessions, lectures on soft skills and providing placement training to the students.
4. To disseminate the job opportunities related information in the concerned centres / departments.
5. To organise job fairs / career related fairs for the job seekers in the university premises.

Student Welfare

The University has an office of Dean Students' Welfare who is responsible to look after the general welfare of students outside classrooms, which contribute to the growth and development of their personality. Various activities and initiatives with respect to the following are coordinated by this office, viz. -

1. organizing educational tours, excursions and sports activities;
2. promoting social and cultural activities among students;
3. organization of student bodies in the University;
4. student-teacher relationship;
5. facilitating financial aid to needy students, securing of fellowships or scholarships, students' concession for travel etc.;
6. health and medical services to students;
7. student counselling;
8. special arrangement to be provided, if any, to women students, and differently abled students;
9. liaisoning between University administration and students;
10. providing student with information related to infrastructural facilities;
11. liaisoning with alumni association

Anti-Ragging Cell

Following the UGC regulations 2009 on curbing the menace of ragging in higher educational institutions, ragging in all its forms has been totally banned in the entire University including its departments/centres all its premises (academic, residential, sports, canteen etc.), whether located within the campus or outside and in all means of transportation of students. CUSB takes strict victimization, attendance, charging of fees, conducting of examinations, harassment etc.

Educational Tours

For educational tours organized as per the course requirements, the University may provide financial assistance, if required, to students in the form of one-time to and fro non-AC sleeper class rail fair by the shortest route. For routes not connected by railways, travel assistance equal to the actual bus fare may be provided.

Sports



The Sports



activities in the University are coordinated by Sports Committee constituted to organize various sports events throughout the year. The University provides sports schedule in the academic calendar, which is distributed to all the students at the beginning of the academic year. University Sports Committee conducts various sports activities for both boys and girls throughout the academic year.z

Cultural Activities

The University has a Cultural Committee coordinated by a Chairperson. The Committee organizes various cultural activities and events throughout the year which provides a platform to the students and which helps the students to identify their hidden talent and to develop themselves in the desired fields. The University has established a CUSB heritage club to nurture the creativity of each individual with an underlying intention of getting a closer look at our rich heritage and inculcating a sense of pride.



Grievance Redressal Cell

To redress the grievances of the students about academic and non-academic matters the University has instituted the grievance redressal cell which is effective in its functioning.

SC/ST/OBC Minority Cell

The University is committed to provide assistance to the SC/ST and minority students through SC/ST/OBC Minority Cell. The major purposes are to implement and monitor the reservation policy and address the problems of the students and to bring them at par with the main stream students by providing them teachers with expertise and specialization in the subjects where they lack.

Equal Opportunity Cell

With the purpose to eliminate discrimination and create awareness about it, as per UGC guidelines, the University has constituted an Equal Opportunity Cell headed by an Anti-Discrimination Officer of the rank of Professor.

Women Task Force

The University has constituted a Task Force for Women to provide security and protection to the women on the University campus and the hostels and to ensure safe working and learning environment to enable them to conduct their professional and academic activities.

**SPARSH**

The University has set up Sensitization, Prevention and Redressal of Sexual Harassment (SPARSH) for the prevention of sexual harassment in the University under UGC (Promotion of Equity in Higher Educational Institutions) Regulations 2012. SPARSH provides campus environment free of gender-based discrimination, sexual harassment and other acts of gender-based violence and creates awareness about it.

Proctorial Board

The University has a Proctorial Board which ensures to maintain discipline on the campus and cordial atmosphere amongst students through observation of general conduct of the students.

Extension activities outreach programme**Unnat Bharat Abhiyaan**

Universities are the centres of higher learning and they serve as catalysts for social development and change. Unnat Bharat Abhiyaan, launched by the government, is an important initiative to revitalize and develop the rural India through the support of institutions of higher learning. The University is located in one of the backward regions and it is our responsibility to bridge the gap between rich and poor, rural and urban and bring transformation in the rural development of the region. University has adopted a few villages near Panchampur and it is looking into the key issues like education, health and sanitation, entrepreneurship and agriculture. It aims to uplift the nearby villages and make them self-sufficient.

Legal Aid Clinic

The importance of Legal Aid and Awareness Campaigns as a mechanism for social progress is something that has been repeatedly stressed upon by the Government of India. In the backdrop of poverty and inequality, legal aid is an effective way towards attainment of the ideals of 'Social, Economic and Political' Justice that are enshrined in our Constitution under the Directive Principles of State Policy. Imparting legal awareness is the first step towards ensuring prompt and effective access to justice. Keeping this in mind, the Bar Council of India mandated all law colleges and universities in India to establish and run legal aid centres or clinics. The idea was to fulfil certain standards of legal education, but more importantly, it was also aimed at engaging the students in serving their community by promoting legal awareness through these legal aid clinics and programmes. The entire purpose of setting up nationwide collegiate clinics is to acclimatize several thousand law students of the nation to the problems faced by the masses ignorant about their rights and remedies under the law. Under the School of Law and Governance, CUSB Legal Aid Clinic is one successful beacon. The clinic functions by organising legal literacy camps, seminars, legal counselling, public speaking, poster making, street plays and liaising with Legal Services Authorities and through various other communicable mediums.

Blood Donation Camp

The University organizes Voluntary Blood Donation Camps with the help of Red Cross Society regularly on the University campus. The students, faculty and non-teaching staff participate in these indoor blood donation camps.

Study Circle

The Students Study Circle, "Renaissance", is set up by the University. The motive of the study circle is to enlighten students and spread knowledge about the specific events through organizing seminars, debate competitions and other similar kinds of activity within the University campus.

Smile Group

SMILE is a voluntary social service group mostly initiated by the students. The aim of this initiative is to research into the problems of the under-privileged children and inspire them and to solve their problems by motivating them with the cooperation of parents, teachers and society. The members visit schools and students catchment areas on selected days, and donate stationary and other pertinent study items, interact with the children and study their cases and encourage them to involve in curricular and co-curricular activities.

CUSB Honesty Shop

The real test of the character only happens after passing the test of temptation, on the same pattern, an innovative initiative has been taken by opening of a Honesty Shop. The aim behind this initiative is to develop life skills among students. Stationary items like Pencil, copy, pen, sharpener, rubber, copy, scale, staplers, cardboard, colors, whiteners etc. have been kept in this honesty shop. There is neither a shopkeeper nor any keeper/camera of the shop. The values of each item are written. Students pay for the material they need or buy and keep the prescribed amount in the cash box kept there. It is known that in the rapidly changing times,



ethical values are being violated. This shop has been started to inculcate moral and ethical values and to teach the lesson of honesty to the students.

CUSB Book World

An initiative taken by Students & teachers based on the idea of *Reading, Sharing* and *Donating* of Books. This initiative is an attempt to promote the culture of learning and reflection from different facets of our social life through reading sessions, discussions and deliberations thereof. These efforts are also designed to facilitate those students who have a desire to study books but may not be in a position to buy books and enjoy fruitful readings. Book World is running successfully for more than two years and also has been acknowledged by Indian Sociological Society in its e-newsletters.

ADMISSION POLICY

1. No candidate shall be eligible to register for a fulltime programme of study if s/he is already registered for any full-time programme of study in this University or any other University/Institution or is in full time employment.
2. To decide policy matters on admission and to oversee the admission process, there is the 'University Admission Teaching and Evaluation Committee (UATEC)'. The Admission Committee governed by UATEC takes appropriate steps for admission in various programmes.
3. The UGC guidelines and Government of India directives regarding reservations in admission are followed.
4. Every year before the commencement of the Entrance Test, the information is advertised well in advance both in print and electronic media. The final merit list shall be prepared from CUCET-2021. The admission is given based on the merit list and following the reservation policy.
5. The fee structure for different programmes is decided by the Academic Council on the recommendation of UATEC.
6. In the event of withdrawing admission by a student, the issue of cancellation of admission and refund of tuition / hostel fee, etc. to the student are decided in the light of the UGC & MHRD directives and University policy in this regard.
7. Important dates related to the admission are announced by the University. The University holds the right to cancel the application and admission of any candidate for wrongful submission of facts pertaining to qualification, reservation and/or any other matters.
8. Any complaint or grievance regarding the admission may be made in writing to the University Admission Committee.

Reservation in Admissions: The Central University of South Bihar follows the reservation policy in admissions as per provisions contained in the Central Educational Institutions (Reservation in admission) Act, 2006 and as amended in 2012 and thereafter from time to time.



General Information for Admission / Entrance Test

1. Students shall be admitted to the respective programmes as per the Admission Policy of the University. Regular updates are available on the University website. All eligible candidates must report themselves for the admission test to the respective test centre(s) on their own and according to the schedule.
2. Admission to the programmes in this University shall be subject to fulfilling the stipulated eligibility conditions. It is the applicant's responsibility to ensure that s/he fulfils the eligibility criteria for a particular programme as mentioned in the admission notification.
3. The applicant must have appeared in the final examination. Applicants awaiting result in the qualifying examination may also apply. However, their admission shall be subject to acquiring minimum eligibility marks in the qualifying examination and they may be allowed to seek admission only on production of their final year marksheet.
4. High School level knowledge of Mathematics, Computer literacy and good communication skills in English language are desirable for all the programmes.
5. Short-listed candidates based on entrance test scores, will be called for counselling and admission.
6. Details of online/offline counselling will be uploaded on the University website after declaration of CUCET-2021 results.
7. Candidates expelled from any other Board/ Institute/University or dismissed from Government service on disciplinary grounds and those who are known to have been involved in acts of crime and gross indiscipline or misconduct shall not be eligible for admission. The University may approach the police for verification in this regard. After the admission, if anybody is found guilty in this regard, s/he shall have to quit the university.
8. Central University of South Bihar reserves the right to launch or drop any academic programme at any stage.
9. Medium of the Entrance Test is English, except for M.A/Ph.D. in Hindi.
10. If a student is not in a position to provide any of the requisite documents/certificates at the time of admission, he shall be considered as provisionally admitted. Last date of submission of any of the pending documents/certificates is 31st December, 2021 failing which the admission of the student shall be liable to be cancelled.

NOTES:

1. The Prospectus 2021-23 supersedes earlier Prospectus/ Brochure and the contents of this and previous Prospectus/ Brochure cannot be produced for any legal purpose. All disputes, however, shall be subject to Patna High Court Jurisdiction only.
2. The contents of the Prospectus may be changed /modified as per administrative decision in future. Course contents may be revised as per decisions of the Academic Council/other bodies of this University.
3. **Payment of Fee:** - The finally selected candidates shall be required to pay fee as prescribed as **Appendix '1'**. In case, any student fails to deposit fee within the stipulated period, his/her admission shall stand cancelled and other candidates from the waiting list will be considered for admission purely on merit basis. Changes in fee structure will be subject to administrative decision of the University.
4. All admitted students shall have to submit Migration/Transfer Certificate from their respective Universities/ Boards positively before 31st December, 2021.
5. Refund of security deposit shall be made by the University only after the declaration of final result of the programme. In case, a student fails to complete the programme within stipulated time, the security deposit shall be refunded as per rules.
6. Regulations regarding admission and teaching-cum-evaluation as prescribed in the relevant Ordinance and also announced from time to time by the University are to be strictly followed by the students.
7. Students are advised to regularly pay attention to the notice boards, displayed at different places pertaining to academic matters.
8. As per the Supreme Court orders, ragging of any kind is banned within and outside the premises of this University. Any student found guilty of ragging and /or abetting ragging is liable to be punished appropriately as per rules of the University/UGC guidelines.
9. Students are expected to maintain excellent conduct inside and outside the University as well as in the hostels. They will be provided a copy of the University rules at the time of admission. Breach of University rules may result in disciplinary action including expulsion from the University, and the University reserves the right to make changes in the rules at any point of time, which will be notified to the students for their compliance.



MODEL ORDINANCE AND REGULATIONS GOVERNING MASTER OF <NAME OF THE DISCIPLINE/ PROGRAMME> DEGREE PROGRAMME OF CENTRAL UNIVERSITY OF SOUTH BIHAR UNDER CHOICE BASED CREDIT SYSTEM

(Effective from Academic Session 2018-19)

Under the powers conferred by The Central Universities Act, 2009- section 28(1) (b)], as amended, Central University of South Bihar, hereby, institutes the four semester Post Graduate Degree Programme for the Award of Master of <Name of the Programme>Degree by the Department of <Name of the Department> under the School of <Name of the School>of the University under the choice based credit system. The following ordinance for governing admission, course of study, examinations and other matters relating to <Name of the Programme> Degree under Department of <Name of the Department> of the Central University of South Bihar are hereby laid to come in force w.e.f. the Academic Session 2018-19 onwards till further amended.

1. Definitions of Key Words:

- 1.1 **‘Choice-Based Credit System (CBCS)’:** The CBCS provides choice for the students to select course from the prescribed courses (Elective or Soft-skill courses). It provides a ‘cafeteria’ approach in which the students can take courses of their choice, learn at their own pace, study additional courses and acquire more than the minimum required credits, and adopt an inter-disciplinary approach to learning.
- 1.2 **‘Academic Year’:** Two consecutive (one odd + one even) semesters shall constitute one academic year.
- 1.3 **‘Course’:** Course, usually referred to as paper having specific title and code number, is a component of a Programme. It consists of a list of topics /points /concepts /theories /principles etc. which a student has to learn and master during the Programme of study. Each Course generally shall be of 04 credits. Each course should define the learning objectives/ learning outcomes. A course may be designed to be delivered through lectures/tutorials/laboratory work/field work/outreach activities/project work/vocational training/viva/seminars/ term papers/assignments /presentations / self-study work etc., or a combination of some of these.
- 1.4 **‘Course Teacher’:** The course teacher generally will be the teacher who has primarily conceived the course, developed its contents, taken up the responsibility of teaching it and evaluating the performance of the students in that course.
- 1.5 **‘Credit’:** A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (lecture or tutorial) or two hours of practical work/field work per week.
- 1.6 **‘Credit Point’:** It is the product of the grade point and the number of credits for a course.
- 1.7 **‘Grade Point’:** It is a numerical weight allotted to each letter grade on a 10-point scale.
- 1.8 **‘Letter Grade’:** It is an index of the performance of students in a said course. Grades are denoted by letters O, A+, A, B+, B, C, P and F. A letter grade is assigned to a student on the basis of evaluation of her/his performance in a course on a ten point scale.
- 1.9 **‘Programme’:** An educational Programme leading to the award of a Degree, Diploma or Certificate.
- 1.10 **‘Credit-Based Semester System (CBSS)’:** Under the CBSS, the requirement for awarding a degree or diploma or certificate is prescribed in terms of number of credits to be completed by the students.
- 1.11 **‘Semester’:** Each Semester shall consist of 15-18 weeks of academic work equivalent to 90 actual teaching days. The odd semester may be scheduled from July to December and even semester from January to June. The credit-based semester system provides flexibility in



designing curriculum and assigning credits based on the course content and hours of teaching.

- 1.12 **‘Semester Grade- Point Average (SGPA)’:** It is a measure of performance of the work done in a semester. It is ratio of total credit points secured by a student in various courses registered in a semester and the total course credits taken during that semester. It shall be expressed up to two decimal places.
- 1.13 **‘Cumulative Grade Point Average (CGPA)’:** It is a measure of overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It shall be expressed up to two decimal places.
- 1.14 **‘Transcript’/ ‘Grade Card’ ‘or Certificate’:** Based on the grades earned, a grade certificate shall be issued to all the registered students after every semester. The grade certificate will display the course details (code, title, number of credits, grade and/or marks secured) along with SGPA of that semester.
- 1.15 **‘The University’:** ‘The University’ in this Ordinance means the Central University of South Bihar.

2. Admission and Other General Provisions:

- 2.1 The Programme of study leading to <Name of the Programme> Degree of Central University of South Bihar shall be of two year (Four Semesters) duration which may be completed in a maximum duration of four years (Eight Semesters).
- 2.2 The intake to the <Name of the Programme> Programme shall be as decided by the UATEC/Academic Council of the University from time to time.
- 2.3 The admission to the <Name of the Programme> Programme shall be governed by the provisions as laid down by the UATEC/Academic Council of the University from time to time.
- 2.4 Reservation of seats for admission in M.Ed. Programme shall be as per reservation policy of Government of India and as notified by GoI/UGC from time to time.
- 2.5 In accordance with the Reservation Rules of GoI for admission in Central Higher Educational Institutions, reservations of seats in M.Ed. Programme are as follows :

S. No.	Category	Reservation
1	SC Candidates	15 % of the intake
2	ST Candidates	7.5% of the intake
3	OBC Candidates	27% of the intake
4	Divyang Candidates	5% of the intake (<i>on horizontal reservation basis</i>)
5	Dependents/Wards of Defence Personnel /Kashmiri Migrants/ NCC Cadets	As per the GOI rules

- (a) The candidates seeking admission under the above categories shall be required to fulfill the prescribed eligibility condition of admission of the programme and shall submit requisite documents in support of their claim, as prescribed by the GOI from time to time.
- (b) The SC/ ST/OBC candidates must enclose attested copy of the latest caste certificate as per GOI norms along with their Admission Form/Enrolment form stating that the candidate belongs to SC/ST/OBC Category.

The following are empowered to issue SC/ST/OBC Certificates:

- (i) District magistrate/ Additional District Magistrate/ Collector/ Deputy Commissioner/ Addl. Deputy Commissioner/Deputy Collector /Ist Class Stipendiary Magistrate/City Magistrate/Sub Divisional magistrate/ Taluka Magistrate/ Executive Magistrate /Extra Assistant Commissioner.
- (ii) Chief Presidency Magistrate/ Addl. Chief Presidency Magistrate/ Presidency Magistrate.



- (iii) Revenue Officer not below the rank of Tehsildar.
 - (iv) Sub - Divisional Officer of the area where the candidate and/or his family normally resides.
 - (v) Administrator/Secretary to the Administrator/ Development Officer (Lakshadweep Islands).
 - (vi) Candidate must note that certificate from any other person/authority shall not be accepted generally.
- (c) 5% seats on horizontal reservation basis shall be reserved for Divyang Candidates (Benchmark Category) and shall be further sub-divided into different categories of Divyangs as per the GOI rules.

A candidate applying under Divyang category must attach a certificate by CMO, District Hospital. However, she/he shall be considered under Divyang category only after verification from the University Medical Board, if necessary.

- (d) Vacant seats reserved for SC/ST/OBC candidates, if any, may be filled up as per the GOI/UGC rules. In case in any one of the two categories of candidates viz., SC/ST, the required number of candidates for admission is not available (i.e., the list of respective category has been exhausted), then candidates belonging to the other category (SC or ST as the case may be, if available), shall be called for admission in order of merit so as to make up the deficiency in the required number in any of the aforesaid two categories. This provision shall be applicable to candidates belonging to SC & ST categories only.
 - (e) If sufficient number of candidates are not available in OBC category (i.e., OBC category list has been exhausted), such vacant seats shall be transferred to the general category.
- 2.6 Mere appearance in the admission test shall not entitle a candidate to be considered for admission to the Programme unless she/he fulfills the eligibility conditions. Applicants must fully satisfy themselves about their eligibility before filling the application form.
- 2.7 Provisional admission shall be offered to the candidates in order of merit list and the availability of seat in the Programme on the date of admission.
- 2.8 In case there is more than one candidate securing equal ranks as obtained by the last candidate in order of merit in the list of candidates to be called for admission, the following *inter-se* ranking rules of the University shall be applicable.

In case the candidates have equal/tie ranks then the marks obtained in the qualifying examination shall be the deciding factor and if, that is also same or result of both the candidates is not declared, then a senior candidate on the basis of date of birth shall be given preference. However, in a case of tie rank, if the result of qualifying examination of one candidate is declared then she/he will be given preference, provided she/he fulfills other eligibility conditions. In case of any dispute the decision of the Chairman, UATEC shall be final.

- 2.9 If the result of the qualifying examination is not declared by a university/board till the date of admission, the mark-sheet of the qualifying examination by a candidate can be submitted on or before 30th September of the admission year. In exceptional cases, further extension may be given by the Competent Authority on cogent reason(s). However, it may be noted that this clause cannot be extended to the candidate(s) whose result is being withheld or not declared by the university/board due to some specific reasons particularly related to the candidate(s). Furthermore, if the result of qualifying examination is not declared by a university/board in general then the aggregate percentage of marks/grades of the completed semesters/years of the qualifying examination (e.g. _____ years/____ semesters of _____ in case of admission in _____) must be not less than the required percentage of marks/grades in the qualifying examination.



- 2.10 At the time of reporting for admission, the candidates are required to be present in person and bring the documents in original as well as a set of photocopy duly attested as notified by the Admission Committee/Controller of Examinations (CoE) from time to time.
- 2.11 A candidate provisionally selected for admission shall be required to fill the prescribed form, submit the required documents, collect her/his admit card or any other equivalent document for admission to the Programme from the office of the Department/School/University after paying the fees on or before a date fixed for the purpose, otherwise the offer made to her/him will automatically stand cancelled.
- 2.12 In case any provisionally selected candidate fails to deposit the fee by the date prescribed, her/his provisional admission shall be cancelled and the seat thus falling vacant shall be offered to the next candidate in order of merit under the specified category.
- 2.13 Notwithstanding anything contained in this ordinance, a candidate who is qualified under the foregoing ordinance for admission to the University, and who is a student of some other Indian University/Institution, shall not be admitted to the University without the production of a Leaving or Transfer Certificate and/or Migration Certificate (as the case may be) issued by the last college/university attended and certifying to the satisfactory conduct of the student mentioning the highest examination she/he has passed. However, in certain cases if the candidates are not in position to submit the Transfer Certificate and/or Migration Certificate and the character certificate at the time of admission, they should submit the same as early as possible, but not later than 30th September of the year of admission in <Name of the Programme>failing which the University reserves the right to cancel their admission. In exceptional cases, further extension may be given by the Competent Authority on cogent reason(s). However, it may be noted that this clause cannot be extended to the candidate(s) whose result is being withheld or not declared by the university/board due to some specific reasons particularly related to the candidate(s).
- 2.14 A waitlisted candidate shall be offered admission strictly on the basis of ranking, provided there is a vacancy in the Programme. Such waitlisted candidates shall have to deposit their fees latest by the date fixed by the Admission Committee/ Competent Authority.
- 2.15 The candidates enjoying employed status and selected for admission to <Name of the Programme> Programme in the University, are required to produce Leave Sanction /Relieving Order at the time of Admission/Registration from their employer for the duration of the Programme permitting them to pursue their studies at the University, failing which the offer of admission may stand withdrawn. In case of any dispute the decision of the competent authority shall be final.
- 2.16 The admission of any candidate is liable to be cancelled without giving any further notice forthwith or at any time during the period of the concerned Programme of Study, if it is detected that the candidate has /had produced fake / forged certificate(s) /document(s), indulged in any act of misconduct/indiscipline and has /had concealed any other relevant information at the time of admission.
- 2.17 The admission of the candidate to the <Name of the Programme> Programme shall be subject to such ordinances, rules and regulations as may be framed from time to time by the University.
- 2.18 Foreign students shall be admitted as per the rules of the University.
- 2.18 Only the High Court of Patna shall have jurisdiction in case of any dispute relating to the provisional admission in the Programme.

3. Eligibility Conditions

The eligibility conditions for admission into the <Name of the Programme> Degree Programme shall be as follows:
<As prescribed>



However, the eligibility conditions for admission into <Name of the Programme> Programme and intake of the Programme shall be decided by the University Admission, Teaching and Evaluation Committee (UATEC) from time to time.

4. Medium of Instruction of the Programme:

The medium of instruction and examination shall be English/Hindi for <Name of the Programme> Programme.

5. Programme Fee:

5.1 The semester-wise fee structure of <Name of the Programme> Programme is given below:

5.2 The mode and schedule of payment of fees shall be decided by the university from time to time.

5.3 The fee structure of <Name of the Programme> Programme under Department of <Name of the Department> may be changed by the University prospectively. Such changed fee structure shall be declared in the admission notification of the concerned academic session.

6. Conduct of the Programme:

6.1 To qualify for the <Name of the Programme> Degree, a candidate must earn <Number of Credits> credits as contained in the Programme structure/Syllabus of <Name of the Programme> Degree as annexed with this ordinance. This Programme structure/Syllabus is subject to update/change/modify from time to time as prescribed by the Board of Studies (BoS) of the Department and need not to follow the procedure prescribed for updating the ordinances.

6.2 A student of the <Name of the Programme> Programme shall not be permitted to seek admission concurrently to any other equivalent or higher degree or diploma examination in this University or any other University, subject to rules/regulations of UGC or equivalent body in this regard and adoption of the same by the University.

6.3 The maximum period allowed to complete the <Name of the Programme> Programme will be four years (Eight Semesters).

6.4 The Department shall offer courses as per its schedule and available resources and can decide to offer or not to offer a particular course in a particular semester. To earn additional or lesser credits in a semester from the Department than the prescribed in the syllabus and to earn credits from other Departments/Schools shall be the sole responsibility of the student. S/he has to choose the courses in such a way that it becomes feasible for her/him to earn the credits.

7. Type of Courses:

The <Name of the Programme> Programme of the University has three types of courses, viz., Core courses, Elective courses, and Self-study/Skill-based courses.

7.1 Core courses:

7.1.1. The core courses are those courses whose knowledge is deemed essential for the students registered for the <Name of the Programme> Programme. Where feasible and necessary, two or more Programmes (like, degree, diploma and certificate etc.) may prescribe one or more common core courses.

7.1.2 All the core courses prescribed for <Name of the Programme> Degree Programme offered by the Department of <Name of the Department> under the School of <Name of the School> shall be mandatory for all the students registered in the <Name of the Programme> Programme.

7.1.3 A core course of the Programme may be an elective course for any other Programme.

7.2 Elective courses:

7.2.1 The elective courses can be chosen from a pool of courses (papers). These courses are intended to:

- allow the student to specialize in one or more branches of the broad subject area;



- help the student to acquire knowledge and skills in a related area that may have applications in the broad subject area;
- help the student to bridge any gap in the curriculum and enable acquisition of essential skills (e.g. statistical, computational, language or communication skills etc.); and
- help the student to pursue an area of interest.

7.2.2 Along with the elective courses prescribed for the <Name of the Programme> Degree Programme offered by the Department of <Name of the Department >, a student has to register herself/himself in different elective courses in such a way that she/he ensures earning of minimum eight credits as elective from the other Departments/Schools.

7.2.3 The student may also choose additional elective courses offered by the University to enable her/him to acquire extra credits from the discipline, or across the disciplines. However, up to only 16 credit courses with best grades completed from the other Departments/Schools shall be considered for calculating CGPA of the Programme of study.

7.3 Self-study/Skill-based Courses:

These self-study/skill-based courses are optional, not mandatory. Being non-credit courses, the performance of students in these courses shall be indicated either as “satisfactory” or as “unsatisfactory”, instead of the Letter Grade and this shall not be counted for the computation of SGPA/CGPA. These courses may also be taken by a student from other Departments/Schools.

Moreover, if the BoS of the Department feels that the Programme of study of <Name of the Programme> requires certain academic backgrounds to pursue the Programme effectively, it may recommend some course(s) without credit(s) to meet the purpose as compulsory part of the syllabus.

Note: A course (Core/Elective/Self-study/Skill-based) may also be offered by the department in the form of a Dissertation, Project work, Practical training, Field work or Internship/Seminar etc.

8. Mobility Options and Credit Transfers:

The students shall be permitted to opt inter-disciplinary and horizontal mobility and can take courses of their choice, learn at their paces, enroll for additional courses, acquire more than the required credits, and adopt an interdisciplinary approach to learning, subject to the provisions made in this ordinance.

8.1. A student may be allowed to take course/courses of any other University/Organization/Institution, the courses of whom are duly accredited by the Department of <Name of the Department >/School of <Name of the School > under MoU or otherwise and approved by the Academic Council. (Note: The Department <Name of the Department >/School of <Name of the Department >/ shall try to ensure accreditation of relevant courses of other Universities/Organizations/Institutions including MOOCs and increase the choice basket of <Name of the Programme >/ Programme).

8.2. A student availing inter-university mobility shall continue to be a bonafide-student of the University where she/he initially got admission and in case she/he earns credits from a different university, the credits so earned shall be transferred to her/his parent University.

8.3. It shall be the responsibility of the student to assess the feasibility and practicality of vertical mobility (across universities), as it doesn't entitle a student to be exempted or relaxed from any of the requisites (sessional, attendance, assignments, end-semester examinations and Programme duration etc.) for the completion of the Programme.

8.4. The mobility option should not be interpreted as inter-university migration.

8.5. The mobility across the disciplines is also subject to availability of desired elective course, faculty, infrastructure and number of students (as fixed by the University/Department from time to time) opting for that elective course.

8.6. The mobility shall be permissible from the Regular Mode Programme to the Regular Mode Programme of learning only, and cannot be replaced by Open/Distance/Online Programme.

8.7. A student of some other University shall in any case be admitted only at the beginning of the



particular Programme/Course which she/he proposes to take in the University subject to the fulfillment of other conditions.

9. Credits:

A credit defines the quantum of contents/syllabus prescribed for a course and determines the number of hours of instruction required per week. Thus, in each course, credits are assigned on the basis of the number of lectures/tutorials/laboratory work/field work and other forms of learning required for completing the contents in 15-18 week schedule. 2 hours of laboratory work/field work is generally considered equivalent to 1 hour of lecture.

- (i) 1 credit = 1 hour of instruction per week (1 credit course = 15 contact hours of instruction per semester)
- (ii) 4 credits = 4 hours of instruction per week (4 credit course = 60 contact hours of instruction per Semester)
- (iii) 1 credit = 1 hour of tutorial per week (1 credit course = 15 contact hours of instruction per semester)
- (iv) 1 credit = 2 hours of laboratory work/field work per week (1 credit course = 30 hours of laboratory work/field)

Number(s) of credit(s) assigned to a particular course are mentioned in the detailed syllabus of the courses.

10. Course Coding:

Each course offered by the Department of <Name of the Department> is identified by a unique course code comprising of twelve letters/numbers indicating Programme/level of Programme (first two letters in uppercase), Discipline/Subject (Next three letters in uppercase), Semester (next digit ranging from 1 to 4), Course Number (next three digits starting from 001 for each semester), Nature of Course for the Programme (next letter in uppercase i.e. C = Core Course; E = Elective Course, S = Self-study/Skill course), total number of credits for the course (next two digits starting from 00), respectively.

For example, the course code for second core course of the <Name of the Programme> Programme in the Third semester in the Department carrying 4 credits shall be <eg. MSCSC3002C04>.

Every time when a new course is prepared by the BoS of the Department (merely changing minor content and not the course title shall also be considered as a new course) it shall be assigned a new course code.

However, the University may decide a different course codification pattern for any Programme in future as per the demand of the situation.

11. Duration of the Programme:

The minimum duration for completion of <Name of the Programme> Programme shall be four consecutive semesters (two odd and two even semesters). *The maximum period for completion shall be eight semesters.*

Provided that (i) a semester or a year may be declared by the Controller of Examinations as a zero semester or a zero year for a student if she/he could not continue with the academic work during that period due to terminal illness and hospitalization of longer duration, or due to accepting a scholarship/fellowship, with due permission of the University, subject to the fulfillment of requirements laid down in this respect by the rules or regulations of the University. Such a zero semester/year shall not be counted for calculation of the duration of the Programme in the case of such a student.

(ii) Hostel and other related facilities shall not be given to a student after completion of minimum duration, i.e., four semesters required for <Name of the Programme> Programme.

**12. Student Mentor:**

The Department shall appoint a Mentor for each student from amongst the faculty members of the Department. All faculty members of the Department shall function as Student Mentors and shall generally have more or less equal number of students. The Student Mentor shall advise the student in choosing courses and render all possible support and guidance to her/him.

13. Course Registration:

13.1. The registration for courses shall be the sole responsibility of the student. No student shall be allowed to do a course without registration, and no student shall be entitled to any credits in the course, unless she/he has been registered for the course by the scheduled date fixed by the Department/School/University.

13.2. Every student has to register in each semester (in consultation with her/his Student Mentor) for the courses she/he intends to undergo in that semester by applying in the prescribed proforma in triplicate (one copy each for student, for the student's file to be maintained in the departmental office and for the office of the Controller of Examinations), duly signed by her/him, the Student Mentor, the concerned Course Teacher and finally approved by the Head/In charge of the Department of <Name of the Department >, within the deadline notified for the purpose by the Department/School/University.

13.3. Registration done in different courses within the stipulated period of time by a student shall not ordinarily be permitted to be changed. However, in exceptional cases, a student may be allowed by the Head/In charge of the Department of <Name of the Department > to add a course, substitute a course for another course of the same type (elective or self-study/skill-based) or withdraw from a course, for valid reasons by applying on prescribed proforma (in triplicate as mentioned above in 13.2) with the consent of the Student Mentor not later than one week from the last date of course registration in a particular semester. Further, withdrawal from a course shall be permitted only if the courses registered after the withdrawal shall enable the student to earn a minimum of 20 credits. This duly approved change/withdrawal shall be notified by the office of the Department of <Name of the Department> to all concerns like Controller of Examinations, both the Course Teachers etc.

13.4. A student shall register for a minimum of 20 credits and can register for a maximum of 32 credits in a semester unless specified otherwise by the University for a Programme of study.

13.5. If a student registers herself/himself for more elective courses than the prescribed in the Programme, while calculating the Cumulative Grade Point Average (CGPA), only the prescribed number of elective courses for the Programme of study shall be included in the descending order of the grades obtained by her/him ensuring the presence of minimum 8 and maximum 16 credits from the electives of other Departments/Schools.

13.6. A student shall have the option to choose an elective course from other Departments/Schools irrespective of the semester in which the course is offered remaining other conditions same subject to the condition that the course is being offered by the particular Department in that semester. For example, a student of third Semester can opt a course of other Department offered in the first/third semester provided the course is being offered by the particular Department.

14. Examination and Promotion:

(A) The examination of all the courses required for the <Name of the Programme> degree shall be internal in nature and generally consisting of Continuous Internal Assessment and End-Semester Examination. For the preparation of final grade in a particular course, the Continuous Internal Assessment (Formative in nature) and the End-Semester Examination (Summative in nature) shall have the weightage of 30% and 70%, respectively.

(B) Each course, irrespective of credits assigned to it, shall be evaluated out of 100 points. These points should not be confused with traditional system of marks. The points obtained by a student in a course are indicator of percentage of marks and not the raw marks. Since, the University has adopted the system of grading, hence, the marks shall not be reflected in a grade sheet of a student. However, for wider uses, and if required, the students or the prospective employer or end user may take the following reference for calculating maximum marks and obtained marks for a Programme/Course:



For Maximum Marks –

- 1 Credit Course = 25 marks course
- 2 Credit Course= 50 marks course
- 3 Credit Course= 75 marks course
- 4 Credit Course= 100 marks course and so on.

For obtained marks –

The obtained points may be converted into marks by taking them as percentage of marks. For example:

- (i) If a student has obtained 80 points in a 4 Credit Course, then it may be converted as: *80 marks out of 100.*
- (ii) If a student has obtained 80 points in a 2 Credit Course, then it may be converted as: *40 marks out of 50.*
- (iii) If a student has obtained 80 points in a 1 Credit Course, then it may be converted as: *20 marks out of 25.*

In such course(s), where direct numerical grades are awarded in place of points, these numerical grades shall be converted into marks by using the following formula:

$$\text{Points in the Course} = \text{Numerical grade in the Course} \times 10$$

However, any change may be recommended in this pattern by the UATEC, from time to time.

14.1. Continuous Internal Assessment:

- 14.1.1 The Continuous Internal Assessment of the students' learning and performance shall be carried out by the Course Teacher(s). Considering the nature of the course, the teacher(s) shall decide the mode of Continuous Internal Assessment, which may include one or more assessment tools, such as student's class performance, assignments, class tests, take-home tests, term paper(s), presentations, oral-quizzes, case studies and laboratory work etc.
- 14.1.2 Each Course Teacher shall design the Continuous Internal Assessment system for the course she/he offers with the approval of the Departmental Committee (DC). This approved design of Continuous Internal Assessment shall be announced to the students of the respective courses at the beginning of each semester by the concerned teacher.
- 14.1.3 Generally, each course shall be taught by one teacher only, who shall maintain all the records related to attendance, teaching and assessment in a systematic manner. In an exceptionally rare case, if a teacher is assisted in teaching by other teacher, the teacher (in-charge of the course) shall be responsible for coordinating teaching and assessment, including award of final grade.
- 14.1.4 In case a student fails to appear in any Continuous Internal Assessment, it will be taken care by the concerned Course Teacher at her/his level.

14.2. End-Semester Examination:

- 14.2.1 Generally, End-Semester theory question paper shall include a limited number of very short answer type questions followed by short and long questions covering the entire syllabus in such a way that the question paper ensures assessing students' knowledge, understanding, application and analysis-synthesis/reflection of the subject. Thus, a standard model format of the End-Semester Examination paper consisting of 70 points shall be as under –
 - Section-A: 15 very short questions of 02 points each = 30 points
(Short specific questions covering the entire syllabus to be given which should be answered in approximately 50 words by the examinee).
 - Section-B: 04 short questions of 05 points each = 20 points



(05 short questions to be given out of which 04 questions are to be attempted in approximately 200 words by the examinee).

Section-C: 02 long questions of 10 points each = 20 points
(03 long questions to be given out of which 02 questions are to be attempted in approximately 500 words by the examinee).

However, a different format of the End-Semester question paper for some particular course (e.g., project, dissertation or laboratory/field work etc.) may be prescribed by the Board of Studies (BoS) of the Department which shall come into force only after the approval of the competent authority of the University.

14.2.2 The duration of the End-Semester theory examination generally shall be of three hours.

14.2.3 The DC shall appoint one or more team(s), as per the need, of preferably three faculty members in each team for moderation of question papers of End-Semester Examinations and communicate the same to the Controller of Examinations. The task of moderation shall be organized by the Controller of Examinations.

The paper setter and the moderator(s) shall ensure and certify that question paper is comprehensive to cover all important topics/themes/course and fit for assessing the mastery of the entire course. They shall also ensure and certify that not more than 10% questions from the previous year question paper have been repeated.

14.3 In exceptional cases, depending upon the nature of a particular course, a totally different mode of assessment and evaluation may be prescribed by the BoS of the Department for the course, which shall come into force only after the approval of the competent authority of the University. However, it must be reflected in the detailed syllabus of the course and be available to the students at the beginning of the semester.

14.4 Any partial or complete change in the system of examination (Assessment & Evaluation) may be recommended by the UATEC which shall be implemented only after the approval of the competent authority.

14.5 A student is required to secure a minimum of 'P' grade in the Continuous Internal Assessment and in the End-Semester Examination, taking together, in a course.

14.6 Making Evaluated Answer-scripts Available to the Students:

14.6.1 All the examination answer-scripts shall be made available to the students after evaluation by the respective teachers as per the schedule decided by the concerned teachers or the University. In case of the End-Semester Examination, the evaluated answer scripts shall be made available to the students within 7 days of the last examination for the semester. Thereafter, within a week, all the answer books along with the statement of marks shall be sent by the concerned teacher through her/his Department to the Office of the Controller of Examinations for declaration of the results.

14.6.2 If a student is not satisfied with the evaluation of her/his answer script, s/he must submit a written objection to the concerned Head of the Department (offering the course) within 8 days from the last examination for the semester. Such complaint shall be looked after by a panel of three faculty members, including the concerned teacher, to be nominated by the concerned Head of the Department, whose decision shall be final. The revised points, if any, shall be submitted by the panel to the concerned Head of Department who shall further submit it to the Controller of Examinations. This complete process of grievance redressal by the panel and the further submission of marks by the Head of Department, generally, should not take more than 7 days from the date of receipt of the grievance. However, in case of any controversy, the matter shall be referred to the Vice-Chancellor for final decision and action.



14.6.3 Once evaluated answer books are submitted to the Controller of Examinations, there shall be no re-evaluation/re-totaling thereafter.

14.7 Letter Grades and Grade Points:

An absolute grading system shall be adopted to grade the students.

14.7.1. Under the absolute grading system, points shall be converted to grades based on pre-determined class intervals.

14.7.2. In the End-Semester theory or practical examinations, the examiner shall award the points and these points after adding the points of Continuous Internal Assessment shall be further converted into Grades/Grade points in accordance with the provisions of this ordinance.

14.7.3. Detail Grade Sheet issued by the Controller of Examinations office at the end of the semester shall carry points /percentage and equivalent grades (numerical and letter) both.

14.7.4. The 10-point Grading System, with the Letter Grades as given under shall be followed:

Letter Grade	Numerical Grade Point	Class Interval (in %)
O (Outstanding)	10	Above 90 and \leq 100
A+ (Excellent)	9	Above 80 and \leq 90
A (Very Good)	8	Above 70 and \leq 80
B+ (Good)	7	Above 60 and \leq 70
B (Above Average)	6	Above 50 and \leq 60
C (Average)	5	Above 45 and \leq 50
P (Pass)	4.5	40 to 45
F (Fail)	0	< 40
Ab (Absent)	0	Absent

Note:

- (i) F= Fail, and the students graded with 'F' in a Programme or Course shall be required to re-appear in the examination.
- (ii) The minimum qualifying points for a course shall be 40% (i.e., Letter Grade 'P'/ Numerical Grade 4.5).
- (iii) The students shall have to qualify in the Continuous Internal Assessment and the End-Semester examinations taking together.
- (iv) Before awarding numerical grade to the points obtained in a course, only the total of Continuous Internal Assessment and End-Semester Examination shall be rounded off to remove the decimal point. Thus, no separate rounding off shall be done of the points obtained in different components of Continuous Internal Assessment and End-Semester Examination.
- (v) There shall be rounding off of SGPA/CGPA up to two decimal points.
- (vi) The SGPA/CGPA obtained by a student shall be out of a maximum of 10 points.
- (vii) In order to be eligible for the award of the <Name of the Programme> Degree of the University, a student must obtain CGPA of <as prescribed> at the end of the Programme.
- (viii) Provided that the student who is otherwise eligible for the award of the <Name of the Programme> Degree but has secured a CGPA of less than 4.50 at the end of the minimum permissible period of semesters may be allowed by the Department to reappear or repeat as the case may be the same course(s) or other courses of the same type in lieu thereof in the extra semesters provided in Clause 11 related to the duration of Programme.



- (ix) The Cumulative Grade Point Average (CGPA) obtained by a student shall be classified into the following division/Class:

CGPA	Class/ Division
Above 9	Outstanding
Above 8 to 9	First Class (With Distinction)
6 to 8	First Class
5.5 to < 6	High-Second Class
5 to < 5.5	Second Class
4.5 to < 5	Third Class

14.8. Re-appear in the End-Semester Examination:

- 14.8.1 Once a student has fulfilled the attendance requirements in a course as per the provisions mentioned in this ordinance but has failed to score minimum grade required to qualify the Course or failed to appear in the End-Semester Examination of the course, may be allowed to re-appear in the End-Semester Examination, in such course, in the extra semesters provided under the Clause 11 on duration of Programme.
- 14.8.2. Such student may avail the chance to re-appear only within the maximum duration of the Programme. The re-appearance shall be permitted only in the End-Semester Examination of the concerned course(s) and the marks obtained by the student in the Continuous Internal Assessment conducted earlier for the particular course(s) shall be carried forward to be added with the marks obtained by her/him in the latest End-Semester Examination of the respective course(s).
- 14.8.3. The re-appear examination of even semesters shall be conducted along with the End-Semester Examinations of even semesters. Similarly, the re-appear examinations of odd semesters shall be conducted along with the End-Semester Examinations of odd semesters.
- 14.8.4. The re-appear examination shall be based on the syllabi of the course in force at the time of initial registration to the course.
- 14.8.5 A student who is re-appearing for the End-Semester Examination as per the clause 14.8.1 above; can re-appear in the subsequent semester(s), whenever the examination of a particular course is held, on payment of Rs. 2000/- (may be revised time to time by the University) per course in addition to the prescribed semester fee of the semester in which she/he has been promoted/provisionally promoted, if applicable, within the maximum permissible duration for the Programme.
- 14.8.6 A student who has got the Migration/Transfer Certificate issued from the University shall not be allowed to re-appear in the End-Semester Examination.

14.9 Re-appear in the End-Semester Examination for Improvement of Grade(s):

- 14.9.1 If a student wishes to improve her/his grade(s) in any course (s), s/he can re-appear in the End-Semester Examination in the subsequent odd/even semester(s), whenever the examination of the particular course(s) is held, on payment of Rs. 2000/- (may be revised time to time by the University) per course in addition to the prescribed semester fee of the semester in which she/he has been promoted/provisionally promoted, if applicable, within the maximum permissible duration for the Programme of study of the student.
- 14.9.2 A student may improve her/his points/grade by reappearing in the End-Semester Examination of a course as per the provisions of reappearing mentioned above. In such cases points obtained by the student in the Continuous Internal Assessment of the particular course shall be carried forward to the subsequent End-Semester Examination of the course. However, in such case, the points/grades obtained on the basis of latest appeared End-Semester Examination shall be considered for calculation of final CGPA of the Programme.
- 14.9.3 The re-appear examination of a course for improvement of grade shall be based on the syllabi of the course in force at the time of initial registration to the course.



14.9.4 A student who has got the Migration/Transfer Certificate issued from the University shall not be allowed to re-appear in any examination for improvement of grade.

14.10 Repeating course(s):

14.10.1 A student having attendance shortage in any course may repeat the course by taking re-admission in that course in subsequent odd/even semester(s), whenever the course is being offered, within the maximum permissible duration of the Programme.

14.10.2 If a student repeats a course she/he has to fulfill all the desired requirements afresh including attendance, Continuous Internal Assessment and the End-Semester Examination. In such case the course content shall be based on the syllabi of the course in force at the time of repeat of the course. However, at the time of repeating, if the same course is not being offered by the Department due to any reason, the student may choose any other course of similar nature and credits from the available courses on recommendation of the Mentor and approval of the concerned Head of Department.

14.10.3 If a student repeats a course, she/he has to submit a fee of Rs. 3000/- (may be revised time to time by the University) per course in addition to the prescribed semester fee of the semester in which she/he has been promoted/provisionally promoted, if applicable.

14.11 Promotion Rules:

14.11.1 A student shall be declared as **'Promoted'** to the next semester when s/he earns 'P' Grade or above in the last concluded semester examination, maintaining the spirit and pattern of semester system and covering the mandatory components, such as Continuous Internal Assessment and End-Semester Examinations in all the courses for which s/he was registered till date.

14.11.2 A student shall be **'Provisionally Promoted'** to the next semester if she/he secures less than 'P' grade in **maximum three courses** out of the total courses registered by her/him till date.

14.11.3 A student shall be deemed as **'Failed'** in a semester when she/he gets below 'P' Grade in **more than three courses** or does not appear in the End-Semester Examination of **more than three courses**, after fulfilling the attendance requirements as per this ordinance, out of the total courses registered by her/him till date. In such case(s), a student has to re-appear in the End-Semester Examination of the course(s) in subsequent odd/even semester(s) within the maximum permissible duration of the Programme on payment of Rs. 2000/- (may be revised time to time by the University) per course. Since, such student does not need to attend the classes of the course(s) again; the marks of Continuous Internal Assessment obtained by her/him in the course(s) earlier shall be carried forward to be added with the marks obtained by her/him in the latest End-Semester Examination of the respective course(s).

14.11.4 A student shall also be deemed as **'Failed'** in a semester when she/he failed to appear in the End-Semester Examinations of more than three courses due to the attendance criteria mentioned in 18.4 of this ordinance. Such student has to repeat the courses in the subsequent odd/even semester(s), whenever the courses are being offered, within the maximum permissible duration of the Programme, on payment of the prescribed fees as per the clause 14.10.3.

14.11.5 Under no circumstances, any student shall be permitted to register in a new course if she/he is having less than 'P' Grade in more than three courses.

14.11.6 A student shall be declared to have passed the Programme of study and award of the degree if she/he has secured the required credits with at least 'P' grade.



14.11.7 The re-examination of End-Semester Examination of the failed or provisionally promoted students shall be as per the clauses/sub-clauses under 14.8 above. However, only in a case where a student of final semester (within the minimum prescribed duration of the Programme) fails to appear or to achieve 'P' grade in maximum three courses including all backlogs after the result declaration of final semester, the Department may ask the concerned course Teacher(s) to conduct re-examination of End-Semester Examinations of such course(s) within a month from commencement of the next semester relaxing the condition of odd/even semester as given in 14.8.3 the student shall have to pay a fee of Rs. 2000/- per course.

14.11.8 If a candidate is repeating a course in an academic session, whatever may be the reason, it shall not be counted in the total number of seats and shall not affect the fresh intake of the <Name of the Programme> Programme in that academic session.

14.12 Minimum Credit Requirements:

For a two-year <Name of the Programme> Degree Programme, the credit requirements shall be <number of credits> credits, including core and elective courses as prescribed in the detailed syllabus attached with this ordinance and regulations. A minimum of 8 credits and maximum of 16 credits shall be in the form of elective courses from the core/elective courses offered by other Department(s).

15. Computation of SGPA and CGPA:

The University shall follow the following procedure to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA):

15.1. The SGPA is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student in a particular semester and sum of the number of credits of all the courses undergone by a student in that semester, i.e.,

$$SGPA (S_i) = \frac{\sum (C_i \times G_i)}{\sum C_i}$$

Where, C_i is the number of credits of the i^{th} course and G_i is the grade point scored by the student in the i^{th} course.

15.2. The CGPA is also calculated in the same manner taking into account all the considerable courses as per the provision laid down in this ordinance out of the total courses undergone by a student over all the semesters of a Programme, i.e.,

$$CGPA = \frac{\sum (C_i \times G_i)}{\sum C_i}$$

Where, C_i is the number of credits of the i^{th} course (which is to be considered for the award of the PG Degree) and G_i is the grade point scored by the student in the i^{th} course.

15.3. The SGPA and CGPA shall be rounded off to 2 decimal points.

15.4. Since, the calculation of CGPA is not based on all the courses undergone by the student, rather it is governed by other provisions laid down in this ordinance like, clause 7.2.3, 13.5 etc., the CGPA may differ from the corresponding calculations based on SGPA only.

16. Illustration of Computation of SGPA and CGPA:

16.1. Illustration for computing SGPA:

Course	Credit	Grade Letter	Grade Point	Credit Point
Course I	3	A	8	3 x 8 = 24
Course II	4	B+	7	4 x 7 = 28
Course III	3	B	6	3 x 6 = 18
Course IV	3	O	10	3 x 10 = 30
	Total credits for the			Total Credit points



	semester = 13			Earned = 100
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Thus, SGPA = $100/13 = 7.69$

16.2 Illustrations for computing CGPA:

Courses Considered for the Award of the Degree	Completed in the month (Year)	Credit	Grade Letter	Grade Point	Credit Point
Course I	Dec 2018	4	A	8	$4 \times 8 = 32$
Course II	Dec 2018	4	B+	7	$4 \times 7 = 28$
Course III	June 2019	4	B	6	$4 \times 6 = 24$
Course IV	June 2020	4	O	10	$4 \times 10 = 40$
		Total credits for the semester =16			Total Credit points earned= 124

Thus, CGPA = $124/16 = 7.75$

Note: Formula to calculate percentage from CGPA/SGPA = CGPA or SGPA $\times 10$; and formula to calculate percentage to CGPA or SGPA = Percentage/10, e.g., In case of example mentioned in Table 16.2, the percentage of CGPA = $7.75 \times 10 = 77.50\%$

16.3. Transcript (Format): Based on the above, letter grades, grade points, and the SGPA, the Transcripts/Detail Grades Certificates (DGCs) shall be issued to the candidates for each semester and a consolidated transcript on completion of the Programme indicating the performance in all the courses considered for calculating the CGPA. Along with the CGPA, the percentage of marks obtained in the Programme shall be reflected in this consolidated transcript on the basis of the CGPA. However, this system may be changed by the University at any point of time without prior notice to the stakeholders as per the need.

17. Removal of Student Name from the Programme:

The name of a student falling under any one of the following categories shall automatically stand removed from the rolls of the University:

- A student who has failed to fulfill the minimum grade point requirements prescribed for the Programme during the maximum duration of the Programme.
- A student who has already exhausted the maximum duration allowed for completion of the Programme and has not fulfilled the requirements for the award of the degree.
- A student who is found to be involved in misconduct, forgery, indiscipline or any other objectionable conduct, upon recommendation of the Disciplinary Committee/ Proctorial Board or any other procedure deemed fit by the University.
- A student who has failed to attend the classes as stipulated under the clause of attendance requirements in this ordinance.

18. Attendance Rules:

18.1 A student is required to attend 100% of the classes held in a course in the specific semester in order to be eligible to appear in the End-semester examination of that particular course.



- 18.2 Waiving of attendance-deficit up to a maximum of 25% is permissible to accommodate following situations:
- (a) Representing the University in any inter-collegiate, inter-University, local, national or international events; (b) Participating in an activity of the University with prior permission of the Competent Authority; (c) Participation in NCC/NSC/NSS Camps duly supported by certificate. (d) Participation in Educational Excursions, which form a part of teaching in any subject, conducted on working days duly certified by the concern Course Teacher/ Head of Department /Dean; and (e) to cover all unforeseen reasons like illness, hospitalization, personal engagements elsewhere or other personal reasons which compel a student to absent herself/himself from attending the classes.
- 18.3 Hence, it shall be mandatory/compulsory to every student to have attendance in 75% classes held in particular course. No waiver, for whatsoever reason, shall be given. Accordingly, no application requesting waiver below 75% attendance shall be entertained by the University. However, a further relaxation up to 10% or the days spent (whichever is lesser) on the basis of situations mentioned under a, b, c and d of Clause 18.2 above (not on the basis of e of Clause 18.2) may be considered by the Vice-Chancellor on the recommendation of the Head/In charge of the Department. In any other situation no appeal can be made for this purpose even to the Vice-Chancellor.
- 18.4 A student, however, shall not be allowed to appear in the End-Semester Examination of the courses which are not covered under above mentioned clauses 18.1, 18.2 and 18.3. Such a student shall be permitted to repeat the courses in the subsequent odd/even semester(s), whenever the courses are being offered, within the maximum permissible duration of the Programme, on payment of the prescribed fees as per the clause 14.10.3. However, in the first semester, for repeating the courses, it shall be mandatory for a student to have minimum 40% attendance in aggregate (taken together all the courses registered by her/him in the semester). If a student does not put in at least 40% of aggregate attendance in the first semester, she/he shall have to leave the Programme without claiming refund of any fees, and her/his admission shall be treated as cancelled.
- 18.5 The attendance of a newly admitted candidate shall be counted from the date of her/his admission/registration or date of beginning of classes, whichever is later. In the case of promoted candidates, attendance shall be counted from the date on which respective class begins. However, if a new student is admitted late after the commencement of the classes, s/he must get herself/himself registered in the desired courses following the due procedure within 5 working days after the admission failing which her/his attendance shall be counted after 5 working days from the date of admission.
- 18.6 In a case of changed registration as per the clause 13.3 of this ordinance the total classes held for calculating percentage of attendance in the newly registered course for a particular student shall be counted from the fresh registration in that particular course.



- 18.7 Monthly records of attendance of students in each of the courses taught by a teacher is to be prepared and submitted by the concerned teacher to the Office of the Head/In charge of the Department (HoD) and the Controller of Examinations' (CoE) office by the 10th day of the next month after displaying it to the students in the course and taking their signatures. The teacher will keep the original record of attendance with her/him and submit it finally to both the offices with her/his remarks regarding the eligibility of a student for appearing in the end semester examination within three working days after the last class or teaching day in the semester, whichever is later. Any failure in compliance in this matter must be informed by the concerned teacher to the Head of Department and the Controller of Examinations with justification.
- 18.8 There shall be an Attendance Monitoring Committee in the Department under the Chairmanship of the Head or her/his nominee for proper monitoring of attendance records and taking suitable action(s) as per the requirements.

19. Programme Structure:

The <Name of the Programme> Programme shall be of two year duration divided into four semesters. A student is required to earn at least 96 credits within the stipulated time as per the details given in <Annexure--->.

(Annexure will contain the following along with the detailed syllabus)

The Courses and Credit Load (In the provided format along with specific scheme of examination, if any):

20. Power to Relax and Amendments

20.1 All the above clauses are subject to the amendments, as and when required, as per the decisions pertaining to rules, regulations and norms of the University Statutory Bodies and other Regulatory Bodies etc. (e.g., NCTE/BCI), from time to time.

20.1.1 Notwithstanding what is contained in the foregoing clauses of this ordinance, the Academic Council may, in exceptional circumstances consider at its discretion and for reasons to be recorded, relax any of the provisions except those prescribing CGPA requirements.

21. Notwithstanding anything stated in this ordinance, for any unforeseen issues arising, and not covered by this ordinance, or in the event of differences of interpretation, the Vice-Chancellor may take a decision, after obtaining the opinion/advice, if required, of UATEC. The decision of the Vice-Chancellor shall be final.



SCHOOLS, DEPARTMENTS AND ACADEMIC PROGRAMMES

SCHOOL OF MATHEMATICS, STATISTICS & COMPUTER SCIENCE

Mathematics, Statistics and Computer Science have played a very important role in building up modern civilization by perfecting all sciences. The vision of the School is to provide quality education and to undertake and support the interdisciplinary research through interaction between Mathematics, Statistics and Computer Science and also with other domains of knowledge. It consists of three departments namely, the Department of Mathematics, the Department of Statistics and the Department of Computer Science. Setting a novel trend in interdisciplinary studies, the three departments under the School are not only educating and training their respective students but also helping other disciplines in their regular as well as special courses by providing relevant skill to solve academic and technical issues.

1. Department of Mathematics

The Department of Mathematics was started with the objective of producing trained manpower for undertaking teaching and research in Mathematics and in allied branches of basic and applied sciences. The Department is committed to impart high quality education in Mathematics. The Department offers two year M.A./M.Sc. programme in Mathematics and Ph.D. programme in Mathematics in diversified areas of Mathematics and Mathematical Sciences. The department also offers number of courses as elective to the students of the other department under choice based credit system. The Department also offers B.Sc. (Mathematics) courses to the 4 year integrated B.Sc.-B.Ed. programme. The Department provides common computer laboratory equipped with all computational facilities.

Objectives of the Program:

The two-year (four semesters) Postgraduate programme aimed to train the student in all the basic fields of Mathematics so as to develop in them the skills for creative thinking, understanding fundamental concepts of the subject, problem solving ability and for achieving professional competence in Mathematics. Under choice based credit systems, the Department provides student-centric approach to the learning for acquiring higher education. Through choice based credit system, the Department provides convenience at the same time effective teaching-learning platform wherein the student has the flexibility to choose their courses from a list of available elective and soft skill courses. A wide spectrum of elective and soft skill courses can provide the student for different future avenues after getting the degree.

B. Program Outcomes:

- (i) Equip students in the skills to analyse problems, formulate on hypothesis, evaluate and draw reasonable conditions thereof.
- (ii) Prepare student for pursuing the career in research and industry.
- (iii) Acquire relevant knowledge and skills required to become a professional.
- (iv) Aware the students for contributing the society with their mathematical skills.

C. Eligibility:

Bachelor's Degree from any recognised University in Mathematics/Statistics but should have studied Mathematics as subject in all the 3 years with a minimum of 55% marks for General/ OBC candidates and 50% marks for SC/ST candidates.

Doctor of Philosophy

a. Objectives of the Program:

Ph.D. programme offered by the Department of Mathematics emphasises on innovative research work in the field of Mathematics and Mathematical Sciences with the implementation of policies designed to improve the research infrastructure and new academic & industry collaborations. The Department motivates researchers to develop analysis based high-end research so that they can contribute the society through the outcomes of their research.

b. Program Outcomes:

- (i) Develop capabilities in critical intellectual inquiry.
- (ii) Develop Ph.D. scholars' scientific culture.
- (iii) Prepare their future career prospects in academics, research etc.
- (iv) Encourage their international prospects.



1.1.1 Ph.D in Mathematics: Department of Mathematics is currently offering Ph.D. in Mathematics.

List of Courses in Ph.D. Mathematics

Course Code	Course Title	Credits
MTH 901	Research Methodology	4
MTH 902	Tools and Techniques of Research	4
MTH 903	Preparation and Presentation of Research Proposal	4
	Total Credits	12

1.1.2. M.Sc. / M.A.in Mathematics

The two-year (four semesters) postgraduate programme aimed to train the student in all the basic fields of Mathematics so as to develop in him/her skill for creative thinking, understanding fundamental concepts of the subject, problem solving and for achieving professional competence in Mathematics. The courses have been designed in such a way that the student will be able to learn the subject in a systematic and methodical manner under the able guidance of the faculty and general environment of the university. There are numerous avenues available to the student after the successful completion of the course. With the wide spectrum of elective courses in the 3rd and 4th semesters a student can opt for a career in research/ teaching/industry. The Programme has following features:

- I. A balanced blend of foundational, core and specialized courses.
- II. Ample scope for enhanced interactive teaching in view of the relatively small student teacher ratio.
- III. Extensive choice of elective courses enabling the student to specialize in various existing and emerging streams of Pure and Applied Mathematics.
- IV. Option to choose some of the open elective courses offered by sister departments such as Statistics and Computer Science.

List of Courses in M.Sc. /M.A. Mathematics(96 Credits)

List of Core Courses				
S. No.	Course Code	Course Title	Credits	Course Instructor
Semester-I				
1	MSMTH1001C04	Real Analysis	4	Dr. Vivek Kumar Jain
2	MSMTH1002C04	Linear Algebra	4	Dr. Rajesh Pratap Singh
3	MSMTH1003C04	Discrete Mathematics	4	Dr. Shubh Narayan Singh
4	MSMTH1004C04	Ordinary Differential Equations and Laplace Transformation	4	Prof. H. K. Nigam
5	MSMTH1005C04	Operation Research	4	Dr. Roushan Kumar
		Elective (Out of the Department of Mathematics)	4	
Semester-II				
6	MSMTH2001C04	Complex Analysis	4	Prof. H. K. Nigam
7	MSMTH2002C04	Algebra-I	4	Dr. Vivek Kumar Jain
8	MSMTH2003C04	Topology	4	Dr. Rajesh Pratap Singh
9	MSMTH2004C04	Measure and Integration	4	Dr. Pankaj Mishra
		Elective (Out of the Department of Mathematics)	4	






		Elective (From the Department of Mathematics)	4	
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Semester-III				
10	MSMTH3001C04	Functional Analysis	4	Dr. Roushan Kumar
11	MSMTH3002C04	Algebra-II	4	Dr. Rajesh Pratap Singh
12	MSMTH3003C04	Partial Differential Equation and Fourier Analysis	4	Prof. H. K. Nigam
13	MSMTH3004C04	Numerical analysis	4	Dr. Pankaj Mishra
Semester-IV				
14	MSMTH4001C04	Probability and Statistics	4	Prof. H. K. Nigam
15	MSMTH4002C16	Project* *will commence from the 3rd Semester and the evaluation will be in the 4th Semester.	16	
		Elective (From the Department of Mathematics)	4	
Total Credits			96	

#As per availability on the Swayam Portal at the time of opting the Swayam courses.

List of Elective Courses				
Sl. No.	Course Code	Course Title	Credits	Course Instructor(s)
Semester-II (One course will be offered)				
1	MSMTH2002E04	Calculus of Variations and Integral Equations	4	Dr. Pankaj Mishra
2	MSMTH2004E04	Graph Theory	4	Dr. Shubh Narayan Singh
Semester-IV (Two courses will be offered)				
1	MSMTH4001E04	Fluid Mechanics	4	Prof. H. K. Nigam
2	MSMTH4003E04	Numerical Solutions to PDE	4	Dr. Roushan Kumar
3	MSMTH4004E04	Group Theory	4	Dr. Vivek Kumar Jain
4	MSMTH4014E04	Mathematical Cryptography	4	Dr. Rajesh Pratap Singh
SKILL BASED/SELF-STUDY COURSES (NON-CREDIT)				
Sl. No.	Course Code	Course Title		
1	MSMTH4010E04:	LATEX		
2	MSMTH4011E04:	MATLAB		

**Brief Profile of Faculty Members**

	<p>Prof. H. K. Nigam PhD (Harcourt Butler Technological Institute, Kanpur) Specialization- Approximation Theory, Fourier Analysis, Summability and Wavelets and Compressive Sensing</p>		<p>Dr. Roushan Kumar Associate Professor Ph.D. (IITBHU, Varanasi) Specialization- Wave Propagation in Thermoelastic Media, Thermoelastic damping, Variational Principle in thermo elasticity, Thermoelastic Damping.</p>
	<p>Dr. Rajesh Pratap Singh Assistant Professor Ph.D. (IIT Guwahati) Specialization- Finite Fields, Combinatorics and Cryptography</p>		<p>Dr. Vivek Kumar Jain Assistant Professor D.Phil (University of Allahabad) Specialization- Group Theory Post-Doctoral Fellowship</p>
	<p>Dr. Shubh Narayan Singh Assistant Professor Ph.D. (IIT Guwahati) Specialization- Algebraic Automata Theory, Algebraic Graph Theory, Semigroup Theory, Group Theory.</p>		<p>Dr. Pankaj Mishra Assistant Professor PhD (BHU, Varanasi) Specialization- Fluid Dynamics, Thermal stability in fluid flows, Differential Equations</p>

1.2 Department of Statistics

The Department of Statistics established in 2010, is committed to provide a vibrant and creative learning environment to students willing to make a career in the field of core and interdisciplinary statistics. The academic activities of the Department emphasize deep understanding of fundamental concepts and development of the analytical ability to solve real-life problems. It also encourages students to engage in extra-curricular and co-curricular activities, essential for development, nurturing of team spirit and developing organizational skills.

Classroom teaching of the Department is supported by the continuous evaluation system which is followed to assess the progress of the students. There is a well-equipped computer laboratory with high speed Internet connection and the software's that include Minitab, SPSS, R, MATLAB, WEKA



to work with. There are as many as 50 computer terminals to facilitate the computational requirements. After successful completion of the course, the students can move forward for a career in research / teaching / industry.

M.Sc. Statistics:

The two-year (four semesters) Post-Graduate programme aims at imparting training students in theoretical and applied aspects of Statistics with due emphasis on the computational aspects. The students undergoing the programme are trained in fields like Demography, Statistical Quality Control, Business Analytics, Bayesian Statistics, Survey Sampling, Multivariate Analysis, Survival Analysis, Operation Research, etc. A student undergoing this programme may also opt for electives offered by the sister departments namely, Department of Mathematics, Department of Computer Science, etc. depending upon his/her interest and aptitude.

1.2.1 Ph.D. in Statistics: The Department of Statistics is currently offering Ph.D. with diverse field of specialization including Bayesian Inference/Modelling and Computations- Survey Sampling Theory and Methods, Demography and Multivariate Techniques, etc.

List of Courses in Ph.D. Statistics

Course Code	Course Title	Credits
STS 901	Research Methodology	4
STS 902	Tools and Techniques of Research	4
STS 903	Preparation and Presentation of Research Proposal	4
Total Credits		12

List of Courses in M.Sc. Statistics (96 Credits) based on CBCS

Course Code	Course Title	Credits	Course Instructor
Semester - I			
MSSTS1001C04	Real Analysis and Linear Algebra	4	Dr. Mukesh Kumar
MSSTS1002C04	Distribution Theory and Nonparametric Statistics	4	Dr. Sandeep Kumar Maurya
MSSTS1003C04	Survey Sampling and National Development Statistics	4	Dr. Sunit Kumar
MSSTS1004C04	Statistical Computing	4	Dr. Richa Vatsa
MSSTS1005C04	Lab-I	4	All faculty
MS****	Elective-I (To be opted form other Departments)	4	
Total Credits		24	
Semester - II			
MSSTS2001C04	Linear Models and Regression Analysis	4	Dr. Richa Vatsa
MSSTS2002C04	Measure Theory and Probability	4	Dr. Kamlesh Kumar
MSSTS2003C04	Statistical Inference	4	Dr. Sandeep Kumar Maurya
MSSTS2004C04	Lab – II	4	All faculty
MSSTS2005E04- MSSTS2007E04	Elective - II	4	
MS****	Elective - III (To be opted form other Departments)	4	
Total Credits		24	
Semester – III			
MSSTS3001C04	Multivariate Analysis	4	Dr. Kamlesh Kumar
MSSTS3002C04	Project (Part-A)	4	All faculty
MSSTS3003C04	Lab-III	4	All faculty



MSSTS3004E04- MSSTS3008E04	Elective - IV	4	
	Elective - V	4	
	Elective - VI	4	
Total Credits		24	
Semester - IV			
MSSTS4001C04	Project (Part-B)	4	All faculty
MSSTS4002C04	Lab-IV	4	All faculty
MSSTS4003E04- MSSTS4007E04	Elective - VII	4	
	Elective - VIII	4	
MSSTS4008E04-- MSSTS4010E04	Elective-X - (To be opted from SWAYAM ¹ or from Departments outside School of Mathematics, Statistics & Computer Science)	4	
Total Credits :-		24	
Grand Total:-		96	

Semester-II Elective Basket

Course Code	Course Title	Credit	Course Instructor
MSSTS2005E04	Demography	4	Dr. Sunit Kumar
MSSTS2006E04	Survival Analysis	4	Dr. Sandeep Kumar Maurya
MSSTS2007E04	Operations Research	4	Dr. Mukesh Kumar

Semester-III Elective Basket

Course Code	Course Title	Credit	Course Instructor
MSSTS3004E04	Stochastic Processes	4	Dr. Sandeep Kumar Maurya
MSSTS3005E04	Bayesian Inference	4	Dr. Richa Vatsa
MSSTS3006E04	Business Analytics-I	4	Dr. Sunit Kumar
MSSTS3007E04	Nonlinear Models	4	
MSSTS3008E04	Spatial Data Analysis	4	

Semester-IV Elective Basket

Course Code	Course Title	Credit	Course Instructor
MSSTS4003E04	Design of Experiments	4	Dr. Kamlesh Kumar
MSSTS4004E04	Categorical and Directional Data Analysis	4	
MSSTS4005E04	Time Series and Forecasting	4	Dr. Sandeep Kumar Maurya
MSSTS4006E04	Statistical Processes and Quality Control	4	Dr. Sunit Kumar
MSSTS4007E04	Business Analytics-II	4	Dr. Mukesh Kumar

Semester-IV SWAYAM Courses¹ - Elective Basket* Open to the Department of Statistics

Course Code	Course Title	Credit	Course Instructor
MSSTS4008E04	Distribution Free Methods	4	
MSSTS4009E04	Econometric Analysis	4	
MSSTS4010E04	Probability and Stochastic for Finance	4	

***Note:-** The basket is non-exhaustive. More Swayam courses of Statistics may be added/removed as per the availability of courses on Swayam portal and need of the students of M.Sc. (Statistics).

Elective Basket Open to the students of other Departments only

Course Code	Course Title	Credit	Course Instructor
Semester-II			



MSSTS2008E04	Statistical Data Analysis-I	4	
MSSTS2009E04	Organizing and Visualizing Data*	4	
Semester-III			
MSSTS3009E04	Statistical Data Analysis-II	4	

*M.Sc. (Statistics) students may opt this course in respective semesters as non-credit courses.




List of Skill Based/Self Study Courses² (Non-Credit)

Course Code	Course Title	Credit
MSSTS2010S04	Latex programming	Non-credit
MSSTS1001S04	Computer Based Data Graphing	Non-credit

1. One Of The Swayam Course (Statistics)- Distribution Free Methods, Econometric Analysis, And Probability And Stochastic For Finance, May Be Opted By Students As The Elective-X During Semester-IV.
2. The Skill Based/Self-Study Courses-Latex And Computer Based Data Graphing Have Been Included To Enhance Students' Skills In Scientific Typing And Computer Based Writing And Presentation.

Note: All The Core And Elective Courses Are Open To The Students Of Other Departments Subject To Satisfying The Prerequisites.

Brief Profile of Faculty Members

	<p>Dr. Sunit Kumar, Associate Professor, Areas of Expertise/Research interest : Sunit Kumar is Associate Professor in Department of Statistics. He had done his MSc. (Statistics) from Science College, Patna University , MPS (Master in Population Studies) from International institute of Population Science, Mumbai. , MSc. (Computer Science) from Maharshi Dayanand university Rohtak and Ph.D. from B. N. Mandal Univirsity , Bihar</p>		<p>Dr. Richa Vatsa Assistant Professor Ph.D. (Trinity College Dublin, Ireland) Specialization- Bayesian Statistical Modeling and Computation</p>
	<p>Dr. Mukesh Kumar Assistant Professor Ph.D. (BHU) Specialization- Sample Survey: Theory and Methods, Multivariate Techniques</p>		<p>Dr. Kamlesh Kumar Assistant Professor Areas of Expertise/Research interest : Sampling Theory, Demography, Biostatistics</p>



	<p>Dr. Sandeep Kumar Maurya, Assistant Professor , Areas of Expertise/Research interest : His main area of interest are Statistical Inference and Lifetime Models. Presently, he is working on Bayesian principle in life testing, reliability estimation and lifetime distribution.</p>		
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1.3 Department of Computer Science

The Department of Computer Science is currently offering Ph.D. and M.Sc. in Computer Science. It aims at developing high quality workforce in technical education and research in the area of Computer Science and Information Technology for future Nation building. The department also offers several attractive training and workshop programmes along with industry tie up according to the market need.

1.3.1 Ph.D in Computer Science: Department of Computer Science is currently offering Ph.D. in Computer Science.

List of Courses in Ph.D. Computer Science

Course Code	Course Title	Credit
CSC 901	Research Methodology	4
CSC 902	Tools and Techniques of Research	4
CSC 903	Preparation and Presentation of Research Proposal	4
Total Credits		12

1.3.2 M.Sc. in Computer Science

The two-year (four semesters) Postgraduate Programme has been designed to focus on the theoretical concepts as well as on practical knowledge and industry interaction. The exercises/assignments/ projects given to students ultimately enable them to become independent quality professionals and researchers. The programme has the following salient features:

- Designed to take students through rigorous ground-work for taking up research, or coming out industry ready.
- Sound foundation in the fundamentals of Computing, Mathematical and Statistical sciences.
- Ample technology orientation via laboratory-intensive courses.
- Students work for six months project in reputed research and training institutes.
- Rich (open) elective course basket providing plenty of space for inter-disciplinary knowledge acquisition required by several emerging areas.

List of Courses in M.Sc. Computer Science (96 Credits)

Course Code	Course Title	Credits	Course Instructor
Semester-I			
MSCSC1001C04	Operating Systems	4	Dr. P. Ranjan
MSCSC1002C04	Data Structure and Algorithms	4	Dr. P. K. Singh/ Dr. J. Yadav
MSCSC1003C04	Computer Networks	4	Dr. N. C. Rathore
MSCSC1004C04	Data Structure Lab	4	Dr. P. K. Singh/ Dr. J. Yadav
MSCSC*****	Elective – I (Within Dept.)	4	
*****	Elective – II (Outside Dept.)	4	
Total Credits		24	



Semester-II			
MSCSC2001C04	Database Management System	4	Dr. N. C. Rathore
MSCSC2002C04	Object-Oriented Programming Methodology	4	Dr. P. K. Singh/ Dr. J. Yadav
MSCSC2003C04	Software Engineering	4	Dr. P. Ranjan
MSCSC*****	Elective – III (Within Dept.)	4	
MSCSC*****	Elective – IV (Outside Dept.)	4	
*****	Elective – V (SWAYAM/Within Dept.)	4	
Total Credits		24	
Semester-III			
MSCSC3001C04	Artificial Intelligence	4	Dr. P. K. Singh
MSCSC3002C04	Design & Analysis of Algorithms	4	Dr. J. Yadav
MSCSC3003C04	Data Mining	4	
MSCSC*****	Elective -VI (Within Dept.)	4	
MSCSC*****	Elective-VII (Within Dept.)	4	
*****	Elective-VIII(Within Dept.)	4	
*****	Skill Based Course / Self Study / Non-Credit	Non-Credit	
Total Credits		24	
Semester -IV			
MSCSC4001C24	Project in Industry/Institute	24	
Total Credits		24	

Elective Basket (Within Department)**1st Semester Elective Basket (Within Department)**

Course Code	Course Title	Credits	
MSCSC1001E04	Digital Logic and Design	4	Dr. P. K. Singh
MSCSC1002E04	Modeling and Simulation	4	Dr. J. Yadav
MSCSC1003E04	Statistical Methods	4	Dr. J. Yadav
MSCSC1004E04	Introduction to Microprocessors	4	
2nd Semester Elective Basket (SWAYAM) (Within Department)			

Course Code	Course Title	Credits	
MSCSC2001E04	Computer Organization	4	Dr. P. K. Singh/ Dr. J. Yadav
MSCSC2002E04	Natural Language Processing	4	
MSCSC2003E04	Distributed Systems	4	Dr. P. Ranjan
MSCSC2004E04	Computer Graphics	4	Dr. P. K. Singh
MSCSC2005E04	Internet Technologies	4	Dr. N. C. Rathore
MSCSC2006E04	Mobile Networks	4	Dr. N. C. Rathore
MSCSC2007E04	Wireless Sensor Networks	4	Dr. N. C. Rathore
MSCSC2008E04	Next Generation Networks	4	Dr. N. C. Rathore
MSCSC2009E04	Compiler Design	4	Dr. J. Yadav
*****	Introduction to Internet of Things	4	
*****	Cloud Computing	4	
*****	Information Security-I	4	
3rd Semester Elective Basket (SWAYAM) (Within Department)			
Course Code	Course Title	Credits	
MSCSC3001E04	Big Data	4	Dr. P. Ranjan
MSCSC3002E04	Machine Learning	4	
MSCSC3003E04	Advanced Computer Networks	4	Dr. N. C. Rathore
MSCSC3004E04	Cryptography and Network Security	4	Dr. N. C. Rathore



MSCSC3005E04	Nature Inspired Computing Methods	4	
MSCSC3006E04	Software Testing	4	Dr. P. Ranjan
MSCSC3007E04	Software Project Management	4	Dr. P. Ranjan
MSCSC3008E04	Soft Computing	4	Dr. P. Ranjan/ Dr. J. Yadav
MSCSC3009E04	Digital Image Processing	4	Dr. P. K. Singh
List of skill based / self-study courses (Non-Credit)			
Course Code	Course Title	Credits	
MSCSC3001S00	Communication Skills	Non-Credit	
MSCSC3002S00	Latex	Non-Credit	
MSCSC3003S00	Socket Programming using Python	Non-Credit	
Elective Basket (Outside Dept./ Outside School)			
Course Code	Course Title	Credits	
MTH***	Discrete Mathematics	4	
MTH***	Linear Algebra	4	
STS***	Distribution Theory and Nonparametric Statistics	4	
STS***	Computing Intensive Statistical Methods - I	4	
2 nd Semester Elective Basket (Outside Department) (Outside School)			
Course Code	Course Title	Credits	
MTH***	Formal Languages and Automata Theory	4	
MTH***	Numerical Analysis	4	
MTH***	Graph Theory	4	
MTH***	Number Theory	4	
MTH***	Mathematical Cryptography	4	
MTH***	Operation Research	4	
STS***	Stochastic Processes	4	
*****	Swachha Bharat Abhiyan	4	
*****	Disaster Management	4	
*****	Intellectual Property Rights	4	
*****	Consumer Affairs	4	





ज्ञान सेवा विमुक्तये

Elective Basket for School 1st Semester - List of Courses Open for School			
Course Code	Course Title	Credits	
MSCSC1051E04	Programming in C	4	Dr. P. K. Singh
MSCSC1052E04	Introduction to IT	4	Dr. P. Ranjan
MSCSC1053E04	Fundamentals of Computers	4	Dr. P. Ranjan
MSCSC1054E04	Introduction to Data Structure and Algorithms	4	Dr. P. K. Singh/ Dr. J. Yadav
2 nd Semester - List of Courses Open for School			
Course Code	Course Title	Credits	
MSCSC2051E04	Programming in C++	4	Dr. P. K. Singh
MSCSC2052E04	Introduction to Database System	4	Dr. N. C. Rathore
MSCSC2053E04	Introduction to Modeling and Simulation	4	Dr. J. Yadav
MSCSC2054E04	Introduction to Digital Image Processing	4	Dr. P. K. Singh
MSCSC2055E04	Introduction to Artificial Intelligence	4	



MSCSC2056E04	Introduction to Design & Analysis of Algorithms	4	
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Brief Profile of Faculty Members

	<p>Dr. Prabhat Ranjan Assistant Professor B. E., M. Tech (MNNIT Allahabad), Ph. D. (MNNIT Allahabad) Specialization: Software Engineering, Big Data</p>		<p>Mr. Nemi Chandra Rathore Assistant Professor M.Tech(IIT-A), PhD (Submitted to IIT-Patna) Specialization: Network Security and Privacy, Computer Networks</p>
	<p>Dr. Jainath Yadav Assistant Professor M.Tech and Ph.D. from IIT Kharagpur Specialization: Speech signal processing</p>		<p>Dr. Piyush Kumar Singh Assistant Professor MCA, Ph.D.(BHU) Specialization: Image Processing, Wavelet Applications</p>



**2. SCHOOL OF PHYSICAL & CHEMICAL SCIENCES****2.1 Department of Physics**

Department of Physics, under the umbrella of School of Physical & Chemical Sciences, has been providing support to the undergraduate programs of Central University of South Bihar (CUSB) since its inception. The M.Sc. Degree Program in Physics was launched from the academic session 2018-19 with the intake of 35 students and from academic session 2019-20, the department is running the Ph.D. programme in various frontier areas of physics such as Nuclear & Particle, High Energy Physics, Astroparticle Physics, Low energy neutrino Physics, Dark Matter, Detector development and Data Acquisition System (DAQ), Experimental condense matter Physics and Material Science, Superconductivity (Theory), Nano-science and technology (Theory), Metallic glasses (Experimental), Molecular Motors, Molecular Spintronics, Two-dimensional superconductivity, Material synthesis, crystal growth and characterization (Piezo, ferro, semiconductor and NLO), Synthesis & Characterization of Nano material, magnetic and hydrogen storage properties, Noncommutativity and deformed special relativity. In addition, from the upcoming session 2020-21, the department is going to start one major undergraduate programme namely B. Sc. Honours in Physics – a three year degree course as per UGC CBCS norms. From the same academic session department is going to offer two specializations in postgraduate programmes such as Material Science, and Nuclear & Particle Physics.

The Department of Physics is committed to engage in high quality research and in the pursuit of excellence in teaching. The faculty members of the department are actively involved in cutting-edge theoretical and experimental research in challenging areas as mentioned above. To promote interdisciplinary research for solving grand challenges facing our society, the department has established both intra-university as well as inter-institutional collaborations with laboratories in India and overseas. The department of physics has active national and international research collaborations.

2.1 Ph.D. in Physics

The broad areas of research in the department of Physics are hard/soft condensed matter physics, spectroscopy, nanoscience and nanotechnology, materials science, and Nuclear and Astroparticle Physics. In due course we will also open research areas related to computational physics, theoretical biophysics, and space physics. All the students will be required to successfully complete a course work before beginning the research towards their Ph.D. thesis. The tentative course work structure, subjected to the approval from the Board of Studies, is as follows::

Course Code	Course Title	Credits
Core	Research Methodology	4
Core	Theoretical and Experimental Techniques of Physics Research	4
Core	Review, Report and Seminar	2
Core	Research and Publication Ethics (RPE)	2

2.2 M.Sc. in Physics

The objectives of this program are to cater and to meet the needs and aspirations of contemporary M.Sc. Physics students. It is tailored to incorporate the essential ingredients of multifaceted education and research for this rapidly changing world. This program aims to (i) provide the much needed and strong foundation in Physics so that students can develop the ability to apply the knowledge of Physics in any allied fields, (ii) help students to develop programming proficiency with high end software for both computation and automation, (iii) give students an opportunity to use advanced laboratory equipment to get acquainted with them, (iv) present a platform to students for training in both mechanical and electronic hardware for basic and applied research, (v) offer necessary soft skills to the students to build their professional career, (vi) to make the students well aware about the radiation safety and precautions that will help the society to make their life better, (vii) to enhanced their knowledge in the area of nuclear and particle physics that will help in making their contribution in country's nuclear energy and national security and safety programmes.

Course Code	Course Title	Credit		
		L	T	P
Semester - I				
MSPHY1001C04	Mathematical Physics	4	0	0
MSPHY1002C04	Classical Mechanics	4	0	0
MSPHY1003C04	Quantum Mechanics	4	0	0
MSPHY1004C04	General Physics Lab. – I	0	0	4
MSPHY1005E04	Electronics	4	0	0
MSPHY1006E04	Experimental Techniques	4	0	0



MSPHY1007E04	Biography of Indian Scientists	2	0	0
	Elective – I (From other department)	4	0	0
Total Credit		30		

Course Code	Course Title	Credit		
		L	T	P
Semester - II				
MSPHY2001C04	Thermodynamics and Statistical Physics	4	0	0
MSPHY2002C04	Classical Electrodynamics and Relativity	4	0	0
MSPHY2003C04	General Physics Lab. – II	0	0	4
MSPHY2004C04	Atomic and Molecular Physics	4	0	0
MSPHY2005C04	Elementary Solid State Physics	2	0	0
MSPHY2006C04	Elementary Nuclear & Particle Physics	2	0	0
MSPHY2007E04	Advanced Quantum Mechanics	4	0	0
MSPHY2008E04	Advanced Mathematical Physics	4	0	0
MSPHY2009E04	Introduction of Ancient Indian Sciences	4	0	0
Total Credit		32		

Course Code	Course Title	Credit		
		L	T	P
Semester – III (Specialization in Condensed Matter Physics)				
MSPHY3001C04	Condensed Matter Physics	4	0	0
MSPHY3002C04	Solid State Devices	4	0	0
MSPHY3003C04	Solid State Physics Lab - I	0	0	4
MSPHY3004E04	Materials Science	4	0	0
MSPHY3005E04	Crystal Growth and Characterizations	2	0	2
MSPHY3006E04	Crystallography Crystal Structure and Diffraction Techniques	2	0	2
MSPHY3007E04	Fundamentals of nanoscience and nanotechnology	4	0	0
MSPHY3008E02	Physics of Dielectric and Ferroelectric Materials	2	0	0
MSPHY3009E02	X-ray Spectroscopy	2	0	0
MSPHY3010E02	Diffusion in Solids	2	0	0
MSPHY3011E04	Fundamentals of Scanning Probe Microscopy	4	0	0
	Elective - III (from other Department)	4	0	0
Total Credit		42		









Course Code	Course Title	Credit		
		L	T	P
Semester – IV (Specialization in Condensed Matter Physics)				
MSPHY4001C04	Advanced Condensed Matter Physics	4	0	0
MSPHY4002C04	Dissertation	4	0	0
MSPHY4003C04	Solid State Physics Lab - II	0	0	4
MSPHY4004E04	Physics of Magnetism and Spintronics	4	0	0
MSPHY4005E04	Alloy Design and Development	2	0	2
MSPHY4006E04	Material Synthesis and Processing	2	0	2
MSPHY4007E04	Renewable Energy	4	0	0
MSPHY4008E04	Carbon Nanostructures and Their Properties	2	0	2
MSPHY4009E04	Biomedical Instrumentation	2	0	0
MSPHY4010E04	Industrial Process Control	2	0	0
MSPHY4011E04	Nanoelectronics	4	0	0
		4	0	0
Total Credit		44		

Course Code	Course Title	Credit		
		L	T	P
Semester – III (Specialization in Nuclear and Particle Physics)				
MSPHY3101C04	Advanced Nuclear Physics	4	0	0
MSPHY3102C04	Nuclear & Particle Physics Lab. – I	0	0	4



MSPHY3103C04	Advanced Particle Physics	0	0	4
MSPHY3104E04	Introduction of Astrophysics	4	0	0
MSPHY3105E04	Nuclear Reactor Physics	4	0	0
MSPHY3106E04	Statistical Analysis Techniques in Nuclear and Particle Physics	4	0	0
MSPHY3107E04	Radiation Safety	2	0	0
MSPHY3108E04	Neutrino Physics	2	0	0
	Elective – I (from other department)	4	0	0
	Total Credit	32		
Course Code	Course Title	Credit		
		L	T	P
Semester – IV (Specialization in Nuclear and Particle Physics)				
MSPHY4101C04	Experimental Techniques in Nuclear and Particle Physics	4	0	0
MSPHY4102C04	Dissertation	0	0	4
MSPHY4103C04	Nuclear & Particle Physics Lab. – II	0	0	4
MSPHY4104E04	Particle Accelerator Physics	4	0	0
MSPHY4105E04	Data Analysis and Simulation in particle Physics	4	0	0
MSPHY4106E04	General Theory of Relativity	4	0	0
MSPHY4107E04	High Energy Cosmic Rays	2	0	0
MSPHY4108E04	Dark Matter Physics	0	0	0
	Total Credit	26		

Brief Profile of Faculty Members

	Prof. Venkatesh Singh, Head Specialization : Nuclear and Astroparticle Physics		Dr. Budhendra Singh, Associate Professor Specialization : Condensed Matter Physics/ Material Science/ Solid State Physics
	Dr. Vijay Raj Singh, Associate Professor Specialization : Experimental Condensed Matter Physics/ Material Sciences		Dr. Akhilananda Kumar Assistant Professor Ph.D. JNU, New Delhi Specialization - Superconductivity (theory), Nano-science and technology (theory), Metallic glasses (experimental).
	Dr. Puneet Mishra UGC-Assistant Professor Ph.D. (Saha Institute of Nuclear Physics, Kolkata) PDF 1. National Institute for Materials Science, Tsukuba, Japan: 2009-2014 2. IMRAM, Tohoku University, Sendai, Japan: 2014-2016 Specialization - Molecular Motors, Molecular Spintronics, Two- dimensional superconductivity		Dr. Rohit Ranjan Shahi, Assistant Professor Specialization : Experimental Condensed Matter Physics, Material Science
	Dr. Nitin Chandra, Assistant Professor Specialization : Theoretical and Mathematical Physics, Ancient Indian Sciences, Sustainable Lifestyle.		Dr. Lakhwinder Singh, Assistant Professor Specialization : Nuclear and Particle Physics



2.2 Department of Chemistry

The Department of Chemistry under the School of Physical and Chemical Sciences forms a key component of the university. The department is composed of dynamic faculty members and research scholars who are actively engaged in knowledge creation and dissemination at the frontiers of the Chemical Sciences. The discipline has an encompassing effect on the biological and physical sciences and therefore considered a central science. Knowledge and skills in chemistry play a crucial role in finding the solutions to most of the challenges (eg. energy, disease, and environment) faced by the mankind today. The department believes in interdisciplinary approach of learning and fosters a culture of excellence. Undergraduate students of chemistry have been nurtured and mentored well to compete at the national and international levels (eg. selection for the summer research fellowships of National Academies of Sciences, award at National Science Film Festival and more...). The postgraduate programme was launched from the last academic session in 2018-19. Going stronger with the research component, Ph.D. programme is being started from this new academic session in 2019-20. The department envisages scaling greater heights with the launch of Ph.D. programmes and producing globally competent chemists who can solve the pressing problems of the nation.

Laboratory Facilities & Resources



There are two laboratories in the department. Each lab is spacious enough to accommodate 40 students at a time. There are six working platforms (island tables) and four fumehoods fitted with inlet & outlets for water, LPG and nitrogen to perform the experiments. The lab is equipped with the sophisticated instruments, glassware, plasticware, chemicals & other lab peripherals. The sophisticated instruments available in the labs are as follows

- UV-Visible absorption spectrophotometer
- UV-Vis-NIR absorption spectrophotometer
- Digital pH Meter
- Digital Conductivity meter,
- Digital Thermometer
- Ultrasonicator
- Ice-Flaker
- Magnetic Stirrer cum hot plate (ceramic top)
- Incubator & Shaker
- Circulating water bath with temperature control (5°C to 80 °C)

FTIR and Luminescence spectrometers are in advanced stages of procurement and are likely to be installed in the upcoming session 2019-20



2.2.1 Ph.D. in Chemistry

The faculty members and students of the department are engaged in cutting edge research at the frontiers of science. The launch of Ph.D. programme in the upcoming academic session in 2019-20 will further strengthen and institutionalize the culture of research and innovation. The department follows an interdisciplinary approach and offers diverse areas of research which include nano-chemistry, materials chemistry, organic synthesis, medicinal chemistry, photochemistry, catalysis etc. To further encourage the interdisciplinary research, the department has established inter-institutional links and collaborations with renowned laboratories and universities. During the programme, students will acquire new skills while working on state-of-the-art instruments in the department. The ultimate aim of the programme is to produce globally competent chemists who can critically think and analyse a problem, and develop innovative scientific solutions. Equipped with sound knowledge and lab skills, the doctoral students would be able to address some of the biggest scientific challenges facing the mankind today such as energy crisis, lighting & displays, sanitation, diagnostics & therapeutics and many more. The successful completion of the Ph.D. programme will ensure enhanced employability and the students are likely to get positions of eminence in leading research and academic institutions in India as well as abroad.

List of Courses in Ph.D. Chemistry (Tentative)

Course Code	Course Title	Credits
Core	Research Methodology	4
Core	Tools and Techniques of Chemistry Research	4
Core	Seminar Presentations	4
Elective	Advanced synthetic organic chemistry: Asymmetric synthesis and catalysis	4
Elective	Research Trends in Chemistry-I	4
Elective	Research Trends in Chemistry-II	4

2.2.2 MSc. in Chemistry

The programme is for the students who have an interest in chemistry and a desire to explore the frontiers of science. This is a unique programme that combines core chemistry (Organic, Inorganic and Physical) with Nano Chemistry and Green Chemistry. Along with thorough grounding in chemistry, it equips the students with the knowledge and skills in the emerging interdisciplinary area of green nanotechnology which has now become a crucial requirement for the sustainable development globally. Computational Chemistry and Medicinal Chemistry have also been incorporated to equip the students better. The programme follows choice-based credit system (CBCS) where students have the liberty to choose courses from the elective baskets of our department or other departments. The students also have the freedom to choose a few online courses through SWAYAM (Study Webs of Active – Learning for Young Aspiring Minds) portal which further enhances learning. The programme envisages creating good bench strength of future scientists who can solve a wide range of issues and contribute to the scientific advancement of the nation. There is ample opportunity and employability of chemists having sound knowledge, analytical skills and hand-on training on the sophisticated instruments. The chemical industry is India's one of the largest manufacturing sectors and plays an integral role in the country's economic development. The Indian chemical sector currently accounts for 13-14% of total exports. In terms of volume of production, it is the twelfth-largest in the world and the third-largest in Asia. Currently, the per capita consumption of products of the Indian chemical industry is one tenth of the world average, which reflects the huge potential for further growth. The "Make in India" scheme has further given a fresh impetus to this sector. For a sustainable, environment friendly growth, the sector is looking for new technologies that incorporate green chemistry and nanotechnology and there lies the exciting and excellent career opportunities for young chemists. Besides chemical industry, the training imparted in the interdisciplinary area of green nanotechnology will also enable the students to diversify and join other sectors such as energy, photovoltaics, photonics, biosensing and healthcare etc. The curriculum has been designed to keep abreast with changing times. In the long run, the programme is likely to produce globally competent chemists with bright innovative ideas. By understanding the nuances of chemistry, these young scientists would be creating new tools, products and technologies to address some of the world's biggest challenges such as (just to name a few) clean affordable energy, biomedical devices and drugs for treating diseases, biosensing and environmental remediation etc.

List of Courses in M.Sc. Chemistry (96 Credits)

FIRST SEMESTER (ODD SEMESTER)



Code No.	Title	Theory/Practical (Hrs/Week)	Total Marks	Credits
MSCHE1001C04	Group Theory, Bonding and Metal-Ligand Equilibrium	4	100	4
MSCHE1002C04	Bonding, Stereochemistry and Reaction Mechanism (I)	4	100	4
MSCHE1003C04	Basic Concepts of Physical Chemistry	4	100	4
MSCHE1004C04	Inorganic Chemistry Lab	8	100	4
Departmental Elective	One or more courses to be selected from the elective basket for odd semesters	4	100	4
Open Elective (Inter-School or Inter-Department or SWAYAM)	One or more courses to be selected from the elective basket for odd semester	4	100	4

SECOND SEMESTER (EVEN SEMESTER)

Code No.	Title	Theory/Practical (Hrs/Week)	Total Marks	Credits
MSCHE2001C04	Photochemical and magnetic properties of complexes and nuclear chemistry	4	100	4
MSCHE2002C04	Reaction Mechanism (II), Pericyclic and Photochemical Reactions	4	100	4
MSCHE2003C04	Quantum Mechanics and Statistical Thermodynamics	4	100	4
MSCHE2004C04	Physical Chemistry Lab	8	100	4
Departmental Elective	Two or more courses to be selected from the elective basket for even semesters	4	100	4

THIRD SEMESTER (ODD SEMESTER)

Code No.	Title	Theory/Practical (Hrs/Week)	Total Marks	Credits
MSCHE3001C04	Carbohydrates, Hetrocyclic Compounds, Organometallic Reagents and Synthetic	4	100	4
MSCHE3002C04	Project-I and Scientific Activities	-	100	2+ 2 = 4
MSCHE3003C04	Organic Chemistry Lab	8	100	4
Departmental Elective	Two or more courses to be selected from the elective basket for odd semesters	4	100	4
Open Elective (Inter-School or Inter-Department or SWAYAM)	One or more courses to be selected from the elective basket for odd	4	100	4

FOURTH SEMESTER (EVEN SEMESTER)

(Common to students of all branches)

Code No.	Title	Theory/Practical (Hrs/Week)	Total Marks	Credits
Chemistry Specialisaton				



MSCHE4001C12	Project-II	-	100	12
Departmental Elective	Three or more courses to be selected from the elective basket for even semesters	4	100	4

ELECTIVES COURSES (Minimum 40 Credits[#])

Code No.	Title of the Paper	Teaching/contact Hrs/week	Total Marks	Credits
Elective-Basket for 1st Semester (Odd Semester)				
<ul style="list-style-type: none"> At least one elective has to be chosen. 				
MSCHE1001E04	Supramolecular Chemistry	4	100	4
MSCHE1002E04	Chemistry of Biomolecules	4	100	4
MSCHE1003E04	Green Chemistry I: Solvents & Synthesis	4	100	4
SWAYAM Elective*				
[#] Few courses have to be taken from SWAYAM portal and from other schools/departments Students will also be encouraged to take a self study/skill-based course available on SWAYAM portal. No credit will be awarded for this as it would be a zero-credit course. * SWAYAM Courses will be reviewed and announced by the department periodically.				

Elective-Basket for 2nd Semester (Even Semester)				
<ul style="list-style-type: none"> At least two electives have to be chosen. 				
MSCHE2001E04	Solid State and Structural Chemistry	4	100	4
MSCHE2002E04	Advanced Instrumental Techniques-I	4	100	4
MSCHE2003E04	Green Chemistry II: Catalysis	4	100	4
MSCHE2004E04	Nucleoside, Advances in Nucleic Acid and Proteins	4	100	4
MSCHE2005E04	Chemistry of Natural Products	4	100	4
Elective-Basket for 3rd Semester (Odd Semester)				
<ul style="list-style-type: none"> At least two electives have to be chosen. 				
MSCHE3001E04	Atom Dynamics in Solid and Advanced Magnetochemistry	4	100	4
MSCHE3002E04	Surface Phenomena, Chemical Dynamics and Spectroscopy	4	100	4
MSCHE3003E04	Chemistry of Materials	4	100	4
MSCHE3004E04	Advanced Photochemistry	4	100	4
MSCHE3005E04	Medicine and Agrochemicals	4	100	4
MSCHE3006E04	Nano Chemistry	4	100	4
Elective-Basket for 4th Semester (Even Semester)				
<ul style="list-style-type: none"> At least three electives have to be chosen. 				
MSCHE4001E04	Reaction mechanism, Organometallics and Advanced Bioinorganic Chemistry	4	100	4
MSCHE4002E04	Applications of spectroscopy techniques to inorganic systems	4	100	4
MSCHE4003E04	Advanced Inorganic Materials	3 (L)+2 (P) = 5	100	3+1 = 4








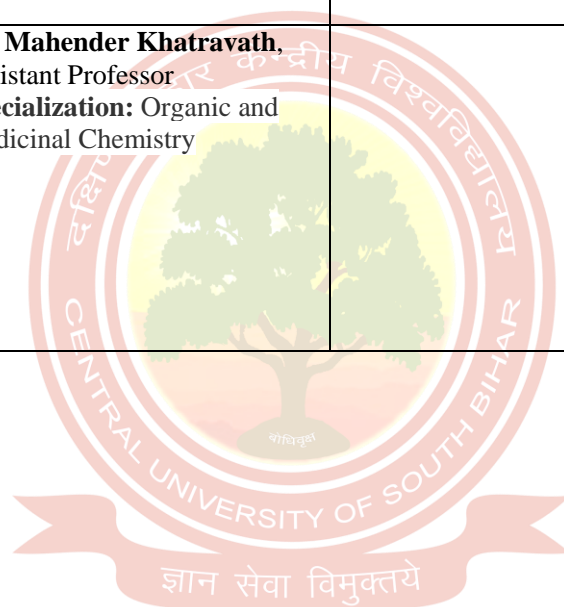
MSCHE4004E04	Dynamic Stereochemistry, reagents and Retrosynthetic analysis	4	100	4
MSCHE4005E04	Medicinal, combinatorial and Organometallic reagents in Organic synthesis	4	100	4
MSCHE4006E04	Spectroscopy and catalysis in Organic synthesis	3 (L)+2 (P) = 5	100	3+1 = 4
MSCHE4007E04	Advanced Quantum Mechanics and Surface Chemistry	4	100	4
MSCHE4008E04	Applied Electrochemistry	4	100	4
MSCHE4009E04	Lasers in Chemistry	4	100	4
MSCHE4010E04	Green Energy Systems	4	100	4
MSCHE4011E04	Advanced Instrumental Techniques-II	4	100	4





Brief Profile of Faculty Members

	<p>Dr. Amiya Priyam Associate Professor & HoD Ph.D. (Jadavpur University, Kolkata) Specialization - Inorganic Chemistry Postdoctoral Fellow, Florida State University and National University of Singapore</p>		<p>Dr Jagannath Roy, Associate Professor Specialization: Inorganic and Applied Chemistry</p>
	<p>Dr. Girish Chandra Assistant Professor Ph.D. (IIT Bombay) Specialisation - Organic Chemistry Postdoctoral Fellow, Ewha Womans University, Seoul, South Korea</p>		<p>Dr. Angad Kumar Singh, Assistant Professor Specialization : Organic / Coordination Chemistry</p>
	<p>Dr. Mahender Khatravath, Assistant Professor Specialization: Organic and Medicinal Chemistry</p>		





3. SCHOOL OF EARTH, BIOLOGICAL AND ENVIRONMENTAL SCIENCES

It is a century of biology and most of the challenges that we are facing in today's time are global warming, pollution, human diseases and changes in our natural resources. A deeper understanding of biology will not only allow us to overcome these problems but also help to sustain the existing natural resources. The school of earth, biological and environmental sciences plays a leading role in achieving this goal. Our strengths lie across the fields of genomics, biochemistry, informatics, emerging infections diseases, basic and applied biology. These strengths are underpinned by faculty members who expert in their fields and are re-investing their knowledge through exceptional students training at graduates, postgraduate and Ph.D. level.



3.1 Department of Biotechnology

The Department of Biotechnology is currently offering Ph.D. and M. Sc. Biotechnology programmes. These Programmes include well-designed theory and practical courses. Innovation-based training is the key to train students with a special emphasis on understanding the basic as well as modern concepts in biological processes for pursuing research in frontier areas of Biological Sciences. The Postgraduate Programmes equip students with deep theoretical as well as practical understanding of different aspects of Biological processes and promote them to take on an integrative approach for their studies and research.

Biotechnology has emerged as a major thrust in the field of science and technology having potential to boost the economy of several countries including India. The voice of global Biotechnology in 21st century is to transfer the bio-based technology from “Lab to Land and from Bench to Business” to bring the cost of bio-based commodities within the reach of common man. The courses in Department of Biotechnology are mainly related to recent and emerging trends in Biology but the students are also taught Biostatistics and Bioinformatics which enable them to analyse their data, draw meaningful conclusions and publish in reputed journals. The Programme equally gives emphasis on integrated approaches in the basic and applied biology viz. Olfaction, human health, recombinant DNA technology, transgenic development, bioremediation and informatics. Students work directly with faculty on real-world projects, gaining hands-on skills necessary to solve emerging problems.

Currently, departmental research is mainly focussed in the areas of Cancer Biology, Autoimmune Diseases, Fungal Diseases, Lung Physiology, Behavioural and molecular Neuroscience, Immunology, Genetic Engineering, Stem Cell Therapy, Proteomics, Molecular Biology, Signal Transduction, Interferon (IFNs) Transcription Factors, Biochemistry of Fungal Pathogens and Genesis of Secondary Metabolites as well as Genetic manipulations of Plants which include Plant Tissue Culture and Molecular Marker Developments. Apart from above advantages, M.Sc. Biotechnology Programme prepares the students to be the leaders in research, policy and business.



The department of Biotechnology is equipped with state-of-the-art technology and equipment that provide a stimulating environment for teaching and research. The department of Biotechnology is actively involved in research by having the distinction of running more than 10 externally funded R & D projects sanctioned from various Government agencies.

Ph.D. Biotechnology Programme:

The Department of Biotechnology is currently offering PhD with diverse field of specializations including Neurobiology, Cancer Biology, Plant Biotechnology, Bioremediation, Infection Biology, Stem cell Biology, and Immunology.

The syllabus was framed with a great care so that the theory, practical and tutorials would meet the requirement of such a challenging and demanding field. Innovation-based training is the key to train students with a special emphasis on understanding the basic as well as modern concepts in biological processes for pursuing research in frontier areas of Biological Sciences.

Department of Biotechnology equip researchers with deep theoretical as well as practical understanding of different aspects of Biological processes and promote them to take on an integrative approach for their studies and research. The students are well trained for both dry and wet-lab techniques enabling them to better suit for different research laboratories and industries which look for personnel well-taught in programming languages, can do molecular modelling and also have abilities to work on bench producing raw data to analyse further using various Biotechnology tools.

Thrust Areas of Research for Ph.D. Biotechnology:

- Neuroscience
- Cancer Biology
- Plant Biotechnology
- Bioremediation
- Infection Biology
- Stem cell Biology
- Immunology
- Biopolymers

Eligibility Criteria for Ph.D. Biotechnology: Master Degree in Biotechnology/ Pharmaceuticals Science/ Medical Science/ Agricultural Science/ Chemistry/Physics/ any branch of Biological Science (Microbiology, Biochemistry, Molecular Biology, Human Genetics, Life Science, Bioscience, Environmental Science, Biomedical, Zoology, Botany) with a minimum of 55% marks for General /OBC candidates and 50% marks for SC/ST candidates in the qualifying degree.

Syllabus for Ph.D. Biotechnology Entrance Examination: Postgraduate (PG) syllabus of Biotechnology, Life Science, Microbiology, Biochemistry, Bioscience, Environmental Science and any branch of Life Science as prescribed by UGC.

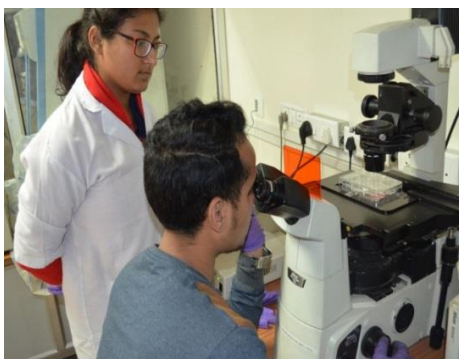
Intake in Ph.D. Biotechnology Programme: 13 Seats

MSc Biotechnology Programme:

The two year (four semesters) Post-Graduate Programme has interdisciplinary approach with participation of faculties/researchers across the University with **Choice based Credit System (CBCS)**. Hands-on training with professional and management skills are keys to our teaching pedagogy. This Programme focuses on responsibility building and ethics in research and policy. We are equally giving emphasis on integrated approaches in human health, transgenic crop development, environmental sciences and informatics. The course also comprises of project dissertation, presentation and comprehensive viva-voce as part of evaluation system. Students also visit major research institutes in the form of educational tour and Biotechnology industries to learn various aspects of product developments. One of the major goals of the Biotechnology Programme is to engage students by actively involving them in cutting-edge research.



Eligibility Criteria for M.Sc. Biotechnology Programme: Bachelor degree in Biotechnology or any branch of Biological Sciences (Microbiology, Biochemistry, Bioscience, Environmental Science, Biomedical etc.), B. Sc.



(Hons) in Zoology, Botany & Chemistry or B.Sc. three year pattern with any of the two subject among Zoology, Botany & Chemistry in 3rd year, B. Tech in Biotechnology. Candidates must have minimum of 55% marks for General/OBC candidates and 50% marks for SC/ST candidates in the qualifying degree.

Intake in M.Sc. Biotechnology Programme: 45 Seats.

Syllabus for M.Sc. Biotechnology Entrance Examination: Undergraduate (UG) syllabus of Biotechnology, Life Science, Microbiology, Biochemistry, Bioscience, Environmental Science and any branch of Life Science as prescribed by UGC.

Salient Features of Programme For International Students:

- 1) Central University of South Bihar was established in the year 2009 under the Central Universities Act, 2009 (Section 25 of 2009), Government of India. The university is funded federally.
- 2) It is situated in its permanent campus at Gaya (Bihar) the well-known Buddhist pilgrimage city.
- 3) Foreign students will have better benefit/cost ratio compared to universities at their country.
- 4) At CUSB, we have internationally acclaimed group of faculty members with several years of research experience in reputed labs across the world.
- 5) Biotechnology program has well equipped laboratory.
- 6) The faculty members have many national and international research collaborations.
- 7) We have research funding from various funding agencies.
- 8) Our MSc. Biotechnology programme is based on Choice Based Credit System

**Facilities and Resources in the Biotechnology Laboratory:**

Biotechnology Laboratory is equipped with state of the art technology and equipment that provide a stimulating environment for teaching and research. The list includes multiple Biosafety Cabinets, Laminar Air Flow, Autoclave, Water bath with wide temperature ranges, Dry Block Heater (Heating Block), Rotatory Shaker, Stackable Incubator Shaker, Cell Sonicator, Many types of Microscopes (Fluorescence, Inverted, Compound and Normal), various types of refrigerated Centrifuges, Nano Drop UV/VIS Spectrophotometer, ELISA Plate Reader, Spectrophotometer, Gradient Thermal Cycler, Real-Time PCR, UV/VIS Transilluminator, Gel Documentation Systems, Electrophoresis units (Horizontal and Vertical), Blot Transfer System, Deep Freezers (-200 C and -860 C), Ice-Flakes Machine, Cryo-Can, Lyophilizer, Complete Milli-Q Water System etc. Facilities for animal, plant and microbial culture work are also available.

M.Sc. Biotechnology Syllabus Structure

Course Code	Courses	Credits		
		L	T	P
Core				
Semester I				
MSBTN1001C04	Cell Biology & Genetics	3	1	0
MSBTN1002C04	Biomolecules & Biochemistry	3	1	0
MSBTN1003C04	Instrumentation: Tools & Techniques in Biotechnology	3	1	0
MSBTN1004C04	Bioinformatics and Biostatistics	3	1	0
MSBTN1005C04	Lab 1 related to MSBTN1001C04 + MSBTN1002C04+ MSBTN1003C04	0	1	3
Semester II				
MSBTN2001C04	Molecular Biology and Genomics	3	1	0
MSBTN2002C04	Microbiology	3	1	0
MSBTN2003C04	Enzymology	3	1	0
MSBTN2004C04	Biology of Immune System	3	1	0
MSBTN2005C04	Lab 2 related to MSBTN2001C04+ MSBTN2002C04	0	1	3
MSBTN2006C04	Lab 3 related to MSBTN2003C04+ MSBTN2004C04	0	1	3
Semester III				
MSBTN3001C04	Recombinant DNA Technology	3	1	0
MSBTN3002C04	Bioprocess Engineering	3	1	0
MSBTN3003C04	Animal Biotechnology	3	1	0
MSBTN3004C04	Plant Biotechnology	3	1	0
MSBTN3005C04	Lab 4 related to MSBTN3001C04+ MSBTN3002C04	0	1	3
MSBTN3006C04	Lab 5 related to MSBTN3003C04+ MSBTN3004C04	0	1	3
Semester IV				
MSBTN4001C16	Project Dissertation, Presentation and Comprehensive Viva-voce#	0	2	14
Total Credit for Core Course		84		

The student shall carry out the dissertation work outside CUSB or as recommended by DC. Department will provide the recommendation letters for the same. However, they have to follow the academic calendar of the CUSB.

Elective Courses

Course Code	Courses	Credits		
		L	T	P
Elective				
Any Four to be chosen (Two from parent Department and Two from Other Department)				
MSBTN1001E04	Biodiversity and Ecobiotechnology**	3	1	0
MSBTN1002E04	Metabolism and Metabolic Engineering	3	1	0
MSBTN2001E04	Cancer Biology *	3	1	0
MSBTN2002E04	IPR, Bioethics and Biosafety **	3	1	0
MSBTN2003E04	Neuroscience *	3	1	0
MSBTN3001E04	Neurological Diseases and Techniques*	3	1	0
MSBTN3002E04	Techniques in Molecular Diagnostics and stem Cell Technology	3	1	0
Total Credit for Elective Course		16		

* Can be offered to other Dept. within school

** Can be offered to other School

**Skill Courses (Non-Credits)**

Skill Based Electives		L	T	P
MSBTN3001S00	<i>Drosophila</i> Techniques	0	0	0
MSBTN3002S00	Village Based Skills	0	0	0
MSBTN3003S00	Field and Excursion Tour	0	0	0

Swayam/Self Study Based Courses (Non -Credits) Course Code	Courses			
		L	T	P
MSBTN1001S02	Introductory Mathematical Methods for Biologists			
MSBTN2001S02	Bio-energetics of Life Processes			
MSBTN3001S02	Principles of Downstream Techniques in Bioprocess			
MSBTN4004S02	Human Molecular Genetics			

Note - Swayam based courses are updated regularly and students can opt any other updated courses even if it is not mentioned in the list given above.






Department of Biotechnology
Ph.D. Syllabus

There will be 12 credit courses (two semesters) for a Ph.D. student.

Semester I and II

Course Code	Courses	Credits
BTN 901	Fundamentals of Research Methodology	4
BTN 902	Scope and Techniques of Research in Biological Sciences	4
BTN 903	Preparation and Presentation of Research Proposal	4
Total Credits		12

Brief Profile of Faculty Members

	Prof. Durg Vijai Singh PhD, Banaras Hindu University, Varanasi Specialization :Antibiotic Resistance Biofilm and Bacterial Pathogenesis		Dr. Rizwanul Haque Associate Professor Ph.D. (Jamia Hamdard University, New Delhi) Specialization : Immunotoxicology, Stem Cell Biology
	Dr. Rakesh Kumar Associate Professor Ph.D. (IIT Delhi) Specialization : Biopolymers and Bio composites		Dr. Nitish Kumar Assistant Professor Ph.D. (CSIR-CSMCRI, Bhavnagar) Specialization :Plant Biotechnology
	Dr. Jawaid Ahsan Assistant Professor Ph.D.(NCBS (TIFR), Bangalore) Specialization :Neuroscience (Drosophila model)		Dr. Krishna Prakash Assistant Professor Ph.D. (Jawaharlal Nehru University, New Delhi) Specialization :Molecular Biology



3.2 Department of Life Science

The discipline of Life Science covers several areas of Biological Sciences including Biochemistry, Microbiology, Molecular Biology and Environmental Science related to “Life in Diversity”. It has a good balance of animal and plant sciences which broaden the student’s knowledge and capabilities and they have diverse teaching in each of the semesters, as and when it is announced. This is compulsory; otherwise the examination result of that student shall be withheld. The Postgraduate Programmes equip students with deep theoretical as well as practical understanding of different aspects of Biological processes and promote them to take on an integrative approach for their studies and research. The department of Life Science is equipped with state-of-the-art technology and equipment that provide a stimulating environment for teaching and research. The department of Life Science is actively involved in research by having the distinction of running funded projects sanctioned from various Government agencies. In Department of Life Science, students from different sciences are also inducted to study life sciences.

Facilities & Resources in Life Science Programme

The list of equipment includes various research facilities of modern biology such as Animal and Plant tissue culture, Proteomics, Hybridoma, Recombinant DNA technology. The laboratory is fortified with instruments like Automated shakers, Inverted and Upright Bright-field and Phase contrast Microscopes, Fluorescence Microscope, Incubators, Laminar Flow hoods, UV-Visible spectrophotometer, Autoclave, Refrigerated Centrifuge, -80°C Deep Fridge, Cryocan, Millipore Water Purification system, Thermal cyclers, Microtome, FPLC system and 2D electrophoresis system. The laboratory focused on various fields of basic and applied biology like agricultural crop improvement, development of immunoassays, stress physiology and molecular biology of plants, parasite biology, physiology/endocrinology etc.



Extensive infrastructure facilities have been created in the form of newly constructed computer lab, and classrooms, which is equipped with latest computers of high configuration having Intel i-7 Quad Core processors. All computers are connected with high band-width of 1 GBPS Internet Connection.

3.2.1 Ph.D in Life Science: Department of Life Science is currently offering Ph.D. in Life Science

List of Courses in Ph.D in Life Science

Course Code	Course Title	Credits
LSC 901	Fundamentals of Research Methodology	4
LSC 902	Scope and Techniques of Research in Biological Sciences	4
LSC 903	Preparation and Presentation of Research Proposal	4
Total Credits		12

**3.2.2 M.Sc. in Life Science**

The two year (four semesters) Post-Graduate Programme has interdisciplinary approach with participation of faculties/researchers across the University with Choice based Credit System (CBCS). Master of Science in Life Science is designed to give opportunity to learn modern biological techniques and provide conducive environment to understand basic and applied fields of biological sciences such as genetic engineering, immunology, recombinant DNA technology, protein crystallography, neurobiology and microbiology etc. This platform nurtures student's thinking to observe, analyse, interpret and utilize the biological techniques and phenomena in basic as well as applied fields. Different modes of teaching are adopted to train students. Presentations, assignments, experimental proof of theories, field observation, data analysis and computer applications in biology are few methodologies, which are being applied for teaching. To engage a student's mind in the course, a continuous evaluation method is being followed. In addition, credits scores area also assigned for summer internship to utilize vacations and provide students laboratory exposure.

List of Courses in M.Sc. in Life Science (96 Credits)

First Semester (Total Credits =24Cr.)				
Course Code	Name of Courses and Course Instructor	Credits		
<u>Core Credit (20 Cr.)</u>		L	T	P
MSLSC1001C04	Cell Biology(Dr. Gautam Kumar)	3	0	1
MSLSC1002C04	Biochemistry (Dr. Manoj Panchal)	3	0	1
MSLSC1003C04	Genetics (Dr. Tara Kashav and Dr. Amrita Srivastava)	3	0	1
MSLSC1004C04	Methods in Biology(Dr. Tara Kashav)	3	0	1
MSLSC1005C04	Microbiology(Dr. Amrita Srivastava)	3	0	1
<i>One Elective Course(4Cr.)</i>				

Second Semester (Total Credits =26Cr.)				
Course Code	Name of Courses	Credits		
<u>Core Credit (18 Cr.)</u>		L	T	P
MSLSC2001C04	Metabolism(Dr. Gautam Kumar)	3	0	1
MSLSC2002C04	Molecular Biology(Dr. Amrita Srivastava)	3	0	1
MSLSC2003C04	Recombinant DNA Technology (Dr. Tara Kashav)	3	0	1
MSLSC2004C04	Molecular Enzymology(Dr. Manoj Panchal)	3	0	1
MSLSC2005C02	Summer Internship (External / Internal)	0	0	2
<i>Two Elective Course (4×2=8Cr.)</i>				

Third Semester (Total Credits =24Cr.)				
Course Code	Name of Courses	Credits		
<u>Core Credit (20 Cr.)</u>		L	T	P
MSLSC3001C04	Developmental Biology (Dr. Amrita Srivastava)	3	0	1
MSLSC3002C04	Physiology of Plant System (Dr. Gautam Kumar)	3	0	1
MSLSC3003C04	Physiology of Animal System (Dr. Manoj Panchal)	3	0	1
MSLSC3004C04	Biology of Immune System (Dr. Manoj Panchal)	3	0	1
MSLSC3005C04	Dissertation	0	0	4
<i>One Elective Course (4Cr.)</i>				



Fourth semester (Total Credits =22 Cr.)				
Course Code	Name of Courses	Credits		
Core Credit (18 Cr.)		L	T	P
MSLSC4001C18	Dissertation	0	0	18
One Elective Course (4Cr.)				

Elective Baskets				
Elective Code	Name of Courses	L	T	P
MSLSC1001E04	Plant Genetic Engineering(Dr. Gautam Kumar)	2	1	1
MSLSC2001E04	Structural Biology(Dr. Tara Kashav)	3	1	0
MSLSC3001E04	Stress Biology(Dr. Amrita Srivastava)	2	1	1
MSLSC4001E04	Biochemistry of proteins(Dr. Manoj Panchal)	2	1	1
MSLSC4002E04	Human Geneticsand Genome Analysis (Dr. Amrita Srivastava)	2	1	1

All Elective courses may not be offered at any given time. An elective will run if opted by 33% of the students enrolled in the programme.

Inter department core/elective course and related practical may be opted by a student from school

Skill Based Courses (Non Credits)

The Life Sciences course includes several excursions. This work finishes in an independent project to study and map an area chosen by the student. Many of the field excursions take place out of term time, so students must be available outside term.

Skill Based Courses	Name of Courses	L	T	P
MSLSC4001S00	Experimental Design their own research project	0	0	0
MSLSC4002S00	Health and safety - Laboratory and field (Swachh Bharat Mission)	0	0	0
MSLSC4003S00	Local villagefieldwork and farming system	0	0	0

Swayam course (Non Credits)

Swayam course code	Name of Courses	L	T	P
MSLSC1001S00	Proteins and Gel-Based Proteomics	0	0	0
MSLSC1002S00	Principles of Downstream techniques in Bioprocess	0	0	0
MSLSC1003S00	Fundamentals of optical and scanning electron microscopy	0	0	0
MSLSC4004S00	Sustainable River Basin Management	0	0	0
MSLSC4005S00	Artificial Intelligence: Search Methods for Problem Solving	0	0	0

Anytime during the entire coursework, Educational/Industrial tour or Excursion may be made to visit institutes/ industries/ laboratories based on availability of funds or otherwise. If excursion takes place, student has to submit a report (10 marks) within a week that will be the part of continuous assessment of a specific course.

* In addition, students are encouraged to take non-credit courses of their specific interests in other Science Centre/Programme of CUSB.

* The M.Sc. dissertation work should be taken place for one year after allotment of supervisor.

**Brief Profile of Faculty Members**

	Dr. Ram Pratap Singh , Associate Professor and Head Specialization : Animal Science		Dr. Gautam Kumar Assistant Professor M.Phil. Ph.D. (JNU, New Delhi) Specialization : Plant Molecular Biology and Biotechnology
	Dr. Amrita Srivastava Assistant Professor Ph.D. (Banaras Hindu University, Varanasi) Specialization : Microbiology		Dr. Tara Kashav Assistant Professor Ph.D. (Jawaharlal Nehru University, New Delhi, India) Postdoctoral experience UMASS Medical School, Worcester, Massachusetts, USA) Specialization :Protein Biochemistry, Structural Biology
	Dr. Manoj Panchal Assistant Professor Ph.D.(Delhi University) Specialization : Protein Hormone Biochemistry and Nucleocytoplasmic Transport		Dr. Naveen Kumar Singh , Assistant Professor Specialization : Plant tissue culture and Genetic Engineering, Plant cell death
	Dr. Sanjay Kumar , Assistant Professor Specialization : Malaria, Cardiovascular, and Blood Cancer		



3.3 Department of Bioinformatics

The post-genomic era has led to emergence of bioinformatics as an important discipline with wide-ranging applications from marker development and diagnostics to drug discovery and toxicological predictions. Bioinformatics is a rapidly growing field of study, which is an amalgamation of biology, chemistry, physics, mathematics, statistics, computer science and information technology. The department offers two programmes – PhD and MSc in bioinformatics. In these programmes, the students are trained for both dry and wet-lab techniques, enabling them to better suit for different research laboratories and industries, requiring manpower skilled in programming languages, data analytics, machine learning techniques, computational modeling and drug design and also have abilities to work on bench. Students are provided support and encouragement to gain experience in the established labs for their project and publish their research work.

3.3.1 Ph.D. in Bioinformatics

The **Department of Bioinformatics** is currently offering PhD with diverse field of specializations including Molecular Modelling and Simulation, Computer Added Drug Designing (CADD), Big Data analytics, Functional Genomics, Biological Database and Server development. The programme trains researchers with deep theoretical as well as practical understanding of different aspects of biological systems and processes, and encourage them to take on an integrative approach for their studies and research. The students are well trained for lab techniques enabling them to better suit for different research laboratories and pharmaceutical and biotechnology industries.

Thrust Areas of Research:Protein modelling and Simulation, Computer Added Drug Designing (CADD), Data mining, Evolutionary analysis, Biological Database and Server development, Transcriptome and proteome analysis, System Biology, X-ray crytallography and structure biology, Free energy perturbation, Big Data analysis and Machine Learning in Biology.

List of Courses in PhD. Bioinformatics

Course Code	Course Title	Credit
BIS 901	Research Methodology (RS Rathore)	4
BIS 902	Tools and Techniques of Research (RS Rathore)	4
BIS 903	Preparation and Presentation of Research Proposal	4
	Total Credits:	12

3.3.2 M.Sc. Bioinformatics

Bioinformatics is a rapidly growing field of interdisciplinary study at the interface of biology and information technology. As such, Bioinformatics brings together Molecular biology with areas from Statistics, Mathematics, and Computer science. Bioinformatics now entails the creation and advancement of databases, algorithms, computational and statistical techniques, and theory to solve formal and practical problems arising from the management and analysis of biological data. Considering the interdisciplinary nature of Bioinformatics, this master programme has a major component from related subjects under one umbrella. The post graduate programme ia primarily a skill-based program.

Objectives

The core objective of the programme is to provide quality education to the graduates, who want to pursue their career in the emerging areas of Bioinformatics and Computational Biology.

- To serve as a nodal point for Bioinformatics and its applications
- To provide industry interface to the students for research project
- To build skilled manpower for drug design and pharmaceutical industry



**List of Courses in M.Sc. Bioinformatics^s**

Course Code	Course Title	Credits		
		L	T	P
Semester- I				
MSBIS1001C04	Introduction to Bioinformatics (Asheesh Shanker)	2	1	1
MSBIS1002C04	Cell and Molecular Biology (Ajay Kr. Singh)	3	1	0
MSBIS1003C04	Mathematics and Statistics with R (Vijay Kr. Singh)	2	1	1
MSBIS1004C04	Linux and Shell Programming (KK Ojha)	2	1	1
MSBIS1005C04	Programming with C (Anil Kumar)	2	1	1
One elective course of 4 credits from parent or other department				
MSBIS1006S00	Plantation of Trees	Non- credit		
Total Credits				24

Student may choose any related course/elective including wet laboratory practicals during semester I and II from other department.

Course Code	Course Title	Credits		
		L	T	P
Semester- II				
Core Courses				
MSBIS2001C04	Algorithms in Bioinformatics (Ajay Kr Singh)	3	0	1
MSBIS2002C04	Biomolecular Modelling & Simulations (DV Singh)	3	0	1
MSBIS2003C04	Programming with Perl (Anil Kumar)	2	1	1
MSBIS2004C04	Genetics and Genomics (Asheesh Shanker)	3	1	0
MSBIS2005C04	Evolution and Molecular Phylogeny (KK Ojha)	3	1	0
One elective course of 4 credits from parent or other department				
MSBIS2006S00	Swachh Bharat Abhiyan	Non- credit		
Total Credits				24

Students wish to go for summer training (non-credit) may join the same at the end of II semester and present work done during summer training within one week of the commencement of semester III.

Experts from industry / alumni placed at various institutions may be called for guest lecture and interaction to get update on requirement in industry.

Educational/Industrial tour or Excursion may be made to visit institutes/industries/laboratories based on availability of funds or otherwise. If excursion took place, student has to submit a report (10 marks) within a week that will be the part of continuous assessment of a specific course decided by faculty council.

Course Code	Course title	Credits		
		L	T	P
Semester -III				
Core Courses				
MSBIS3001C04	Chemoinformatics and Drug Design (DV Singh)	3	0	1
MSBIS3002C04	Transcriptomics and Proteomics (Vijay Kr Singh)	3	0	1
MSBIS3003C04	DBMS and Web Technology (Anil Kumar)	2	1	1
MSBIS3004C04	Minor Project (Review of Literature, Seminar, and Research Problem Definition) (RS Rathore)	4		
Two elective courses of 8 credits from parent or other department				
MSBIS3005S00	Village based Skills	Non- credit		
MSBIS3006S00	Human Molecules Genetics (SWAYAM Course)	Non- credit		
Total Credits				24

Course Code	Course title	Credits	
		L	T
Semester – IV			
MSBIS4001C24	Dissertation	24	
Total Credits			24

Student would have choice to carry out dissertation internally or externally.

Course Code	Course title	Credits		
		L	T	P
Elective Courses				
MSBIS1001E04	Biochemistry and Immunology (DV Singh)	3	1	0
MSBIS2001E04	Whole exome sequencing data analysis (Vijay Kr Singh)	3	0	1
MSBIS3001E04	Big Data Analytics and Health Informatics (RS Rathore)	4	0	0
MSBIS3002E04	Programming with Python (Asheesh Shanker)	2	1	1
MSBIS3003E04	Systems Biology (DV Singh)	2	1	1



C: Core Course; E: Elective Course; S: Self-study/Skill Course

An elective will run if opted by 33% of the students enrolled in the programme.

*Tentative list of Course instructors

Inter department elective: Any theory course and related practical may be opted by a student from school

Inter school course: MSBIS1004C04, MSBIS1005C04, MSBIS3003C04

Skill based course: MSBIS1001C04, MSBIS1005C04, MSBIS2002C04, MSBIS2003C04, MSBIS3001C04, MSBIS3003C04.

Laboratory Facilities & Resources

Extensive infrastructure facilities have been created in the form of newly constructed computer lab, which is equipped with latest computers of high configuration having Intel I-7 Quad Core processors. All computers are reconnected with high bandwidth Internet connection powered by 1 Gbps NKN backbone. The lab also has many HP, Dell, Fujitsu & Tyrone work stations for high performance computing.

Brief Profile of Faculty Members

	<p>Prof. Ravindranath Singh Rathore Professor Ph.D. (IISc, Bangalore), PDF (Univ Texas at Galveston Tx, USA) Specialization : Drug Design, Structural Biology & Crystallography</p>		<p>Dr. Asheesh Shanker Associate Professor Ph.D. (Banasthali Vidyapith) Specialization : Bioinformatics & Genomics</p>
	<p>Dr. Ajay Kr. Singh Associate Professor M.Tech, Ph.D. (UPTU, Lucknow) Specialization : Cancer Informatics, CADD</p>		<p>Dr. Krishna Kr. Ojha Assistant Professor Ph.D. (BHU) Specialization : Genomics, Evolutionary biology</p>
	<p>Dr. Durg Vijay Singh Assistant Professor, MTech and PhD (IIT Allahabad) Specialization : Molecular Modeling & Drug Design</p>		<p>Dr. Vijay Kumar Singh, Assistant Professor, PhD (University of Turin, Italy) Specialization : Functional Genomics, Microarray data analysis</p>
	<p>Dr. Anil Kumar Assistant Professor, PhD(IIT, Guwahati) Specialization : Biological Database Development</p>		



3.4 Department of Environmental Science

The Department offers M.Sc. and Ph.D. Programme in Environmental Science which revolves around multidisciplinary and integrated study of the Earth, Atmospheric, Biological and Chemical processes and their linkages with developmental perspectives for attaining a sustainable environment. The focus includes complex interactions between the different components of nature (between and beyond disciplinary boundaries), impact on food security and associated ecosystem services in the immediate and long-term perspectives, besides environmental monitoring and management.

Environmental Science Laboratory

The department is equipped with environmental science laboratory for high end research and teaching purposes. The well-equipped wet laboratory is meant for carrying out experimentation and research in Ecology, Biomanipulation and biocontrol, Biogeochemistry, Pollution monitoring and control, Environmental Engineering, Environmental biotechnology and microbiology, Ecotoxicology, Soil sciences, Solid Waste management and many others. Important equipment of environmental science laboratory are Atomic Adsorption Spectrophotometer (AAS), UV-Vis-spectrophotometer, CHNS analyzer, Ion chromatograph, Automated solvent extractor, Gas Chromatograph (GC), Gas Chromatograph Mass Spectroscopy (GCMS), Kjeldahl nitrogen assembly, Microwave digestion system, Rotary Evaporator, Flame photometer, Incubator shaker, BOD incubator, Respirable dust sampler.

The dry laboratory carries research on Climate Modelling, Monsoon Studies, Climate Change, Remote Sensing and others. The laboratory includes high speed IBM/HP (Unix/Linux servers), Regional Climate Models (PRECIS, WRF, RegCM4), Climate data analysis tools, IPCC models outputs, GIS software ArcGIS10.2 are available for weather and climate modeling studies.

3.4.1 Ph.D. in Environmental Science

List of Courses in Ph.D. in Environmental Science

Course Code	Course Title	Credits
ESC 901	Research Methodology	4
ESC 902	Tools and Techniques of Research	4
ESC 903	Preparation and Presentation of Research Proposal	4
Total Credits		12

3.4.2 M.Sc. Environmental Science

The two-year (four semesters) Postgraduate Programme is designed to provide necessary knowledge and skills to postgraduate students, so that they can learn to analyze and assess environmental systems and problems; be able to propose sustainable solutions and contribute to the development of policies and strategies for environmental planning. The major thrusts of the programme are:

1. To study natural resources, the impacts of human activities thereon and the implications of environmental degradation on human development.
2. Natural Processes in the Environment, which focus on the natural processes such as the Atmospheric, Biogeochemical, Ecological and Hydrological processes
3. The Human Dimension of Environmental Change: to understand the determinants of the growth of populations and economies, and how this growth results in demand for natural resources, leading to scarcity, pollution and risks for human health
4. Analytical Tools in Environmental Science: basic tools for analyzing environmental issues, such as data collection and analysis and modelling of air, water, soil and biological systems.



List of Courses in M.Sc. Environmental Science (96 Credits)

Sl. No.	Course Code	Course Title & Course Instructor	Total Credit	Theory (Cr.)	Practical/ Project/ Hands in Experience (Cr.)
Semester –I (Total credit-24)					
Core Course (Credit-20)					
1.	MSESC1001C04	Environmental Biology (Dr. Ram Kumar)	4	3	1
2.	MSESC1002C04	Water Pollution: Causes, Consequences and Control (Dr. Prashant)	4	3	1
3.	MSESC1003C04	Environmental Chemistry (Dr. Rajesh Kr. Ranjan)	4	3	1
4.	MSESC1004C04	Environmental Geosciences (Dr. Pradhan Parth Sarthi)	4	3	1
5.	MSESC1005C04	Field Work (Visit of Industry, Nature reserves/interpretation Centre/National Park, Protected Areas)	4	4	0
6.	----	Basic Biology*	Non credit		
7.	----	Basic Mathematics*	Non credit		
Elective Course (Credit-04)					
8.	MSESC1006E04	Introduction to Environmental Sciences (Dr. N. L. Devi)	4	4	0
9.	MSESC1007E04	Social and Developmental Perspectives (Dr. N. L. Devi)	4	3	1
Semester –II (Total credit-24)					
Core Course (Credit-20)					
10.	MSESC2001C04	Environmental Impact Assessment (Dr. Prashant)	4	3	1
11.	MSESC2002C04	Energy and Environment (Dr. Rajesh Kr. Ranjan)	4	3	1
12.	MSESC2003C04	Natural Resources and their Management (Dr. N. L. Devi)	4	3	1
13.	MSESC2004C04	Air Pollution: Causes, Consequences and Control (Dr. N. L. Devi)	4	3	1
14.	MSESC2005C04	Atmospheric Science & Climate Change (Dr. Pradhan Parth Sarthi)	4	3	1
Elective Course (Credit-04)					
15.	MSESC2006E04	Analytical Methods (Dr. Rajesh Kr. Ranjan)	4	3	1
16.	MSESC2007E04	Disaster Management (Dr. Pradhan Parth Sarthi)	4	3	1
Semester –III (Total credit-24)					
Core Course (Credit-08)					
17.	MSESC3001C04	Research Methodology (Dr. Ram Kumar)	4	3	1
18.	MSESC3002C04	Dissertation	4	4	0
Elective Course (Credit-16)					
19.	MSESC3003E04	Restoration Ecology (Dr. Ram Kumar)	4	3	1
20.	MSESC3004E04	The Science and Practice of Sustainable Development (Dr. Ram Kumar)	4	3	1



21.	MSESC3005E04	Environmental Policies, Laws and Ethics (Dr. Prashant)	4	3	1
22.	MSESC3006E04	Solid Waste Management (Dr. Prashant)	4	3	1
23.	MSESC3007E04	Environmental Economics (Dr. Prashant)	4	4	0
24.	MSESC3008E04	Bio-geo chemical cycles (Dr. Rajesh Kr. Ranjan)	4	3	1
25.	MSESC3009E04	Eco-toxicology and Environmental Health (Dr. N. L. Devi)	4	3	1
26.	MSESC3010E04	Environmental Modeling (Dr. Pradhan Parth Sarthi)	4	3	1
Semester –IV (Total credit-24)					
Core Course (Credit-08)					
27.	MSESC4001C08	Dissertation	8	8	0
Elective Course (Credit-16)					
28.	MSESC4002E04	Environmental Biotechnology (Dr. Ram Kumar)	4	3	1
29.	MSESC4003E04	Biodiversity and Conservation Biology (Dr. Ram Kumar)	4	3	1
30.	MSESC4004E04	Microbial Ecology (Dr. Ram Kumar)	4	3	1
31.	MSESC4005E04	Industrial Environment Management (Dr. Prashant)	4	3	1
32.	MSESC4006E04	Environmental Entrepreneurship (Dr. Prashant)	4	3	1
33.	MSESC4007E04	Soil Science (Dr. Rajesh Kr. Ranjan)	4	3	1
34.	MSESC4008E04	Statistical Methods and Computer Applications (Dr. Pradhan Parth Sarthi)	4	3	1
35.	MSESC4009E04	Remote Sensing and GIS (Dr. Pradhan Parth Sarthi)	4	3	1

List of Core courses & Elective courses of M.Sc. Environmental Science open for University Level (CUSB)

Sl. No.	Course Code	Course Title	Total Credit
Core Course			
1.	MSESC1001C04	Environmental Biology (Dr. Ram Kumar)	4
2.	MSESC3001C04	Research Methodology (Dr. Ram Kumar)	4
3.	MSESC1002C04	Water Pollution: Causes, Consequences and Control (Dr. Prashant)	4
4.	MSESC2001C04	Environmental Impact Assessment (Dr. Prashant)	4
5.	MSESC1003C04	Environmental Chemistry (Dr. Rajesh Kr. Ranjan)	4
6.	MSESC2003C04	Natural Resources and their Management (Dr. N. L. Devi)	4
7.	MSESC2004C04	Air Pollution: Causes, Consequences and Control (Dr. N. L. Devi)	4
8.	MSESC1004C04	Environmental Geosciences (Dr. Pradhan Parth Sarthi)	4
9.	MSESC2005C04	Atmospheric Science & Climate Change (Dr. Pradhan Parth Sarthi)	4
Elective Course			
10.	MSESC4002E04	Environmental Biotechnology (Dr. Ram Kumar)	4



11.	MSESC4003E04	Biodiversity and Conservation Biology (Dr. Ram Kumar)	4
12.	MSESC3003E04	Restoration Ecology (Dr. Ram Kumar)	4
13.	MSESC3004E04	The Science and Practice of Sustainable Development (Dr. Ram Kumar)	4
14.	MSESC4004E04	Microbial Ecology (Dr. Ram Kumar)	4
15.	MSESC3005E04	Environmental Policies, Laws and Ethics (Dr. Prashant)	4
16.	MSESC3006E04	Solid Waste Management (Dr. Prashant)	4
17.	MSESC4006E04	Environmental Entrepreneurship (Dr. Prashant)	4
18.	MSESC3007E04	Environmental Economics (Dr. Prashant)	4
19.	MSESC3008E04	Bio-geo chemical cycles (Dr. Rajesh Kr. Ranjan)	4
20.	MSESC4007E04	Soil Science (Dr. Rajesh Kr. Ranjan)	4
21.	MSESC1006E04	Introduction to Environmental Sciences (Dr. N. L. Devi)	4
22.	MSESC1007E04	Social and Developmental Perspectives (Dr. N. L. Devi)	4
23.	MSESC3009E04	Eco-toxicology and Environmental Health (Dr. N. L. Devi)	4
24.	MSESC4008E04	Statistical Methods and Computer Applications (Dr. Pradhan Parth Sarthi)	4
25.	MSESC4009E04	Remote Sensing and GIS (Dr. Pradhan Parth Sarthi)	4
26.	MSESC3010E04	Environmental Modelling (Dr. Pradhan Parth Sarthi)	4
27.	MSESC2007E04	Disaster Management (Dr. Pradhan Parth Sarthi)	4

List of Skill based courses of M.Sc. Environmental Science

Sl. No.	Course Code	Course title	Total Credit
1.	MSESC1002C04	Water Pollution: Causes, Consequences and Control (Dr. Prashant)	4
2.	MSESC3004E04	The Science and Practice of Sustainable Development (Dr. Ram Kumar)	4
3.	MSESC3006E04	Solid Waste Management (Dr. Prashant)	4
4.	MSESC4005E04	Industrial Environment Management (Dr. Prashant)	4
5.	MSESC4006E04	Environmental Entrepreneurship (Dr. Prashant)	4
6.	MSESC4009E04	Remote Sensing and GIS (Dr. Pradhan Parth Sarthi)	4

*Basic Biology / Basic Mathematics are non credit bridge courses, this will be offered to those who wish to refresh the basics of Mathematics/ Biology to cope up with the requirements of M.Sc. Environmental Sciences.

SWAYAM

20% of the total credits (96) can be earned from outside centres i.e. either SWAYAM or courses being offered within University (CUSB). These earned courses shall be booked under elective courses. The core courses are compulsory for all students admitted in M.Sc. Environmental Science programme.






The list of SWAYAM courses will be announced in the beginning of 2nd & 3rd Semester. Students may earn required credits from the prescribed list. The Centre Committee (CC) may approve, other courses also brought by students from the SWAYAM platform as the case may be.

Eligibility for open course:-

1. The student shall be enrolled in PG /masters programmes of CUSB.
2. Only for students having Bachelor of Science degree.



Brief Profile of Faculty Members

	<p>Prof. Umesh kumar Singh Specialization : Specialization : Hydrogeology, Biogeochemistry, Health Risk Assessment, Solid Waste Management, Climate Change</p>		<p>Prof. Ram Kumar Associate Professor Ph.D. (University of Delhi) Postdoc, National Taiwan Ocean University, Taiwan Specialization : Evolutionary Ecology; Population and community Ecology of Zooplankton</p>
	<p>Prof. Pradhan Parth Sarthi Associate Professor Ph.D. (Banaras Hindu University) Varanasi, UP Specialization : Meteorology Climate modelling; Climate Change; Extreme Events</p>		<p>Dr. Rajesh Kumar Ranjan Assistant Professor P.h.D. (JNU, New Delhi) Specialization : Environmental Sciences / Environmental Chemistry/ Organic Geochemistry</p>
	<p>Dr. Prashant Assistant Professor Ph.D. (Vikram University, Ujjain, Madhya Pradesh) Specialization : Environment Management</p>		<p>Dr. Ningombam Linthoingambi Devi Assistant Professor Ph.D. (China University of Geosciences, Wuhan, China) Specialization : Biogeochemistry, Ecotoxicology and Atmospheric Science</p>



1. DEPARTMENT OF GEOLOGY

The Department of Geology in the Central University of South Bihar started from the session 2020-2021 with the aim to nurture students interested in comprehensive learning of the subject and to promote Human Resource Development (HRD) in achieving goals of sustainable development and conservation of natural resources. The faculty members of the Department of Geology are committed to engaging in high-quality research and in the pursuit of excellence in teaching. The department follows an inter- & intra-disciplinary approach and offers broad areas of geological training, which include Paleontology and Stratigraphy, Micropaleontology, Hydrogeology, Natural Hazards, Risk Management, Remote Sensing, Petrology, Geochemistry and Oceanography. Unplanned anthropogenic activity has disturbed both the earth's natural processes and natural growth of the biosphere. The geoscientists can try to understand the situation and develop possible scenarios based on their geological knowledge. In this connection, the students of the Department of Geology, will be prompted to advance, knowledge and experience in the application of geological principles to the investigation of natural resources, the ability to interpret geologic maps correctly, to identify and explain the formation of rock suites, ore deposits, structures and rock-forming minerals, skills associated with the geological project management, supervision, and decision-making processes and ability to have good teamwork and leadership practices.

The possibilities to acquire knowledge of the geological heritage have advanced many folds in the last three decades; however, graduate and post-graduate students are not able to develop insight into the science and therefore are not receiving proper training. The individual students from various universities will be trained through an internship, PhD research and post-doctoral research.

2. Ph. D in Geology

The faculty members of the Department of Geology are committed to engage in high quality research and in the pursuit of excellence in teaching. The launch of Ph.D. programme in the upcoming academic session in 2020-21 will further strengthen and institutionalize the traditions of innovation and research. The department follows an inter- & intra-disciplinary approach and offers broad areas of research which includes Micropaleontology, Hydrogeology, Water Resource Management, Natural Hazard (Landslide, flood, Drought) prediction and modeling, Advance application of Geospatial Technology in Earth Resources Mapping and Monitoring, River Basin Management, Oceanography, Geochemistry, Igneous Petrology and Isotope Geology.

All the students seeking admission for Ph.D will be required to successfully complete the course work before the beginning of the research for their Ph.D thesis. The course work will be of two semesters (as per program mentioned below)

List of Courses Ph. D in Geology

Course Code	Title of the Course	Credits
GEOL901	Research Methodology	4
GEOL902	Tools and Techniques in Geology	4
GEOL903	Preparation, Presentation of Research Proposal.	4
Total Credits		12

3. M.Sc. in Geology

The M.Sc. course in Geology shall be imparted to the students for two academic sessions consisting of four semesters as given below. Candidates will be examined and evaluated on grade basis at the end of each semester in the different courses of theory and practical as per the credits given against each course. The M.Sc. Geology will consist of (a) Core Courses (b) Elective Courses and (c) Elective Courses from Swayam portal.

- (a) The Core courses will be compulsory for all the students admitted to M.Sc. Geology. There will be thirteen core courses covering major branches of Geology and three sessions of two to three weeks of geological field training and viva-voce examinations in the field. The attendance in the geological field training will be compulsory for all the students. The field training and viva-voce examination will be conducted by at least two internal examiners (faculty members) during first to third semesters. For the geological field training 2 credits (50 marks) including viva-voce examination in the field shall be assigned to evaluation of the report. The semester breaks can also be utilized for the geological field training. After the field training, the students will be required to submit a detailed field report to the concerned teachers for evaluation.
- (b) Project Oriented Dissertation, Presentation and viva-voce of four credits (Total of 100 marks) will be part of the Core Courses in the fourth semester. The area of Dissertation shall be assigned to the students before the commencement of the classes for the III semester based on the merit of up to II semester, the choice the students and expertise available in the Department. The Project Oriented Dissertation must be submitted at least one month before the commencement of fourth Semester's final examination. There will be a short presentation of 45 minutes in the presence of faculty members and the board of examiners for the purpose of evaluation before the submission of Project Oriented Dissertation. During completion of the Dissertation work the students will be required to complete various assignments given to them by their respective supervisors for the purpose of their evaluation.
- (c) The students shall select the Elective Courses in the beginning of all Semesters according to the scheme mentioned below.

**List of Courses M.Sc. in Geology**

Course Code	Course Title	Credits
MSGEL1001C03	Geomorphology and Remote Sensing	3
MSGEL1002C03	Mineralogy, Optical mineralogy, and Crystallography	3
MSGEL1003C03	Micropaleontology and vertebrate Palaeontology	3
MSGEL1004C03	Stratigraphy	3
	Total of Theory	12
MSGEL1005C02	Lab: Geomorphology and Remote Sensing and Mineralogy, Optical mineralogy, & Crystallography	2
MSGEL1006C02	Lab: Micropaleontology, vertebrate Palaeontology and Stratigraphy	2
MSGEL1007C02	Geological Field Training (Palaeontology and stratigraphy of 14 days)	2
	Total of Practical	6
	Total of Core Courses	18
Course Code	Elective Courses	Credits
MSGEL1008E03	Oceanography	3
MSGEL1009E03	Applied Palaeontology and Principle of stratigraphy (also for students of other PG Programs)	3
MSGEL1010E03	Palaeobotany (also for students of other PG Programs)	3
	Total of Elective Courses	9
	Total	27




SEMESTER - II		
Course Code	Core Courses	Credits
MSGEL2001C03	Igneous Petrology	3
MSGEL2002C03	Structural Geology	3
MSGEL2003C03	Invertebrate Palaeontology	3
MSGEL2004C03	Sedimentology	3
	Total of Theory	12
MSGEL2005C02	Lab: Igneous Petrology and Structural Geology	2
MSGEL2006C02	Lab: Invertebrate Palaeontology and Sedimentology	2
MSGEL2007C02	Geological Field Training (Geological mapping of 21 days)	2
	Total of Practical	6
	Total of Core Courses	18
Course Code	Elective Courses	Credits
MSGEL2008E03	Application of Remote Sensing and GIS in Geosciences	3
MSGEL2009E03	Geochemistry	3
MSGEL2010E02	Life Through Ages (also for students of other PG Programs)	2
	Total of Elective Courses	08
	Total	26

SEMESTER - III		
Course Code	Core Courses	Credits
MSGEL3001C03	Metamorphic Petrology	3
MSGEL3002C03	Hydrogeology	3
MSGEL3003C03	Economic Geology	3
	Total of Theory	9
MSGEL3004C02	Geological field work (Applied geology and mining for 14 days)	2
MSGEL3005C02	Lab: Metamorphic Petrology	2
MSGEL3006C02	Lab: Hydrogeology and Economic Geology	2
	Total of Practical	6
	Total of Core Courses	15



Course Code	Elective Courses (Any four)	Credits
MSGEL3007E03	Elements of Mining and Ore Dressing	3
MSGEL3008E03	Computer application in Geosciences	3
MSGEL3009E03	Engineering Geology	3
MSGEL3010E02	Disaster Management (also for students of another PG Program)	2
MSGEL3011E03	Metamorphic Petrology and Thermodynamics from Swayam Portal: https://swayam.gov.in/nd2_cec20_mm03/	3
MSGEL3012E03	Geophysics and Mineral Exploration	3
	Total of Elective Courses	11 or 12
	Total	26 or 27
SEMESTER - IV		
Course Code	Core Courses	Credits
MSGEL4001C03	Environmental Geology and Natural Hazards	3
MSGEL4002C04	Field based project-oriented dissertation, presentation & Viva-voce	4
	Total of Theory	7
Course Code	Core Courses	Credits
MSGEL4003C02	Lab: Environmental Geology and Natural Hazards	2
	Total of Practical	2
	Total of Core Courses	9
Course Code	Elective Courses (any four)	Credits
MSGEL4004E03	Watershed Management	3
MSGEL4005E03	Sequence Stratigraphy	3
MSGEL4006E03	Petroleum Exploration	3
MSGEL4007E02	Preparation of fossils, rock thin-sections and polished sections	2
MSGEL4008E03	Photogeology in Terrain evaluation from Swayam Portal: https://swayam.gov.in/nd1_noc20_ce60/	3
	Total of Elective Courses	11 or 12
	Total	20 or 21
	GRAND TOTAL	101

Brief Profile of Faculty Members

	Dr. Prafull Kumar Singh, Associate Professor & Head Specialization : Hydrogeology, Geologic Remote Sensing, Natural Hazards		Dr. Vikal Kumar Singh, Assistant Professor Specialization : Applied Nucroakeibtikigy
	Dr. Longjam Kabita Chanu, Assistant Professor Specialization : Igneous petrology & Geochemistry		



DEPARTMENT OF PHARMACY

The Department of Pharmacy under the School of Health Sciences forms a key component of the university. The department is composed of dynamic faculty members who are actively engaged in knowledge creation and dissemination at the frontiers of the Pharmaceutical Sciences. The discipline has an encompassing effect on the Pharmaceutics and Pharmacology and therefore considered a central branch of applied science especially in the field of medical sciences. Knowledge and skills in Pharmacy play a crucial role in finding the solutions to most of the key challenges of the society (such as communicable & non-communicable diseases and developmental aspects of different pharmaceutical preparations with better patient compliance). The department believes in inter- & intra-disciplinary approach of learning and fosters a culture of excellence. Moreover the M. Pharm. (Pharmaceutics) & M. Pharm. (Pharmacology) is launched from the academic session in 2020-21. The Department as well as the Institute has state of the art facilities for analysis & screening of drugs with sophisticated instruments at Central Instrument Facilities. Department has faculties who have active expertise in the fields of research encompassing Synthetic Chemistry, Natural Products' Chemistry, Novel Drug Delivery System, Molecular Pharmacology and Formulations besides Computer Aided Drug Design. To make the Department more stronger with the research component, Ph.D. programme is being started from this new academic session in 2020-21. The department envisages scaling greater heights with the launch of Ph.D. programmes and producing globally competent pharmacy professionals who can solve the health problems of the nation.

PH.D. IN PHARMACY

The faculty members of the department are engaged in cutting edge research at the frontiers of science. The launch of Ph.D. programme in the upcoming academic session in 2020-21 will further strengthen and institutionalize the culture of research and innovation. The department follows an inter- & intra-disciplinary approach and offers diverse areas of research which include nano-pharmaceutics, targeted drug delivery system, molecular signalling studies & therapeutic studies especially in the fields of Breast Cancer, Liver Cancer, Cancer Immunology, Alzheimer Disease, Parkinson Diseases, and Hypertension etc. To further encourage the inter- & intra-disciplinary research, the department has a key focus to establish inter-institutional links and collaborations with renowned laboratories and universities through Ph.D. Programme. During the programme, students will acquire new skills while working on state-of-the-art instruments in the department and with the collaborating laboratories/Universities. The ultimate goal of the programme is to produce globally competent pharmacy professionals who can critically solve the health issues of the society.

Eligibility Criteria for Admission to Ph.D. Programme

- (A) Candidates possessing a M. Pharm./M.S.(Pharmacy)/Equivalent Degree in Pharmacy Degree from 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. Candidates for admission to the Ph. D. 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.
- (B) 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 19th 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.

**MODE OF ADMISSION**

A candidate who has passed the qualifying examination with requisite percentage of marks is eligible for admission to the Ph. D. Programme through one of the following modes:

- (A) **Admission through Entrance Test with proper notification**
 (B) **Direct Admission**

COURSE WORK

- A candidate, admitted to the Ph.D. Programme in Pharmacy, shall be required to undertake Course Work as approved by the Academic Council during the initial one or two semesters for a minimum period of one semester. However, this period may be extended for another semester as per the requirements of Department. The candidate shall have to qualify as per the criteria prescribed by the Course Work Ordinances of the Pharmacy Department. The Course Work shall include a course on Research Methodology and Reviewing of Published Research Work in the relevant field.
- All candidates admitted to the Ph.D. programme of the Department will be required to complete the Ph.D. Course work prescribed by the Department.
- The credit assigned to the Ph.D. course work shall be a minimum of 08 credits and a maximum of 16 credits. A minimum of four credits shall be assigned to one or more courses on Research Methodology. Other courses shall be advanced level courses preparing the students for Ph.D. degree. **The details of the courses, course credits and other related matters shall be determined in accordance with the Ordinances of the Department.** However, a minimum of 75 % attendance during the course work will be required in the Course Work for the research scholars registered on part-time basis.
- The Department where the scholar pursues his/her research shall prescribe the course(s) to him/her based on the recommendations of the Research Advisory Committee.
- The courses offered for the Ph. D. Programme may be through lecture, laboratory, field study, design and self-study courses, mini projects and seminars. Each of these courses shall be of doctoral level.

Course Structure of Ph.D. Programme
 (Minimum Core = 12)

	Course Title	Theory/Practical (Hrs/Week)	Total Marks	Credit
Core	Research Methodology	2	50	2
Core	Recent Advances in Pharmacology OR Recent Advances in Pharmaceutics	4	100	4
Core	Research Proposal Preparation and Seminar Presentation	4	100	4
Core	Research and Publication Ethics	2	50	2

RESEARCH METHODOLOGY**UNIT I: General Research Methodology (5H)**

Research, objective, requirements, practical difficulties, review of literature, study design, types of studies, strategies to eliminate errors/bias, controls, randomization, crossover design, placebo, blinding techniques.

UNIT II: Literature Survey (10H)

Introductions: Sources of information, need for reviewing literature, primary-secondary and tertiary sources, journals, journal abbreviations, abstracts, current titles, reviews, monographs, dictionaries, text books, current contents, patents. Introduction to chemical abstracts and beilstein, subject index, substance index, author index, formula index and other indices with examples.

Digital: Web resources, E-journals, journal access, TOC alerts. Hot articles: Citation index, UGC infonet, E-books, Impact Factors, Search engines- Google scholar, chemical industry, Wiki-databases, chemSpider, ScienceDirect, SciFinder, Scopus.

UNIT III: Medical Research (10H)

History, values in medical ethics, autonomy, beneficence, non-maleficence, double effect, conflicts between autonomy and beneficence/non-maleficence, euthanasia, informed consent, confidentiality, criticisms of orthodox medical ethics, importance of communication, control resolution, guidelines, ethics committees, cultural concerns, truth telling, online business practices, conflicts of interest, referral, vendor relationships, treatment of family members, sexual relationships, fatality.



CPCSEA guidelines for laboratory animal facility & Declaration of Helsinki Goals, veterinary care, quarantine, surveillance, diagnosis, treatment and control of disease, personal hygiene, location of animal facilities to laboratories, anesthesia, euthanasia, physical facilities, environment, animal husbandry, record keeping, SOPs, personnel and training, transport of lab animals.

Declaration of Helsinki: History, introduction, basic principles for all medical research, and additional principles for medical research combined with medical care.

UNIT IV: Ethics and IPR (5H)

Regulatory bodies, practices and compliances, Good Laboratory Practices (GLP), Research Ethics & Misconduct, Patents, Copyrights, GI and Trademarks, Product and process patent, Patent Treaties and Convention, process of filing patent, database of patent, search and retrieval.

References

1. Research Methodology. Methods and Techniques: C. R. Kothari.
2. Paul D Leedy, Jeanne E Ormrod and Jeanne Ellis Ormrod, Practical Research: Planning and Design, Prentice Hall, 2004.
3. Robert V Smith, Graduate Research: A Guide for Students in the Sciences, University of Washington Press, 1998.
4. http://cpcsea.nic.in/Content/55_1_GUIDELINES.aspx dated 07/07/2020
5. <https://www.wma.net/wp-content/uploads/2017/01/Wiesing-DoH-Helsinki-20141111.pdf> dated 07/07/2020

RECENT ADVANCES IN PHARMACOLOGY

UNIT-1: Pharmacological and Toxicological Screening Methods (15H)

Laboratory Animals: Common laboratory animals: Description, handling and applications of different species and strains of animals. Transgenic animals: Production, maintenance and applications Anaesthesia and euthanasia of experimental animals. **General principles of preclinical screening:** CNS Pharmacology: behavioral and muscle coordination, CNS stimulants and depressants, anxiolytics, anti-psychotics, anti epileptics, Respiratory Pharmacology, Reproductive Pharmacology, Cancer Pharmacology etc. **General principles of immunoassay:** theoretical basis and optimization of immunoassay, heterogeneous and homogenous immunoassay systems. **Cell culture techniques:** Basic equipments used in cell culture lab. Cell culture media, various types of cell culture, general procedure for cell cultures; applications of flow cytometry.

UNIT-2: Cell & Cell Signalling (15H)

Intercellular and intracellular signalling pathways: cyclic AMP signaling pathway, mitogen-activated protein kinase (MAPK) signaling, Janus kinase (JAK)/signal transducer and activator of transcription (STAT) signaling pathway etc. Cell death—events, regulators, intrinsic and extrinsic pathways of apoptosis. Necrosis and autophagy signalling etc.

UNIT – 3: Applications of genomic & proteomic tools and Pharmacogenomics (15H)

DNA electrophoresis, PCR (reverse transcription and real time), Gene sequencing, micro array technique, SDS page, ELISA and western blotting, Recombinant DNA technology and gene therapy Basic principles of recombinant DNA technology-Restriction enzymes, various types of vectors. Applications of recombinant DNA technology. Gene therapy- Various types of gene transfer techniques, clinical applications and recent advances in gene therapy. Gene mapping and cloning of disease gene. Genetic variation and its role in health/ pharmacology Polymorphisms affecting drug metabolism Genetic variation in drug transporters Genetic variation in G protein coupled receptors Applications of proteomics science: Genomics, proteomics, metabolomics, functionomics, nutrigenomics Immunotherapeutics Types of immunotherapeutics, humanisation antibody therapy, Immunotherapeutics in clinical practice.

UNIT – 4: Clinical Research and Pharmacovigilance (15H)

Regulatory Perspectives of Clinical Trials - Origin and Principles of International Conference on Harmonization - Good Clinical Practice (ICH-GCP) guidelines Ethical Committee: Institutional Review Board, Ethical Guidelines for Biomedical Research and Human Participant Schedule Y, ICMR Informed Consent Process: Structure and content of an Informed Consent Process Ethical principles governing informed consent process. **Clinical Trials:** Types and Design Experimental Study- RCT and Non RCT, Observation Study: Cohort, Case Control, Cross sectional Clinical Trial Study Team Roles and responsibilities of Clinical Trial Personnel: Investigator, Study Coordinator, Sponsor, Contract Research Organization and its management .**Methods, ADR reporting and tools used in Pharmacovigilance:** International classification of diseases, International Nonproprietary names for drugs, Passive and Active surveillance, Comparative observational studies, Targeted clinical investigations and Vaccine safety surveillance. Spontaneous reporting system and Reporting to regulatory authorities, Guidelines for ADRs reporting. Argus, Aris G Pharmacovigilance, VigiFlow, Statistical methods for evaluating medication safety data.



References

1. Central Drugs Standard Control Organization- Good Clinical Practices, Guidelines for Clinical Trials on Pharmaceutical Products in India. New Delhi: Ministry of Health;2001.
2. International Conference on Harmonization of Technical requirements for registration of Pharmaceuticals for human use. ICH Harmonized Tripartite Guideline. Guideline for Good Clinical Practice.E6; May 1996.
3. Ethical Guidelines for Biomedical Research on Human Subjects 2000. Indian Council of Medical Research, New Delhi.
4. Textbook of Clinical Trials edited by David Machin, Simon Day and Sylvan Green, March 2005, John Wiley and Sons.
5. The Cell, A Molecular Approach. Geoffrey M Cooper.
6. Pharmacogenomics: The Search for Individualized Therapies. Edited by J. Licinio and M -L. Wong
7. Handbook of Cell Signaling (Second Edition) Edited by Ralph A. et.al
8. Molecular Pharmacology: From DNA to Drug Discovery. John Dickenson et.al
9. Basic Cell Culture protocols by CherilD.Helgason and Cindy L.Miller
10. Biological standardization by J.H. Burn D.J. Finney and I.G. Goodwin
11. Screening methods in Pharmacology by Robert Turner. A
12. Evaluation of drugs activities by Laurence and Bachrach
13. Methods in Pharmacology by Arnold Schwartz.
14. Fundamentals of experimental Pharmacology by M.N.Ghosh
15. Pharmacological experiment on intact preparations by Churchill Livingstone
16. Drug discovery and Evaluation by Vogel H.G.
17. Modern Pharmacology with Clinical Applications, Craig Charles R. & Stitzel Robert E., Lippincott Publishers.
18. Clinical Pharmacokinetics & Pharmacodynamics : Concepts and Applications – Malcolm Rowland and Thomas N.Tozer, Wolters Kluwer, Lippincott Williams & Wilkins Publishers.
19. Applied biopharmaceutics and Pharmacokinetics, Pharmacodynamics and Drug metabolism for industrial scientists. 16. Modern Pharmacology, Craig CR. & Stitzel RE, Little Brown & Company.

RECENT ADVANCES IN PHARMACEUTICS

UNIT -1 : Drug Delivery Systems (15H)

Sustained Release (SR) and Controlled Release (CR) formulations: Introduction & basic concepts, advantages/disadvantages, factors influencing, Physicochemical & biological approaches for SR/CR formulation, mechanism of drug delivery from SR/CR formulation. **Polymers:** Introduction, definition, classification, properties and application. **Rate Controlled Drug Delivery Systems:** Principles & Fundamentals, Types, Activation; Modulated Drug Delivery Systems; Mechanically activated, pH activated, Enzyme activated, and Osmotic activated Drug Delivery Systems Feedback regulated Drug Delivery Systems; Principles & Fundamentals & other drug delivery systems.

UNIT-2: Modern Pharmaceutics (15H)

Validation: Introduction to Pharmaceutical Validation, Scope & merits of Validation, Validation and calibration of Master plan, ICH & WHO guidelines for calibration and validation of equipments, Validation of specific dosage form, Types of validation. Government regulation, Manufacturing Process Model, URS, DQ, IQ, OQ & PQ of facilities.

GMP & Industrial Management - Objectives and policies of current good manufacturing practices, layout of buildings, services, equipments and their maintenance.

UNIT-3: Regulatory affairs(15H)

Regulatory requirement for product approval: API, biologics, novel, therapies obtaining NDA, ANDA for generic drugs ways and means of US registration for foreign drugs. CMC, post approval regulatory affairs.Regulation for combination products and medical devices.CTD and ECTD format, industry and FDA liaison. ICH - Guidelines of ICH-Q, S E, M. Regulatory requirements of EU, MHRA, TGA and ROW countries.

Non clinical drug development: Global submission of IND, NDA, ANDA. Investigation of medicinal products dossier, dossier (IMPD) and investigator brochure (IB).

UNIT-4: Molecular Pharmaceutics (15H)

Targeted Drug Delivery Systems: Concepts, Events and biological process involved in drug targeting.Tumor targeting and Brain specific delivery. **Targeting Methods:** Introduction preparation and evaluation. Nano Particles & Liposomes: Types, preparation and evaluation. **Micro Capsules / Micro Spheres:**Types, preparation and evaluation, Monoclonal Antibodies; preparation and application, preparation and application of Niosomes, Aquasomes, Phytosomes, Electrosomes. **Pulmonary Drug Delivery Systems :** Aerosols, propellents, Containers Types, preparation and evaluation, Intra Nasal Route Delivery systems; Types, preparation and evaluation.



Books recommended:

1. Chien, Y.W. (1992). Novel Drug Delivery Systems. 2nd Ed. revised and expanded. New York: Marcel Dekker.
2. Vyas, S.P., Khar R.K. (2002). Controlled Drug Delivery - concepts and advances. New Delhi: VallabhPrakashan.
3. Jain, N.K. (2001). Controlled and Novel Drug Delivery. 1st Ed. New Delhi: CBS Publishers & Distributors.
4. Shargel, L, Kaufer, I. (2005). Generic Drug Product Development, Solid Oral Dosage forms. Vol.143. New York: Marcel Dekker Inc.
5. Berry, I.R., Martin, R.P. (2008). The Pharmaceutical Regulatory Process. 2nd Ed., vol. 185. Drugs and the Pharmaceutical Sciences. New York: CRC press.
6. Guarino, R.A. (2004). New Drug Approval Process: Accelerating Global Registrations. 5th Ed., vol. 190. New York: Marcel Dekker Inc.
7. Lachmann, L., Libermann, H.A., Kanig, J.L. (2013). Theory and practice of industrial pharmacy. 4th Ed., Bombay: Varghese Publishing House.
8. Lachmann, L., Libermann, H.A., Joseph, B. (1989). Pharmaceutical dosage forms: Tablets. 2nd Ed., vol. I-III. New York: Marcel Dekker.
9. Lachmann, L., Libermann, H.A., Martin, M.R., Banker, G.S. (1996). Pharmaceutical dosage forms: disperse systems. vol. I-II, CRC press.
10. Avis, K.E., Lachmann, L., Libermann, H.A. (1984). Pharmaceutical dosage forms: parenteral medications. vol.1. New York: Marcel Dekker.

RESEARCH PROPOSAL PREPARATION AND SEMINAR PRESENTATION

UNIT I: Research Proposal (15H)

Developing a Research Proposal: Format of research proposal, individual research proposal and institutional proposal. Research Report: Format of the research report, style of writing the report, references and bibliography
Application and uses of common softwares in Pharmacy- GraphPad Prism, chemsketch, chemdraw. Auto-Doc 4.0, Design Expert, Mini-Tab 16 etc.

UNIT II: Literature Survey(45H)

Extensive survey of published literature relevant to the chosen topic of research which appeared in referred research journals of national and international repute, edited books, reference books, monographs, survey / study reports, dissertations / theses published in book form, and books / reports containing proceedings of national and international conferences / seminars / symposia. Students have to make a review on the given topic/proposal of research work.

There will be two seminar presentations (*viz.* presentation-I and presentation-II). The Ph.D. seminar courses require students to attend and deliver seminars as per their selected themes. Evaluation will be based on review preparation, participation and on the quality of the talk deliver.

RESEARCH AND PUBLICATION ETHICS

UNIT-1: PHILOSOPHY AND ETHICS (2 HRS)

1. Introduction to philosophy: definition, nature and scope, concept, branches 2. Ethics: definition, moral philosophy, nature of moral judgements and relations.

UNIT-2: SCIENTIFIC CONDUCT (4 HRS)

1. Ethics with respect to science and research 2. Intellectual honest and research integrity 3. Scientific misconducts: falsification, fabrication, and plagiarism. 4. Redundant publications: duplicate and overlapping publications, salami slicing 5. Selective reporting and misrepresentation of data.



UNIT-3: PUBLICATION ETHICS (6 HRS)

1. Publication ethics: definition, introduction and importance 2. Best practices/standards setting initiatives and guidelines: COPE, WAME, etc. 3. Conflicts of interest 4. Publication misconduct: definition, concept, problems that lead to unethical behaviour and vice versa, types 5. Violation of publication ethics, authorship and contributor-ship 6. Identification of publication misconduct, complaints and appeals 7. Predatory publishers and journals

UNIT-4: OPEN ACCESS PUBLISHING (6 HRS)

1. Open access publications and initiatives 2. SHERPA/RoMEO online recourse to check publisher copyright and self-archiving policies. 3. Software tool to identify predatory publications developed by SPPU 4. Journal finder/ journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer Journal Suggester, etc.

UNIT-5: PUBLICATION MISCONDUCT (6 HRS)

Group Discussions 1. Subject specific ethical issues, authorship 2. Conflicts of interest 3. Complaints and appeals: examples and fraud from India and abroad **Software tools** Use of plagiarism software like Turnitin, Urkund and other open source software tools.

UNIT-6: DATABASES AND RESEARCH METRICS (6 HRS)

Databases 1. Indexing detabeses 2. Citation detabases: Web of Science, Scopus, etc. **Research Metrics** : Impact Factor of journal as per journal citation report, SNIP, SJR, IPP, Cite Score. Metrics: h-index, g index, i10 index, altmetrics.

MASTER OF PHARMACY (PHARMACOLOGY)

Annexure II

REGULATIONS

“The Revised Regulations for the Master of Pharmacy (M. Pharm.) Degree Program - Credit Based Semester System (CBSS) of the Pharmacy Council of India, New Delhi”, has been adopted from The Gazette of India, No. 362, December 11, 2014.

1. Short Title and Commencement

These regulations shall be called as “The Revised Regulations for the Master of Pharmacy (M. Pharm.) Degree Program - Credit Based Semester System (CBSS) of the Pharmacy Council of India, New Delhi”. They came in effect from the Academic Year 2016-17. The regulations framed are subject to modifications from time to time by the authorities of the Central University of South Bihar.

2. Minimum qualification for admission

A Pass in the following examinations

a) B. Pharm Degree examination of an Indian university established by law in India from an institution approved by Pharmacy Council of India and has scored not less than 55 % of the maximum marks aggregate of 4 years of B. Pharm. (50 % for SC/ST/PH) preference for GPAT/GATE qualified candidate

b) Every student, selected for admission to post graduate pharmacy program in any PCI approved institution should have obtained registration with the State Pharmacy Council or should obtain the same within one month from the date of his/her admission, failing which the admission of the candidate shall be cancelled.

Note: It is mandatory to submit a migration certificate obtained from the respective university where the candidate had passed his/her qualifying degree (B. Pharm.)

3. Duration of the program

The program of study for M. Pharm shall extend over a period of four semesters (two academic years). The curricula and syllabi for the program shall be prescribed from time to time by Pharmacy Council of India, New Delhi.

4. Medium of instruction and examinations

Medium of instruction and examination shall be in English.

5. Attendance and progress

A candidate is required to put in at least 80% attendance in individual courses considering theory and practical separately. The candidate shall complete the prescribed course satisfactorily to be eligible to appear for the respective examinations.



6. Program/Course credit structure

As per the philosophy of Credit Based Semester System, certain quantum of academic work viz. theory classes, practical classes, seminars, assignments, etc. are measured in terms of credits. On satisfactory completion of the courses, a candidate earns credits. The amount of credit associated with a course is dependent upon the number of hours of instruction per week in that course. Similarly, the credit associated with any of the other academic, co/extra- curricular activities is dependent upon the quantum of work expected to be put in for each of these activities per week/per activity.

Credit assignment

Theory and Laboratory courses

Courses are broadly classified as Theory and Practical. Theory courses consist of lecture (L) and Practical (P) courses consist of hours spent in the laboratory. Credits (C) for a course is dependent on the number of hours of instruction per week in that course, and is obtained by using a multiplier of one (1) for lecture and a multiplier of half (1/2) for practical (laboratory) hours. Thus, for example, a theory course having four lectures per week throughout the semester carries a credit of 4. Similarly, a practical having four laboratory hours per week throughout semester carries a credit of 2. The contact hours of seminars, assignments and research work shall be treated as that of practical courses for the purpose of calculating credits. i.e., the contact hours shall be multiplied by 1/2. Similarly, the contact hours of journal club, research work presentations and discussions with the supervisor shall be considered as theory course and multiplied by 1.

Minimum credit requirements

The minimum credit points required for the award of M. Pharm degree is 95. However based on the credit points earned by the students under the head of co-curricular activities, a student shall earn a maximum of 100 credit points. These credits are divided into Theory courses, Practical, Seminars, Assignments, Research work, Discussions with the supervisor, journal club and Co-Curricular activities over the duration of four semesters. The credits are distributed semester-wise as shown in Table. Courses generally progress in sequence, building competencies and their positioning indicates certain academic maturity on the part of the learners. Learners are expected to follow the semester-wise schedule of courses given in the syllabus.

7. Academic work

A regular record of attendance both in Theory, Practical, Seminar, Assignment, journal club, Discussion with the supervisor, Research work presentation and Dissertation shall be maintained by the department /teaching staff of respective courses.



**M. Pharm in Pharmaceutics (MPH) Programme
First Year**

Semester I&II**Table 1: Course of study for M. Pharm. (Pharmacology)**

Course Code	Course	Credit Hours	Credit Points	Hrs./wk	Marks
Semester I					
MPL 101T	Modern Pharmaceutical Analytical Techniques	4	4	4	100
MPL 102T	Advanced Pharmacology-I	4	4	4	100
MPL 103T	Pharmacological and Toxicological Screening Methods-I	4	4	4	100
MPL 104T	Cellular and Molecular Pharmacology	4	4	4	100
MPL 105P	Pharmacology Practical I	12	6	12	150
-	Seminar/Assignment	7	4	7	100
Total		35	26	35	650
Semester II					
MPL 201T	Advanced Pharmacology II	4	4	4	100
MPL 202T	Pharmacological and Toxicological Screening Methods-II	4	4	4	100
MPL 203T	Principles of Drug Discovery	4	4	4	100
MPL 204T	Experimental Pharmacology practical- II	4	4	4	100
MPL 205P	Pharmacology Practical II	12	6	12	150
-	Seminar/Assignment	7	4	7	100
Total		35	26	35	650

Total Credits: Semester I&II–26Credits each

The guide will be chosen based on mutual consent of the student and faculty member. After selection of the research guide the student will formulate his/her Seminar topic (MPL 106 & MPL 206).

Second Year**Semester III:** Course of study for M. Pharm. III Semester

Course Code	Course	Credit Hours	Credit Points
MRM 301T	Research Methodology and Biostatistics*	4	4
-	Journal club	1	1
-	Discussion / Presentation (Proposal Presentation)	2	2
-	Research Work	28	14
Total		35	21

**Total Credits: Semester III–21 Credits**

Course Code	Course	Credit Hours	Credit Points
-	Journal Club	1	1
-	Research Work	31	16
-	Discussion/Final Presentation	3	3
Total		35	20

Total Credits: Semester IV–20 Credits**Semester IV: Course of study for M. Pharm. IV Semester**

Semester	Credit Points
I	26
II	26
III	21
IV	20
Co-curricular Activities (Attending Conference, Scientific Presentations and Other Scholarly Activities)	Minimum=02 Maximum=07*
Total Credit Points	Minimum=95 Maximum=100*

Total Credits: Semester I- IV–95 Credits

*Credit Points for Co-curricular Activities

Guidelines for Awarding Credit Points for Co-curricular Activities

Name of the Activity	Maximum Credit Points Eligible / Activity
Participation in National Level Seminar/Conference/Workshop/Symposium/ Training Programs (related to the specialization of the student)	01
Participation in international Level Seminar/Conference/Workshop/Symposium/ Training Programs (related to the specialization of the student)	02
Academic Award/Research Award from State Level/National Agencies	01
Academic Award/Research Award from International Agencies	02
Research / Review Publication in National Journals (Indexed in Scopus / Web of Science)	01
Research / Review Publication in International Journals (Indexed in Scopus / Web of Science)	02

Note: International Conference: Held outside India

The research work will start from this Semester. The students will submit progress report and present seminar(s) based on the progress of his/her research work that should be attended by all students in the department, the research guide, the HOD and other faculty of the Department. The student will be evaluated by all faculty members.



Schemes for internal assessments and end semester

Course Code	Course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
SEMESTER I								
MPL101T	Modern Pharmaceutical Analytical Techniques	10	15	1 Hr	25	75	3 Hrs	100
MPL102T	Advanced Pharmacology-I	10	15	1 Hr	25	75	3 Hrs	100
MPL103T	Pharmacological and Toxicological Screening Methods-I	10	15	1 Hr	25	75	3 Hrs	100
MPL104T	Cellular and Molecular Pharmacology	10	15	1 Hr	25	75	3 Hrs	100
MPL105P	Experimental Pharmacology - I	20	30	6 Hrs	50	100	6 Hrs	150
-	Seminar /Assignment	-	-	-	-	-	-	100
Total								650

Course Code	Course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
SEMESTER III								
MRM301T	Research Methodology and Biostatistics*	10	15	1 Hr	25	75	3 Hrs	100
-	Journal club	-	-	-	25	-	-	25
-	Discussion / Presentation (Proposal Presentation)	-	-	-	50	-	-	50
-	Research work*	-	-	-	-	350	1 Hr	350
Total								525



**Schemes for internal assessments and end semester examinations
(Semester III& IV)**

SEMESTER IV								
-	Journal club	-	-	-	25	-	-	25
-	Discussion / Presentation (Proposal Presentation)	-	-	-	75	-	-	75
-	Research work and Colloquium	-	-	-	-	400	1 Hr	400
Total								500

First Year Semester I - THEORY

MPL 101T, Title of the Course: Modern Pharmaceutical Analytical Techniques

UV-visible spectroscopy: Introduction, Theory, Laws, Instrumentation associated with UV-Visible spectroscopy, Choice of solvents and solvent effect and Applications of UV Visible spectroscopy.

Infra-red spectroscopy: Theory, Modes of Molecular vibrations, Sample handling, Instrumentation of Dispersive and Fourier -Transform IR Spectrometer, Factors affecting vibrational frequencies and Applications of IR spectroscopy.

Spectrofluorimetry: Theory of Fluorescence, Factors affecting fluorescence, Quenchers, Instrumentation and Applications of fluorescence spectrophotometer.

Flame emission spectroscopy and Atomic absorption spectroscopy: Principle, Instrumentation, Interferences and Applications.

NMR spectroscopy: Quantum numbers and their role in NMR, Principle, Instrumentation, Solvent requirement in NMR, Relaxation process, NMR signals in various compounds, Chemical shift, Factors influencing chemical shift, Spin-Spin coupling, Coupling constant, Nuclear magnetic double resonance, Brief outline of principles of FT-NMR and ¹³C NMR. Applications of NMR spectroscopy.

Mass Spectroscopy: Principle, Theory, Instrumentation of Mass Spectroscopy, Different types of ionization like electron impact, chemical, field, FAB and MALDI, APCI, ESI, APPI Analyzers of Quadrupole and Time of Flight, Mass fragmentation and its rules, Meta stable ions, Isotopic peaks and Applications of Mass spectroscopy

Chromatography: Principle, apparatus, instrumentation, chromatographic parameters, factors affecting resolution and applications of the following: a) Paper chromatography b) Thin Layer chromatography c) Ion exchange chromatography d) Column chromatography e) Gas chromatography f) High Performance Liquid chromatography g) Affinity chromatography

Electrophoresis: Principle, Instrumentation, Working conditions, factors affecting separation and applications of the following: a) Paper electrophoresis b) Gel electrophoresis c) Capillary electrophoresis d) Zone electrophoresis e) Moving boundary electrophoresis f) Iso electric focusing

X ray Crystallography: Production of X rays, Different X ray diffraction methods, Bragg's law, Rotating crystal technique, X-ray powder technique, Types of crystals and applications of X-ray diffraction.

Immunological assays: RIA (Radio immuno assay), ELISA, Bioluminescence assays.

Potentiometry: Principle, working, Ion selective electrodes and application of potentiometry.

Thermal Techniques: Principle, thermal transitions and Instrumentation (Heat flux and power-compensation and designs), Modulated DSC, Hyper DSC, experimental parameters (sample preparation, experimental conditions, calibration, heating and cooling rates, resolution, source of errors) and their influence, advantage and disadvantages, pharmaceutical applications.



Differential Thermal Analysis (DTA): Principle, instrumentation and advantage and disadvantages, pharmaceutical applications, derivative differential thermal analysis (DDTA). **TGA:** Principle, instrumentation, factors affecting results, advantage and disadvantages, pharmaceutical applications.

REFERENCES

1. Spectrometric Identification of Organic compounds - Robert M Silverstein, Sixth edition, John Wiley & Sons, 2004.
2. Principles of Instrumental Analysis - Douglas A Skoog, F. James Holler, Timothy A. Nieman, 5th edition, Eastern press, Bangalore, 1998.
3. Instrumental methods of analysis – Willards, 7th edition, CBS publishers.
4. Practical Pharmaceutical Chemistry – Beckett and Stenlake, Vol II, 4th edition, CBS Publishers, New Delhi, 1997.
5. Organic Spectroscopy - William Kemp, 3rd edition, ELBS, 1991.
6. Quantitative Analysis of Drugs in Pharmaceutical formulation - P D Sethi, 3rd Edition, CBS Publishers, New Delhi, 1997.
7. Pharmaceutical Analysis - Modern Methods – Part B - J W Munson, Vol 11, Marcel. Dekker Series
8. Spectroscopy of Organic Compounds, 2nd edn., P.S/Kalsi, Wiley eastern Ltd., Delhi. 9. Textbook of Pharmaceutical Analysis, KA.Connors, 3rd Edition, John Wiley & Sons, 1982.

MPL 102T, Title of the Course: Advanced Pharmacology – I

1. General Pharmacology

- a. **Pharmacokinetics:** The dynamics of drug absorption, distribution, biotransformation and elimination. Concepts of linear and non-linear compartment models. Significance of Protein binding.
- b. **Pharmacodynamics:** Mechanism of drug action and the relationship between drug concentration and effect. Receptors, structural and functional families of receptors, quantitation of drug receptors interaction and elicited effects.

2 Neurotransmission

- a. General aspects and steps involved in neurotransmission.
- b. Neurohumoral transmission in autonomic nervous system (Detailed study about neurotransmitters- Adrenaline and Acetyl choline).
- c. Neurohumoral transmission in central nervous system (Detailed study about neurotransmitters- histamine, serotonin, dopamine, GABA, glutamate and glycine].
- d. Non adrenergic non cholinergic transmission (NANC). Cotransmission

Systemic Pharmacology

A detailed study on pathophysiology of diseases, mechanism of action, pharmacology and toxicology of existing as well as novel drugs used in the following systems

Autonomic Pharmacology

Parasympathomimetics and lytics, sympathomimetics and lytics, agents affecting neuromuscular junction

3 Central nervous system Pharmacology

General and local anesthetics Sedatives and hypnotics, drugs used to treat anxiety. Depression, psychosis, mania, epilepsy, neurodegenerative diseases. Narcotic and non-narcotic analgesics.

4 Cardiovascular Pharmacology

Diuretics, antihypertensives, antiischemics, anti- arrhythmics, drugs for heart failure and hyperlipidemia. Hematinics, coagulants, anticoagulants, fibrinolytics and antiplatelet drugs

5 Autocoid Pharmacology

The physiological and pathological role of Histamine, Serotonin, Kinins Prostaglandins Opioid autocoids. Pharmacology of antihistamines, 5HT antagonists.

REFEERENCES

1. The Pharmacological Basis of Therapeutics, Goodman and Gillman's
2. Principles of Pharmacology. The Pathophysiologic basis of drug Therapy by David E Golan, Armen H, Tashjian Jr, Ehrin J, Armstrong, April W, Armstrong, Wolters, Kluwer-Lippincott Williams & Wilkins Publishers.
3. Basic and Clinical Pharmacology by B.G Katzung
4. Hand book of Clinical Pharmacokinetics by Gibaldi and Prescott.
5. Applied biopharmaceutics and Pharmacokinetics by Leon Shargel and Andrew B.C.Yu.
6. Graham Smith. Oxford textbook of Clinical Pharmacology.



7. Avery Drug Treatment
8. Dipiro Pharmacology, Pathophysiological approach.
9. Green Pathophysiology for Pharmacists
10. Robbins & Cortan Pathologic Basis of Disease, 9th Ed. (Robbins Pathology)
11. A Complete Textbook of Medical Pharmacology by Dr. S.K. Srivastava published by APC Avichal Publishing Company
12. KD. Tripathi. Essentials of Medical Pharmacology.
13. Modern Pharmacology with Clinical Applications, Craig Charles R. & Stitzel Robert E., Lippincott Publishers.
14. Clinical Pharmacokinetics & Pharmacodynamics : Concepts and Applications – Malcolm Rowland and Thomas N. Tozer, Wolters Kluwer, Lippincott Williams & Wilkins Publishers.
15. Applied biopharmaceutics and Pharmacokinetics, Pharmacodynamics and Drug metabolism for industrial scientists.
16. Modern Pharmacology, Craig CR. & Stitzel RE, Little Brown & Company

MPL 103T, Title of the Course: Pharmacological and Toxicological Evaluation - I

1 Laboratory Animals

Common laboratory animals: Description, handling and applications of different species and strains of animals. Transgenic animals: Production, maintenance and applications Anaesthesia and euthanasia of experimental animals. Maintenance and breeding of laboratory animals. CPCSEA guidelines to conduct experiments on animals Good laboratory practice. Bioassay-Principle, scope and limitations and methods

2 Preclinical screening of new substances for the pharmacological activity using in vivo, in vitro, and other possible animal alternative models.

- 2.1 General principles of preclinical screening. CNS Pharmacology: behavioral and muscle coordination, CNS stimulants and depressants, anxiolytics, anti-psychotics, anti epileptics and nootropics. Drugs for neurodegenerative diseases like Parkinsonism, Alzheimers and multiple sclerosis. Drugs acting on Autonomic Nervous System.
 - 2.2 Respiratory Pharmacology: anti-asthmatics, drugs for COPD and anti allergics.
 - 2.3 Reproductive Pharmacology: Aphrodisiacs and antifertility agents Analgesics, antiinflammatory and antipyretic agents. Gastrointestinal drugs: anti ulcer, anti -emetic, antidiarrheal and laxatives.
 - 2.4 Cardiovascular Pharmacology: antihypertensives, antiarrhythmics, antianginal, antiatherosclerotic agents and diuretics. Drugs for metabolic disorders like anti-diabetic, antidyslipidemic agents. Anti- cancer agents. Hepatoprotective screening methods.
 - 2.5 Immunomodulators, Immunosuppressants and immunostimulants
- #### **3. General principles of immunoassay:** theoretical basis and optimization of immunoassay, heterogeneous and homogenous immunoassay systems. Immunoassay methods evaluation; protocol outline, objectives and preparation. Immunoassay for digoxin and insulin Limitations of animal experimentation and alternate animal experiments. Extrapolation of in vitro data to preclinical and preclinical to humans

REFERENCES

1. Biological standardization by J.H. Burn D.J. Finney and I.G. Goodwin
2. Screening methods in Pharmacology by Robert Turner. A
3. Evaluation of drugs activities by Laurence and Bachrach
4. Methods in Pharmacology by Arnold Schwartz.
5. Fundamentals of experimental Pharmacology by M.N. Ghosh
6. Pharmacological experiment on intact preparations by Churchill Livingstone
7. Drug discovery and Evaluation by Vogel H.G.
8. Experimental Pharmacology by R.K. Goyal.
9. Preclinical evaluation of new drugs by S.K. Guta
10. Handbook of Experimental Pharmacology, SK. Kulkarni
11. Practical Pharmacology and Clinical Pharmacy, SK. Kulkarni, 3rd Edition.
12. David R. Gross. Animal Models in Cardiovascular Research, 2nd Edition, Kluwer Academic Publishers, London, UK.
13. Screening Methods in Pharmacology, Robert A. Turner.
14. Rodents for Pharmacological Experiments, Dr. Tapan Kumar Chatterjee.
15. Practical Manual of Experimental and Clinical Pharmacology by Bikash Medhi (Author), Ajay Prakash (Author)

**MPL 104T, Title of the Course: Cellular and Molecular Pharmacology****1. Cell biology**

Structure and functions of cell and its organelles Genome organization. Gene expression and its regulation, importance of siRNA and micro RNA, gene mapping and gene sequencing Cell cycles and its regulation. Cell death– events, regulators, intrinsic and extrinsic pathways of apoptosis. Necrosis and autophagy.

2 Cell signaling

Intercellular and intracellular signaling pathways. Classification of receptor family and molecular structure ligand gated ion channels; G-protein coupled receptors, tyrosine kinase receptors and nuclear receptors. Secondary messengers: cyclic AMP, cyclic GMP, calcium ion, inositol 1,4,5-trisphosphate, (IP3), NO, and diacylglycerol. Detailed study of following intracellular signaling pathways: cyclic AMP signaling pathway, mitogen-activated protein kinase (MAPK) signaling, Janus kinase (JAK)/signal transducer and activator of transcription (STAT) signaling pathway.

3 Principles and applications of genomic and proteomic tools

DNA electrophoresis, PCR (reverse transcription and real time), Gene sequencing, micro array technique, SDS page, ELISA and western blotting, Recombinant DNA technology and gene therapy Basic principles of recombinant DNA technology-Restriction enzymes, various types of vectors. Applications of recombinant DNA technology. Gene therapy- Various types of gene transfer techniques, clinical applications and recent advances in gene therapy.

4 Pharmacogenomics

Gene mapping and cloning of disease gene. Genetic variation and its role in health/ pharmacology Polymorphisms affecting drug metabolism Genetic variation in drug transporters Genetic variation in G protein coupled receptors Applications of proteomics science: Genomics, proteomics, metabolomics, functionomics, nutrigenomics Immunotherapeutics Types of immunotherapeutics, humanisation antibody therapy, Immunotherapeutics in clinical practice

5 a. Cell culture techniques

Basic equipments used in cell culture lab. Cell culture media, various types of cell culture, general procedure for cell cultures; isolation of cells, subculture, cryopreservation, characterization of cells and their application. Principles and applications of cell viability assays, glucose uptake assay, Calcium influx assays Principles and applications of flow cytometry

b. Biosimilars**REFERENCES:**

1. The Cell, A Molecular Approach. Geoffrey M Cooper.
2. Pharmacogenomics: The Search for Individualized Therapies. Edited by J. Licinio and M -L. Wong
3. Handbook of Cell Signaling (Second Edition) Edited by Ralph A. et.al
4. Molecular Pharmacology: From DNA to Drug Discovery. John Dickenson et.al
5. Basic Cell Culture protocols by CherilD.Helgason and Cindy L.Miller
6. Basic Cell Culture (Practical Approach) by J. M. Davis (Editor)
7. Animal Cell Culture: A Practical Approach by John R. Masters (Editor)
8. Current protocols in molecular biology vol I to VI edited by Frederick M.Ausuvet et al.

Practical**MPL 105P, Pharmacological Practical - I**

1. Analysis of pharmacopoeial compounds and their formulations by UV Vis spectrophotometer
2. Simultaneous estimation of multi component containing formulations by UV spectrophotometry
3. Experiments based on HPLC
4. Experiments based on Gas Chromatography
5. Estimation of riboflavin/quinine sulphate by fluorimetry
6. Estimation of sodium/potassium by flame photometry

Handling of laboratory animals.

1. Various routes of drug administration.
2. Techniques of blood sampling, anesthesia and euthanasia of experimental animals.
3. Functional observation battery tests (modified Irwin test)
4. Evaluation of CNS stimulant, depressant, anxiogenics and anxiolytic, anticonvulsant activity. 5. Evaluation of analgesic, anti-inflammatory, local anesthetic, mydriatic and miotic activity.



6. Evaluation of diuretic activity.
7. Evaluation of antiulcer activity by pylorus ligation method.
8. Oral glucose tolerance test.
9. Isolation and identification of DNA from various sources (Bacteria, Cauliflower, onion, Goat liver).
10. Isolation of RNA from yeast

11. Estimation of proteins by Bradford/Lowry's in biological samples.
12. Estimation of RNA/DNA by UV Spectroscopy
13. Gene amplification by PCR. 14. Protein quantification Western Blotting.
15. Enzyme based in-vitro assays (MPO, AChEs, α amylase, α glucosidase).
16. Cell viability assays (MTT/Trypan blue/SRB).
17. DNA fragmentation assay by agarose gel electrophoresis.
18. DNA damage study by Comet assay.
19. Apoptosis determination by fluorescent imaging studies.
20. Pharmacokinetic studies and data analysis of drugs given by different routes of administration using softwares
21. Enzyme inhibition and induction activity
22. Extraction of drug from various biological samples and estimation of drugs in biological fluids using different analytical techniques (UV)
23. Extraction of drug from various biological samples and estimation of drugs in biological fluids using different analytical techniques (HPLC)

REFERENCES

1. CPCSEA, OECD, ICH, USFDA, Schedule Y, EPA guidelines,
2. Fundamentals of experimental Pharmacology by M.N.Ghosh
3. Handbook of Experimental Pharmacology by S.K. Kulkarni.
4. Drug discovery and Evaluation by Vogel H.G.
5. Spectrometric Identification of Organic compounds - Robert M Silverstein,
6. Principles of Instrumental Analysis - Douglas A Skoog, F. James Holler, Timothy A. Nieman,
7. Vogel's Text book of quantitative chemical analysis - Jeffery, Basset, Mendham, Denney,
8. Basic Cell Culture protocols by Cheril D. Helgason and Cindy L.Mille
9. Basic Cell Culture (Practical Approach) by J. M. Davis (Editor)
10. Animal Cell Culture: A Practical Approach by John R. Masters (Editor)
11. Practical Manual of Experimental and Clinical Pharmacology by Bikash Medhi(Author), Ajay Prakash (Author) Jaypee brothers' medical publishers Pvt. Ltd

MPL106, Title of the Course: Research Seminar-I/Assignment

The student in discussion with his/her research guide will choose a topic related to his/her area of research and will deliver a Seminar at a date and time fixed by the department, that should be attended by all students in the department, the research guide, the HOD and other faculty of the Department. The Seminar will be of 25 minutes duration, followed by a discussion. The student will be evaluated by all faculty members under the following parameters: coverage of literature, presentation skills, defence and the seminar report (the report should be handed in by the student the next day after the delivery of the seminar and a copy of the seminar report should be housed in the department). The final marks will be given by the faculty.

Semester II

Theory

MPL 201T, Title of the Course: Advanced Pharmacology – II

- 1 Endocrine Pharmacology** Molecular and cellular mechanism of action of hormones such as growth hormone, prolactin, thyroid, insulin and sex hormones Anti-thyroid drugs, Oral hypoglycemic agents, Oral contraceptives, Corticosteroids. Drugs affecting calcium regulation
- 2 Chemotherapy**
 - 2.1** Cellular and molecular mechanism of actions and resistance of antimicrobial agents such as β -lactams, aminoglycosides, quinolones, Macrolide antibiotics. Antifungal, and anti-TB drugs.
 - 2.2** Antiviral Therapy with special reference to Emerging viral infections including COVID19.
 - 2.3** Drugs used in Protozoal Infections Drugs used in the treatment of Helminthiasis
 - 2.4** Chemotherapy of cancer Immunopharmacology Cellular and biochemical mediators of inflammation and immune response. Allergic or hypersensitivity reactions. Pharmacotherapy of asthma and COPD.
 - 2.5** Immunosuppressants and Immunostimulants
 - 2.6** Novel Pharmacological Targets for Cancer Therapy.
- 3 GIT Pharmacology**
 - 3.1** Antiulcer drugs, Prokinetics, antiemetics, anti-diarrheals and drugs for constipation and irritable bowel syndrome.



- 3.2 Novel Targets for Gastric ulcer treatment
4. **Chronopharmacology** Biological and circadian rhythms, applications of chronotherapy in various diseases like cardiovascular disease, diabetes, asthma and peptic ulcer
5. **Free radical Pharmacology:** Generation of free radicals, role of free radicals in etiopathology of various diseases such as diabetes, neurodegenerative diseases.
- 5.1 Pharmacology of important anti-oxidants in treatment of Alzheimer's disease, Parkinson's disease, Cancer and Diabetes mellitus.

REFERENCES

1. The Pharmacological basis of therapeutics- Goodman and Gill man's
2. Principles of Pharmacology. The Pathophysiologic basis of drug therapy by David E Golan et al.
3. Basic and Clinical Pharmacology by B.G -Katzung
4. Pharmacology by H.P. Rang and M.M. Dale.
5. Hand book of Clinical Pharmacokinetics by Gibaldi and Prescott.
6. Text book of Therapeutics, drug and disease management by E T. Herfindal and Gourley.
7. Applied biopharmaceutics and Pharmacokinetics by Leon Shargel and Andrew B.C.Yu.
8. Handbook of Essential Pharmacokinetics, Pharmacodynamics and Drug Metabolism for Industrial Scientists
9. Robbins & Cortan Pathologic Basis of Disease, 9th Ed. (Robbins Pathology)
10. A Complete Textbook of Medical Pharmacology by Dr. S.K Srivastava published by APC Avichal Publishing Company.
11. KD.Tripathi. Essentials of Medical Pharmacology
12. Principles of Pharmacology. The Pathophysiologic basis of drug Therapy by David E Golan, Armen H, Tashjian Jr, Ehrin J, Armstrong, April W, Armstrong, Wolters, Kluwer-Lippincott Williams & Wilkins Publishers

MPL 202T, Title of the Course: Pharmacological and Toxicological Evaluation-II

1. Basic definition and types of toxicology (general, mechanistic, regulatory and descriptive) Regulatory guidelines for conducting toxicity studies OECD, ICH, EPA and Schedule Y OECD principles of Good laboratory practice (GLP) History, concept and its importance in drug development
2. Acute, sub-acute and chronic- oral, dermal and inhalational studies as per OECD guidelines. Acute eye irritation, skin sensitization, dermal irritation & dermal toxicity studies. Test item characterization- importance and methods in regulatory toxicology studies
3. Reproductive toxicology studies, Male reproductive toxicity studies, female reproductive studies (segment I and segment III), teratogenicity studies (segment II) Genotoxicity studies (Ames Test, in vitro and in vivo Micronucleus and Chromosomal aberrations studies) In vivo carcinogenicity studies
4. IND enabling studies (IND studies)- Definition of IND, importance of IND, industry perspective, list of studies needed for IND submission. Safety pharmacology studies- origin, concepts and importance of safety pharmacology. Tier1- CVS, CNS and respiratory safety pharmacology, HERG assay. Tier2- GI, renal and other studies
5. Toxicokinetics- Toxicokinetic evaluation in preclinical studies, saturation kinetics Importance and applications of toxicokinetic studies. Alternative methods to animal toxicity testing.

REFERENCES

1. Hand book on GLP, Quality practices for regulated non-clinical research and development (<http://www.who.int/tdr/publications/documents/glphandbook.pdf>).
2. Schedule Y Guideline: drugs and cosmetics (second amendment) rules, 2005, ministry of health and family welfare (department of health) New Delhi
3. Drugs from discovery to approval by Rick NG.
4. Animal Models in Toxicology, 3rd Edition, Lower and Bryan
5. OECD test guidelines.
6. Principles of toxicology by Karen E. Stine, Thomas M. Brown.
7. Guidance for Industry M3(R2) Nonclinical Safety Studies for the Conduct of Human Clinical Trials and Marketing Authorization for Pharmaceuticals (<http://www.fda.gov/downloads/drugs/guidancecomplianceregulatoryinformation/guidances/ucm073246.pdf>)

MPL 203T, Title of the Course: Principles of Drug Discovery

1. An overview of modern drug discovery process: Target identification, target validation, lead identification and lead Optimization. Economics of drug discovery. Target Discovery and validation-Role of Genomics, Proteomics and Bioinformatics. Role of Nucleic acid microarrays, Protein microarrays, Antisense technologies, siRNAs, antisense oligonucleotides, Zinc finger proteins. Role of transgenic animals in target validation.



- 2 Lead Identification- combinatorial chemistry & high throughput screening, in silico lead discovery techniques, Assay development for hit identification. Protein structure Levels of protein structure, Domains, motifs, and folds in protein structure. Computational prediction of protein structure: Threading and homology modeling methods. Application of NMR and X-ray crystallography in protein structure prediction
- 3 Rational Drug Design Traditional vs rational drug design, Methods followed in traditional drug design, High throughput screening, Concepts of Rational Drug Design, Rational Drug Design Methods: Structure and Pharmacophore based approaches Virtual Screening techniques: Drug likeness screening, Concept of pharmacophore mapping and pharmacophore based Screening
- 4 Molecular docking: Rigid docking, flexible docking, manual docking; Docking based screening. De novo drug design. Quantitative analysis of Structure Activity Relationship History and development of QSAR, SAR versus QSAR, Physicochemical parameters, Hansch analysis, Fee Wilson analysis and relationship between them
- 5 QSAR Statistical methods – regression analysis, partial least square analysis (PLS) and other multivariate statistical methods. 3D-QSAR approaches like COMFA and COMSIA Prodrug design-Basic concept, Prodrugs to improve patient acceptability, Drug solubility, Drug absorption and distribution, site specific drug delivery and sustained drug action. Rationale of prodrug design and practical consideration of prodrug design.

REFERENCES

1. MouldySioud. Target Discovery and Validation Reviews and Protocols: Volume 2 Emerging Molecular Targets and Treatment Options. 2007 Humana Press Inc.
2. Darryl León. Scott MarkellIn. Silico Technologies in Drug Target Identification and Validation. 2006 by Taylor and Francis Group, LLC.
3. Johanna K. DiStefano. Disease Gene Identification. Methods and Protocols. Springer New York Dordrecht Heidelberg London.
4. Hugo Kubiny. QSAR: Hansch Analysis and Related Approaches. Methods and Principles in Medicinal Chemistry. Publisher Wiley-VCH
5. Klaus Gubernator, Hans-Joachim Böhm. Structure-Based Ligand Design. Methods and Principles in Medicinal Chemistry. Publisher Wiley-VCH
6. Abby L .Parrill. M . Rami Reddy. Rational Drug Design. Novel Methodology and Practical Applications. ACS Symposium Series; American Chemical Society: Washington, DC, 1999.
7. J. Rick Turner. New drug development design, methodology and, analysis. John Wiley & Sons, Inc., New Jersey.

MPL 204T, Clinical Research and Pharmacovigilance

- 1 **Regulatory Perspectives of Clinical Trials:** Origin and Principles of International Conference on Harmonization - Good Clinical Practice (ICH-GCP) guidelines Ethical Committee: Institutional Review Board, Ethical Guidelines for Biomedical Research and Human Participant Schedule Y, ICMR Informed Consent Process: Structure and content of an Informed Consent Process Ethical principles governing informed consent process
- 2 **Clinical Trials:** Types and Design Experimental Study- RCT and Non RCT, Observation Study: Cohort, Case Control, Cross sectional Clinical Trial Study Team Roles and responsibilities of Clinical Trial Personnel: Investigator, Study Coordinator, Sponsor, Contract Research Organization and its management
- 3 **Clinical Trial Documentation-** Guidelines to the preparation of documents, Preparation of protocol, Investigator Brochure, Case Report Forms, Clinical Study Report Clinical Trial Monitoring Safety Monitoring in CT Adverse Drug Reactions: Definition and types. Detection and reporting methods. Severity and seriousness assessment. Predictability and preventability assessment, Management of adverse drug reactions; Terminologies of ADR.
- 4 **Basic aspects, terminologies and establishment of pharmacovigilance** History and progress of pharmacovigilance, Significance of safety monitoring, Pharmacovigilance in India and international aspects, WHO international drug monitoring programme, WHO and Regulatory terminologies of ADR, evaluation of medication safety, Establishing pharmacovigilance centres in Hospitals, Industry and National programmes related to pharmacovigilance. Roles and responsibilities in Pharmacovigilance
- 5 **Methods, ADR reporting and tools used in Pharmacovigilance** International classification of diseases, International Nonproprietary names for drugs, Passive and Active surveillance, Comparative observational studies, Targeted clinical investigations and Vaccine safety surveillance. Spontaneous reporting system and Reporting to regulatory authorities, Guidelines for ADRs reporting. Argus, Aris G Pharmacovigilance, VigiFlow, Statistical methods for evaluating medication safety data.
- 6 **Pharmacoepidemiology, pharmacoconomics, safety pharmacology**

**REFERENCES**

1. Central Drugs Standard Control Organization- Good Clinical Practices, Guidelines for Clinical Trials on Pharmaceutical Products in India. New Delhi: Ministry of Health;2001.
2. International Conference on Harmonization of Technical requirements for registration of Pharmaceuticals for human use. ICH Harmonized Tripartite Guideline. Guideline for Good Clinical Practice.E6; May 1996.
3. Ethical Guidelines for Biomedical Research on Human Subjects 2000. Indian Council of Medical Research, New Delhi.
4. Textbook of Clinical Trials edited by David Machin, Simon Day and Sylvan Green, March 2005, John Wiley and Sons.
5. Clinical Data Management edited by R K Rondels, S A Varley, C F Webbs. Second Edition, Jan 2000, Wiley Publications.
6. Handbook of clinical Research. Julia Lloyd and Ann Raven Ed. Churchill Livingstone.
7. Principles of Clinical Research edited by Giovanna di Ignazio, Di Giovanna and Haynes.

Practical**MPL 205P Pharmacology Practical - II**

1. To record the DRC of agonist using suitable isolated tissues preparation.
2. To study the effects of antagonist/potentiating agents on DRC of agonist using suitable isolated tissue preparation.
3. To determine to the strength of unknown sample by matching bioassay by using suitable tissue preparation.
4. To determine to the strength of unknown sample by interpolation bioassay by using suitable tissue preparation
5. To determine to the strength of unknown sample by bracketing bioassay by using suitable tissue preparation
6. To determine to the strength of unknown sample by multiple point bioassay by using suitable tissue preparation.
7. Estimation of PA2 values of various antagonists using suitable isolated tissue preparations.
8. To study the effects of various drugs on isolated heart preparations
9. Recording of rat BP, heart rate and ECG.
10. Recording of rat ECG
11. Drug absorption studies by averted rat ileum preparation.
12. Acute oral toxicity studies as per OECD guidelines.
13. Acute dermal toxicity studies as per OECD guidelines.
14. Repeated dose toxicity studies- Serum biochemical, haematological, urine analysis, functional observation tests and histological studies.
15. Drug mutagenicity study using mice bone-marrow chromosomal aberration test.
16. Protocol design for clinical trial.(3 Nos.)
17. Design of ADR monitoring protocol.
18. In-silico docking studies. (2 Nos.) 19. In-silico pharmacophore based screening. 20. In-silico QSAR studies.
21. ADR reporting

REFERENCES

1. Fundamentals of experimental Pharmacology-by M.N.Ghosh
2. Hand book of Experimental Pharmacology-S.K.Kulakarni
3. Text book of in-vitro practical Pharmacology by Ian Kitchen
4. Bioassay Techniques for Drug Development by Atta-ur-Rahman, Iqbal choudhary and William Thomsen
5. Applied biopharmaceutics and Pharmacokinetics by Leon Shargel and Andrew B.C.Yu.
6. Handbook of Essential Pharmacokinetics, Pharmacodynamics and Drug Metabolism for Industrial Scientists.

Second Year**MPL 301 Title of the Course: Research Methodology & Biostatistics****UNIT – I**

General Research Methodology: Research, objective, requirements, practical difficulties, review of literature, study design, types of studies, strategies to eliminate errors/bias, controls, randomization, crossover design, placebo, blinding techniques.

UNIT – II

Biostatistics: Definition, application, sample size, importance of sample size factors influencing sample size, dropouts, statistical tests of significance, type of significance tests, parametric tests(students “t” test, ANOVA, Correlation coefficient, regression), non-parametric tests (wilcoxon rank tests, analysis of variance, correlation, chi square test), null hypothesis, P values, degree of freedom, interpretation of P values.

**UNIT – III**

Medical Research: History, values in medical ethics, autonomy, beneficence, non-maleficence, double effect, conflicts between autonomy and beneficence/non-maleficence, euthanasia, informed consent, confidentiality, criticisms of orthodox medical ethics, importance of communication, control resolution, guidelines, ethics committees, cultural concerns, truth telling, online business practices, conflicts of interest, referral, vendor relationships, treatment of family members, sexual relationships, fatality.

UNIT – IV

CPCSEA guidelines for laboratory animal facility: Goals, veterinary care, quarantine, surveillance, diagnosis, treatment and control of disease, personal hygiene, location of animal facilities to laboratories, anesthesia, euthanasia, physical facilities, environment, animal husbandry, record keeping, SOPs, personnel and training, transport of lab animals.

UNIT – V

Declaration of Helsinki: History, introduction, basic principles for all medical research, and additional principles for medical research combined with medical care.

MASTER OF PHARMACY (PHARMACEUTICS)**Annexure I****REGULATIONS**

“The Revised Regulations for the Master of Pharmacy (M. Pharm.) Degree Program - Credit Based Semester System (CBSS) of the Pharmacy Council of India, New Delhi”, has been adopted from The Gazette of India, No. 362, December 11, 2014.

8. Short Title and Commencement

These regulations shall be called as “The Revised Regulations for the Master of Pharmacy (M. Pharm.) Degree Program - Credit Based Semester System (CBSS) of the Pharmacy Council of India, New Delhi”. They came in effect from the Academic Year 2016-17. The regulations framed are subject to modifications from time to time by the authorities of the Central University of South Bihar.

9. Minimum qualification for admission

A Pass in the following examinations

c) B. Pharm Degree examination of an Indian university established by law in

India from an institution approved by Pharmacy Council of India and has scored not less than 55 % of the maximum marks aggregate of 4 years of B. Pharm. (50 % for SC/ST/PH) preference for GPAT/GATE qualified candidate .

d) Every student, selected for admission to post graduate pharmacy program in any PCI approved institution should have obtained registration with the State Pharmacy Council or should obtain the same within one month from the date of his/her admission, failing which the admission of the candidate shall be cancelled.

Note: It is mandatory to submit a migration certificate obtained from the respective university where the candidate had passed his/her qualifying degree (B. Pharm.)

10. Duration of the program

The program of study for M. Pharm shall extend over a period of four semesters (two academic years). The curricula and syllabi for the program shall be prescribed from time to time by Pharmacy Council of India, New Delhi.

11. Medium of instruction and examinations

Medium of instruction and examination shall be in English.

12. Attendance and progress

A candidate is required to put in at least 80% attendance in individual courses considering theory and practical separately. The candidate shall complete the prescribed course satisfactorily to be eligible to appear for the respective examinations.

13. Program/Course credit structure

As per the philosophy of Credit Based Semester System, certain quantum of academic work viz. theory classes, practical classes, seminars, assignments, etc. are measured in terms of credits. On satisfactory completion of the courses, a candidate earns credits. The amount of credit associated with a course is dependent upon the number of hours of instruction per week in that course. Similarly, the credit associated with any of the other academic, co/extra-curricular activities is dependent upon the quantum of work expected to be put in for each of these activities per week/per activity.

Credit assignment

Theory and Laboratory courses



Courses are broadly classified as Theory and Practical. Theory courses consist of lecture (L) and Practical (P) courses consist of hours spent in the laboratory. Credits (C) for a course is dependent on the number of hours of instruction per week in that course, and is obtained by using a multiplier of one (1) for lecture and a multiplier of half (1/2) for practical (laboratory) hours. Thus, for example, a theory course having four lectures per week throughout the semester carries a credit of 4. Similarly, a practical having four laboratory hours per week throughout semester carries a credit of 2. The contact hours of seminars, assignments and research work shall be treated as that of practical courses for the purpose of calculating credits. i.e., the contact hours shall be multiplied by 1/2. Similarly, the contact hours of journal club, research work presentations and discussions with the supervisor shall be considered as theory course and multiplied by 1.

Minimum credit requirements

The minimum credit points required for the award of M. Pharm degree is 95. However based on the credit points earned by the students under the head of co-curricular activities, a student shall earn a maximum of 100 credit points. These credits are divided into Theory courses, Practical, Seminars, Assignments, Research work, Discussions with the supervisor, journal club and Co-Curricular activities over the duration of four semesters. The credits are distributed semester-wise as shown in Table. Courses generally progress in sequence, building competencies and their positioning indicates certain academic maturity on the part of the learners. Learners are expected to follow the semester-wise schedule of courses given in the syllabus.

14. Academic work

A regular record of attendance both in Theory, Practical, Seminar, Assignment, journal club, Discussion with the supervisor, Research work presentation and Dissertation shall be maintained by the department / teaching staff of respective courses.

M. Pharm in Pharmaceutics (MPH) Programme First Year

Semester I

Table 1: Course of study for M. Pharm. (Pharmaceutics)

Course Code	Course	Credit Hours	Credit Points	Hrs./week	Marks
Semester I					
MPH101T	Modern Pharmaceutical Analytical Techniques	4	4	4	100
MPH102T	Drug Delivery System	4	4	4	100
MPH103T	Modern Pharmaceutics	4	4	4	100
MPH104T	Regulatory Affair	4	4	4	100
MPH105P	Pharmaceutics Practical I	12	6	12	150
MPH 106	Seminar/Assignment	7	4	7	100
Total		35	26	35	650
Semester II					
MPH201T	Molecular Pharmaceutics (Nano Tech and Targeted DDS)	4	4	4	100
MPH202T	Advanced Biopharmaceutics & Pharmacokinetics	4	4	4	100
MPH203T	Computer Aided Drug Delivery System	4	4	4	100
MPH204T	Cosmetic and Cosmeceuticals	4	4	4	100
MPH205P	Pharmaceutics Practical II	12	6	12	150
MPH 206	Seminar/Assignment	7	4	7	100
Total		35	26	35	650

Total Credits: Semester I & II –26 Credits each



The guide will be chosen based on mutual consent of the student and faculty member. After selection of the research guide the student will formulate his/her Seminar topic (MPH 106 & 206).

Second Year

Semester III: Course of study for M. Pharm. III Semester

Course Code	Course	Credit Hours	Credit Points
MRM 301T	Research Methodology and Biostatistics*	4	4
-	Journal club	1	1
-	Discussion / Presentation (Proposal Presentation)	2	2
-	Research Work	28	14
Total		35	21

Total Credits: Semester III–21 Credits

Course Code	Course	Credit Hours	Credit Points
-	Journal Club	1	1
-	Research Work	31	16
-	Discussion/Final Presentation	3	3
Total		35	20

Total Credits: Semester IV–20 Credits

Semester IV: Course of study for M. Pharm. IV Semester

Semester	Credit Points
I	26
II	26
III	21
IV	20
Co-curricular Activities (Attending Conference, Scientific Presentations and Other Scholarly Activities)	Minimum=02 Maximum=07*
Total Credit Points	Minimum=95 Maximum=100*

Total Credits: Semester I- IV–95 Credits

*Credit Points for Co-curricular Activities

Guidelines for Awarding Credit Points for Co-curricular Activities

Name of the Activity	Maximum Credit Points Eligible / Activity
Participation in National Level Seminar/Conference/Workshop/Symposium/ Training Programs (related to the specialization of the student)	01
Participation in international Level Seminar/Conference/Workshop/Symposium/ Training Programs (related to the specialization of the student)	02
Academic Award/Research Award from State Level/National Agencies	01
Academic Award/Research Award from International Agencies	02
Research / Review Publication in National Journals (Indexed in Scopus / Web of Science)	01
Research / Review Publication in International Journals (Indexed in Scopus / Web of Science)	02

Note: International Conference: Held outside India

The research work will start from this Semester. The students will submit progress report and present seminar(s) based on the progress of his/her research work that should be attended by all students in the department, the research guide, the HOD and other faculty of the Department. The student will be evaluated by all faculty members.



Schemes for internal assessments and end semester

Course Code	Course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
SEMESTER I								
MPH 101T	Modern Pharmaceutical Analytical Techniques	10	15	1 Hr	25	75	3 Hrs	100
MPH 102T	Drug Delivery System	10	15	1 Hr	25	75	3 Hrs	100
SEMESTER II								
MPH 201T	Molecular Pharmaceutics (Nano Tech and Targeted DDS)	10	15	1 Hr	25	75	3 Hrs	100
MPH 202T	Advanced Biopharmaceutics & Pharmacokinetics	10	15	1 Hr	25	75	3 Hrs	100
MPH 203T	Computer Aided Drug Delivery System	10	15	1 Hr	25	75	3 Hrs	100
MPH 204T	Cosmetic and Cosmeceuticals							
MPH 205P	Pharmaceutics Practical I	20	30	6 Hrs	50	100	6 Hrs	150
-	Seminar /Assignment	-	-	-	-	-	-	100
Total								650



**Schemes for internal assessments and end semester examinations
(Semester III& IV)**

Course Code	Course	Internal Assessment				End Semester Exams		Total Marks
		Continuous Mode	Sessional Exams		Total	Marks	Duration	
			Marks	Duration				
SEMESTER III								
MRM301T	Research Methodology and Biostatistics*	10	15	1 Hr	25	75	3 Hrs	100
-	Journal club	-	-	-	25	-	-	25
-	Discussion / Presentation (Proposal Presentation)	-	-	-	50	-	-	50
-	Research work*	-	-	-	-	350	1 Hr	350
Total								525
-	work and Colloquium	-	-	-	-	400	1 Hr	400
Total								500

Semester I

MPH 101 Title of the Course: Modern Pharmaceutical Analytical Techniques

UV-visible spectroscopy: Introduction, Theory, Laws, Instrumentation associated with UV-Visible spectroscopy, Choice of solvents and solvent effect and Applications of UV Visible spectroscopy.

Infra-red spectroscopy: Theory, Modes of Molecular vibrations, Sample handling, Instrumentation of Dispersive and Fourier -Transform IR Spectrometer, Factors affecting vibrational frequencies and Applications of IR spectroscopy.

Spectrofluorimetry: Theory of Fluorescence, Factors affecting fluorescence, Quenchers, Instrumentation and Applications of fluorescence spectrophotometer.

Flame emission spectroscopy and Atomic absorption spectroscopy: Principle, Instrumentation, Interferences and Applications.

NMR spectroscopy: Quantum numbers and their role in NMR, Principle, Instrumentation, Solvent requirement in NMR, Relaxation process, NMR signals in various compounds, Chemical shift, Factors influencing chemical shift, Spin-Spin coupling, Coupling constant, Nuclear magnetic double resonance, Brief outline of principles of FT-NMR and ¹³C NMR. Applications of NMR spectroscopy.

Mass Spectroscopy: Principle, Theory, Instrumentation of Mass Spectroscopy, Different types of ionization like electron impact, chemical, field, FAB and MALDI, APCI, ESI, APPI Analyzers of Quadrupole and Time of Flight, Mass fragmentation and its rules, Meta stable ions, Isotopic peaks and Applications of Mass spectroscopy

Chromatography: Principle, apparatus, instrumentation, chromatographic parameters, factors affecting resolution and applications of the following: a) Paper chromatography b) Thin Layer chromatography c) Ion exchange chromatography d) Column chromatography e) Gas chromatography f) High Performance Liquid chromatography g) Affinity chromatography

Electrophoresis: Principle, Instrumentation, Working conditions, factors affecting separation and applications of the following: a) Paper electrophoresis b) Gel electrophoresis c) Capillary electrophoresis d) Zone electrophoresis e) Moving boundary electrophoresis f) Iso electric focusing



X ray Crystallography: Production of X rays, Different X ray diffraction methods, Bragg's law, Rotating crystal technique, X-ray powder technique, Types of crystals and applications of X-ray diffraction.

Immunological assays: RIA (Radio immuno assay), ELISA, Bioluminescence assays.

Potentiometry: Principle, working, Ion selective electrodes and application of potentiometry.

Thermal Techniques: Principle, thermal transitions and Instrumentation (Heat flux and power-compensation and designs), Modulated DSC, Hyper DSC, experimental parameters (sample preparation, experimental conditions, calibration, heating and cooling rates, resolution, source of errors) and their influence, advantage and disadvantages, pharmaceutical applications.

Differential Thermal Analysis (DTA): Principle, instrumentation and advantage and disadvantages, pharmaceutical applications, derivative differential thermal analysis (DDTA). **TGA:** Principle, instrumentation, factors affecting results, advantage and disadvantages, pharmaceutical applications.

Books recommended:

1. Silverstein, R.M. (2004). Spectrometric Identification of Organic compounds. 6th Ed., New York: Wiley Interscience Publication, John Wiley and Sons, Inc.
2. Skoog, D.A., Holler, F.J., Nieman, T.A. (1998). Principles of Instrumental Analysis. 5th Ed., Bangalore: Eastern press.
3. Beckett, A.H., Stenlake, J.B. (1987). Practical Pharmaceutical Chemistry. 4th Ed., vol 2. New Delhi: CBS Publishers & Distributers.
4. Kemp, W. (1991). Organic Spectroscopy, 3rd Ed., London: Red Globe Press.
5. Sethi, P.D. (1987). Quantitative Analysis of Drugs in Pharmaceutical formulation. 3rd Ed., New Delhi: CBS Publishers & Distributers.
6. Munson, J.W. (2008). Pharmaceutical Analysis- Modern methods – Part B. vol 11. New York: Marcel Dekker, Inc.

MPH 102 Title of the Course: Drug Delivery Systems

Sustained Release (SR) and Controlled Release (CR) formulations: Introduction & basic concepts, advantages/disadvantages, factors influencing, Physicochemical & biological approaches for SR/CR formulation, mechanism of drug delivery from SR/CR formulation.

Polymers: Introduction, definition, classification, properties and application.

Dosage Forms for Personalized Medicine: Introduction, Definition, Pharmacogenetics, categories of patients for personalized medicines, customized drug delivery systems, bioelectronic medicines, 3D printing of pharmaceuticals, telepharmacy.

Rate Controlled Drug Delivery Systems: Principles & Fundamentals, Types, Activation; Modulated Drug Delivery Systems; Mechanically activated, pH activated, Enzyme activated, and Osmotic activated Drug Delivery Systems Feedback regulated Drug Delivery Systems; Principles & Fundamentals.

Gastro-Retentive Drug Delivery Systems: Principle, concepts advantages and disadvantages, Modulation of GI transit time approaches to extend GI transit. Buccal Drug Delivery Systems: Principle of muco adhesion, advantages and disadvantages, Mechanism of drug permeation, Methods of formulation and its evaluations.

Ocular Drug Delivery Systems: Barriers of drug permeation, Methods to overcome barriers.

Transdermal Drug Delivery Systems: Structure of skin and barriers, Penetration enhancers, Transdermal Drug Delivery Systems, Formulation and evaluation.

Protein and Peptide Delivery: Barriers for protein delivery. Formulation and Evaluation of delivery systems of proteins and other macromolecules.

Vaccine delivery systems: Vaccines, uptake of antigens, single shot vaccines, mucosal and transdermal delivery of vaccines.

**Books recommended:**

1. Chien, Y.W. (1992). Novel drug delivery systems. 2nd Ed., New York: Marcel Dekker, Inc.
2. Robinson, J.R., Lee, V.H.L. (1992). Controlled drug delivery systems. New York: Marcel Dekker, Inc.
3. Mathiowitz, E. (1999). Encyclopedia of controlled delivery. New York: Wiley Interscience Publication, John Wiley and Sons, Inc.
4. Jain, N.K. (1997). Controlled and novel drug delivery. 1st Ed., New Delhi: CBS Publishers & Distributors.
5. Vyas, S.P., Khar, R.K. (2002). Controlled drug delivery-concepts and advances. 1st Ed., New Delhi: VallabhPrakashan.
- 6.

MPH 103 Title of the Course: Modern Pharmaceutics

Preformation Concepts – Drug Excipient interactions - different methods, kinetics of stability, Stability testing.

Dissolution parameter: Similarity factors – f_2 and f_1 , Higuchi and Peppas plot.

Theories of dispersion and pharmaceutical Dispersion (Emulsion and Suspension, SMEDDS) preparation and stability

Large and small volume parental – physiological and formulation consideration, Manufacturing and evaluation.

Compression and compaction: Physics of tablet compression, compression, consolidation, effect of friction, distribution of forces, compaction profiles, Heckel plots.

Validation: Introduction to Pharmaceutical Validation, Scope & merits of Validation, Validation and calibration of Master plan, ICH & WHO guidelines for calibration and validation of equipments, Validation of specific dosage form, Types of validation. Government regulation, Manufacturing Process Model, URS, DQ, IQ, OQ & PQ of facilities.

cGMP & Industrial Management: Objectives and policies of current good manufacturing practices, layout of buildings, services, equipments and their maintenance.

Production management: Production organization, materials management, handling and transportation, inventory management and control, production and planning control, Sales forecasting, budget and cost control, industrial and personal relationship. Concept of Total Quality Management.

Optimization techniques in Pharmaceutical Formulation: Concept and parameters of optimization, Optimization techniques in pharmaceutical formulation and processing. Statistical design, Response surface method, Contour designs, Factorial designs and application in formulation

Linearity, Concept of significance, Standard deviation, Chi square test, students T-test, ANOVA test.

Books Recommended:

1. Lachmann, L., Libermann, H.A., Kanig, J.L. (2013). Theory and practice of industrial pharmacy. 4th Ed., Bombay: Varghese Publishing House.
2. Lachmann, L., Libermann, H.A., Joseph, B. (1989). Pharmaceutical dosage forms: Tablets. 2nd Ed., vol. I-III. New York: Marcel Dekker.
3. Lachmann, L., Libermann, H.A., Martin, M.R., Banker, G.S. (1996). Pharmaceutical dosage forms: disperse systems. vol. I-II, CRC press.
4. Avis, K.E., Lachmann, L., Libermann, H.A. (1984). Pharmaceutical dosage forms: parental medications. vol.1. New York: Marcel Dekker.
5. Gillbert, S.B., Christopher, T.R. (1996). Modern Pharmaceutics. 4th Ed., CRC press.
6. Remington, J.P. (2005). Remington: The science and practice of pharmacy. 21st Ed., Lippincott Williams and Wilkins.
7. Bean, H.S., Beckett, A.H., Carless, J.E. (1964). Advances in pharmaceutical sciences. vol. I-V, London, Berkeley: Academic press.
8. Sinko, P.J. (2011). Martin's physical pharmacy and pharmaceutical sciences. 6th Ed., Lippincott Williams and Wilkins.
9. Rawlins, E.A. (2012). Bentley's textbook of pharmaceutics. 8th Ed., Elsevier.
10. Willing, S.H. (2001). Good manufacturing practices for pharmaceuticals: a plan for total quality control. 5th Ed., New York: Marcel Dekker, Inc.
11. Quality Assurance Guide, By Organization of Pharmaceutical producers of India.
12. Kohli, D.P.S., Shah, D.H. (2008). Drug formulation manual. New Delhi: Eastern publishers.
13. Sharma, P.P. (2015). How to practice GMPs. 7th Ed., Agra: Vandhana publications.
14. Nash, R.A., Watcher, A.H. (2003). Pharmaceutical process validation. 3rd Ed., vol. 129. New York: Marcel Dekker Inc.
15. Wells, J.I. (1990). Pharmaceutical preformulation: The physiochemical properties of drug substances. vol. 79. Chichester: Ellis Horwood.
16. Evans, J.R., Anderson, D.R., Sweeny, D.J., Williams, T.A. (1990). Applied production and operations management. 3rd Ed
17. Swarbrick, J. (2006). Encyclopaedia of pharmaceutical technology. 3rd Ed., CRC press.

**MPH 104 Title of the Course: Regulatory affairs**

Documentation in Pharmaceutical industry: Master formula record, DMF (Drug Master File), distribution records. Generic drugs product development Introduction, Hatch-Waxman act and amendments, CFR (CODE OF FEDERALREGULATION), drug product performance, in-vitro, ANDA regulatory approval process, NDA approval process, BE and drug product assessment, in –vivo, scale up process approval changes, post marketing surveillance, outsourcing BA and BE to CRO.

Regulatory requirement for product approval: API, biologics, novel, therapies obtaining NDA, ANDA for generic drugs ways and means of US registration for foreign drugs CMC, post approval regulatory affairs. Regulation for combination products and medical devices. CTD and ECTD format, industry and FDA liaison. ICH - Guidelines of ICH-Q, S E, M. Regulatory requirements of EU, MHRA, TGA and ROW countries.

Non clinical drug development: Global submission of IND, NDA, ANDA. Investigation of medicinal products dossier, dossier (IMP) and investigator brochure (IB).

Clinical trials: Developing clinical trial protocols. Institutional review board/ independent ethics committee Formulation and working procedures informed Consent process and procedures. HIPAA- new, requirement to clinical study process, pharmacovigilance safety monitoring in clinical trials.

Books recommended:

1. Shargel, L, Kauffer, I. (2005). Generic Drug Product Development, Solid Oral Dosage forms. Vol.143. New York: Marcel Dekker Inc.
2. Berry, I.R., Martin, R.P. (2008). The Pharmaceutical Regulatory Process. 2nd Ed., vol. 185. Drugs and the Pharmaceutical Sciences. New York: CRC press.
3. Guarino, R.A. (2004). New Drug Approval Process: Accelerating Global Registrations. 5th Ed., vol. 190, New York: Marcel Dekker Inc.
4. Weinberg, S. (2009). Guidebook for drug regulatory submissions. 1st Ed., John Wiley & Sons Inc.
5. Pisano, D.J., Mantus, D. (2005). FDA regulatory affairs: a guide for prescription drugs, medical devices, and biologics. 2nd Ed., New York: CRC press.
6. Rozovsky, F.A., Adams, R.K. (2003). Clinical Trials and Human Research: A Practical Guide to Regulatory Compliance. 1st Ed., Washington: John Wiley and Sons.

MPH 105P Pharmaceutics Lab-I

1. Analysis of pharmacopoeial compounds and their formulations by UV Vis spectrophotometer
2. Simultaneous estimation of multi component containing formulations by UV spectrophotometry
3. Experiments based on HPLC
4. Experiments based on Gas Chromatography
5. Estimation of riboflavin/quinine sulphate by fluorimetry
6. Estimation of sodium/potassium by flame photometry
7. To perform In-vitro dissolution profile of CR/ SR marketed formulation
8. Formulation and evaluation of sustained release matrix tablets
9. Formulation and evaluation osmotically controlled DDS
10. Preparation and evaluation of Floating DDS- hydro dynamically balanced DDS
11. Formulation and evaluation of Muco adhesive tablets.
12. Formulation and evaluation of trans dermal patches.
13. To carry out preformulation studies of tablets.
14. To study the effect of compressional force on tablets disintegration time.
15. To study Micromeritic properties of powders and granulation.
16. To study the effect of particle size on dissolution of a tablet.
17. To study the effect of binders on dissolution of a tablet.
18. To plot Heckal plot, Higuchi and peppas plot and determine similarity factors.

MPH 106 Title of the Course: Research Seminar-I/Assignment

The student in discussion with his/her research guide will choose a topic related to his/her area of research and will deliver a Seminar at a date and time fixed by the department, that should be attended by all students in the department, the research guide, the HOD and other faculty of the Department. The Seminar will be of 25 minutes duration, followed by a discussion. The student will be evaluated by all faculty members under the following parameters: coverage of literature, presentation skills, defence and the seminar report (the report should be handed in by the student the next day after the delivery of the seminar and a copy of the seminar report should be housed in the department). The final marks will be given by the faculty.

**Semester II****MPH 202 Title of the Course: Advanced Pharmacokinetics and Biopharmaceutics**

Drug Absorption from the Gastrointestinal Tract: Gastrointestinal tract, Mechanism of drug absorption, Factors affecting drug absorption, pH-partition theory of drug absorption. Formulation and physicochemical factors: Dissolution rate, Dissolution process, Noyes-Whitney equation and drug dissolution, Factors affecting the dissolution rate. Gastrointestinal absorption: role of the dosage form: Solution (elixir, syrup and solution) as a dosage form, Suspension as a dosage form, Capsule as a dosage form, Tablet as a dosage form, Dissolution methods, Formulation and processing factors. Physiological factors related to drug absorption.

Biopharmaceutic considerations in drug product design and in vitro drug product performance: Introduction, rate-limiting steps in drug absorption, physicochemical nature of the drug formulation factors affecting drug product performance, in vitro: dissolution and drug release testing, compendial methods of dissolution, alternative methods of dissolution testing, meeting dissolution requirements, problems of variable control in dissolution testing performance of drug products. In vitro-in vivo correlation, dissolution profile comparisons, drug product stability, considerations in the design of a drug product.

Pharmacokinetics: Basic considerations, pharmacokinetic models, compartment modeling: one compartment model- IV bolus, IV infusion, extra-vascular. Multi compartment model: two compartment - model in brief, non-linear pharmacokinetics: cause of non-linearity, Michaelis - Menten equation, estimation of k_{max} and V_{max} .

Drug interactions: introduction, the effect of protein binding interactions, the effect of tissue-binding interactions, cytochrome p450-based drug interactions, drug interactions linked to transporters.

Bioavailability and Bioequivalence: Drug product performance, purpose of bioavailability studies, relative and absolute availability. Methods for assessing bioavailability, bioequivalence studies, design and evaluation of bioequivalence studies, study designs, crossover study designs, evaluation of the data, bioequivalence example. Biopharmaceutics classification systems. In-vitro, in-situ and In-vivo permeability methods. Clinical significance of bioequivalence studies, special concerns in bioavailability and bioequivalence studies.

Introduction to Pharmacokinetics and pharmacodynamic (PK-PD)

Pharmacokinetics and pharmacodynamics of biotechnology drugs: Introduction, Proteins and peptides, Monoclonal antibodies, Oligonucleotides, Vaccines (immunotherapy), Gene therapies.

Books recommended:

1. Gibaldi, M. (1991). Biopharmaceutics and Clinical Pharmacokinetics. 4th Ed. Philadelphia: Lea and Febiger.
2. Treatise, A., Brahmankar, D.M., Jaiswal, S.B. (2015). Biopharmaceutics and Pharmacokinetics. Delhi: VallabhPrakashan.
3. Shargel, L., Yu, A., Pong, S.W. (2012). Applied Biopharmaceutics and Pharmacokinetics. 6th Ed. New York: McGraw Hill Publication.
4. Rani, S., Hiremath R. (2012). Textbook of Biopharmaceutics and Pharmacokinetics. 2nd Ed. Delhi: Prism Publications.
5. Gibaldi, M., Perrier, D. (1982). Pharmacokinetics. 2nd Ed. Revised and expanded. New York: CRC press.
6. Swarbrick, J. (1970). Current Concepts in Pharmaceutical Sciences: Biopharmaceutics. Philadelphia: Lea and Febiger.
7. Rowland, M. Tozer, T.N. (1995). Clinical Pharmacokinetics, Concepts and Application, 3rd edition, Philadelphia: Lippincott Williams and Wilkins.
8. Mack, H.M. (1989). Dissolution, Bioavailability and Bioequivalence, Pennsylvania: Mack Publishing Company.
9. Notari, R.E. (1987). Biopharmaceutics and Clinical Pharmacokinetics, An Introduction, 4th edition, revised and expanded, New York: Marcel Dekker.
10. Wagner, J.G. Pamarowski, M. (1971). Biopharmaceutics and Relevant Pharmacokinetics, 1st edition, Illinois: Drug Intelligence Publications.
11. Swarbrick, J. Boylan, J.G. (1996). Encyclopedia of Pharmaceutical Technology, New York: Marcel Dekker.
12. Jambhekar, S.S. Breen, P.J. (2009). Basic Pharmacokinetics, 1st edition, Pharmaceutical press.
13. Avdeef, A. (2003). Absorption and Drug Development- Solubility, Permeability, and Charge State, New York: John Wiley & Sons Inc.

MPH 203 Title of the Course: Computer-aided Drug Development

Computers in Pharmaceutical Research and Development: A General Overview: History of Computers in Pharmaceutical Research and Development. Statistical modeling in Pharmaceutical research and development: Descriptive versus Mechanistic Modeling, Statistical Parameters, Estimation, Confidence Regions, Nonlinearity at the Optimum, Sensitivity Analysis, Optimal Design, Population Modeling



Quality-by-Design in Pharmaceutical Development: Introduction, ICH Q8 guideline, Regulatory and industry views on QbD, Scientifically based QbD - examples of application.

Computational Modeling of Drug Disposition: Introduction ,Modeling Techniques: Drug Absorption, Solubility, Intestinal Permeation, Drug Distribution, Drug Excretion, Active Transport; P-gp, BCRP, Nucleoside Transporters, hPEPT1, ASBT, OCT, OATP, BBB-Choline Transporter.

Computer-aided Formulation Development: Concept of optimization, Optimization parameters, Factorial design, Optimization technology & Screening design. Computers in Pharmaceutical Formulation: Development of pharmaceutical emulsions, micro-emulsion drug carriers Legal Protection of Innovative Uses of Computers in R&D, The Ethics of Computing in Pharmaceutical Research, Computers in Market analysis

Computer-aided Biopharmaceutical Characterization: Gastrointestinal absorption simulation. Introduction, Theoretical background, Model construction, Parameter sensitivity analysis, Virtual trial, Fed vs. fasted state, In vitro dissolution and in vitro in vivo correlation, Biowaiver considerations

Computer Simulations in Pharmacokinetics and Pharmacodynamics: Introduction, Computer Simulation: Whole Organism, Isolated Tissues, Organs, Cell, Proteins and Genes.

Computers in Clinical Development: Clinical Data Collection and Management, Regulation of Computer Systems
Artificial Intelligence (AI), Robotics and Computational fluid dynamics: General overview, Pharmaceutical Automation, Pharmaceutical applications, Advantages and Disadvantages. Current Challenges and Future Directions.

Books recommended:

1. Ekins, S. (2006). Computer Applications in Pharmaceutical Research and Development, John Wiley & Sons.
2. Djuris, J. (2013). Computer-Aided Applications in Pharmaceutical Technology, 1st Ed. Cambridge: Woodhead Publishing.
3. Swarbrick, J., Boylan, J.G. (1996). Encyclopedia of Pharmaceutical Technology.vol 13. New York: Marcel Dekker Inc.
4. Bolton, S., Bon, C. (2010). Pharmaceutical Statistics.5th Ed.,vol 203. New York: Informa

MPH 201 Title of the Course: Molecular Pharmaceutics

Targeted Drug Delivery Systems: Concepts, Events and biological process involved in drug targeting.Tumor targeting and Brain specific delivery.

Targeting Methods: Introduction preparation and evaluation. Nano Particles & Liposomes: Types, preparation and evaluation.

Micro Capsules / Micro Spheres:Types, preparation and evaluation, Monoclonal Antibodies; preparation and application, preparation and application of Niosomes, Aquasomes, Phytosomes, Electrosomes.

Pulmonary Drug Delivery Systems : Aerosols, propellents, Containers Types, preparation and evaluation, Intra Nasal Route Delivery systems; Types, preparation and evaluation.

Nucleic acid based therapeutic delivery system: Gene therapy, introduction (ex-vivo & in-vivo gene therapy). Potential target diseases for gene therapy (inherited disorder and cancer). Gene expression systems (viral and nonviral gene transfer).Liposomal gene delivery systems.

Biodistribution and Pharmacokinetics: Knowledge of therapeutic antisense molecules and aptamers as drugs of future.

Books recommended:

1. Chien, Y.W. (1992). Novel Drug Delivery Systems. 2nd Ed. revised and expanded. New York: Marcel Dekker.
2. Vyas, S.P., Khar R.K. (2002). Controlled Drug Delivery - concepts and advances. New Delhi: VallabhPrakashan.
3. Jain, N.K. (2001). Controlled and Novel Drug Delivery.1st Ed. New Delhi: CBS Publishers & Distributors.

MPH204 Title of the Course: Cosmetics and Cosmeceuticals

Cosmetics – Regulatory: Definition of cosmetic products as per Indian regulation. Indian regulatory requirements for labeling of cosmetics Regulatory provisions relating to import of cosmetics, Misbranded and spurious cosmetics. Regulatory provisions relating to manufacture of cosmetics – Conditions for obtaining license, prohibition of manufacture and sale of certain cosmetics, loan license, offences and penalties.



Cosmetics - Biological aspects :Structure of skin relating to problems like dry skin, acne, pigmentation, prickly heat, wrinkles and body odor. Structure of hair and hair growth cycle. Common problems associated with oral cavity. Cleansing and care needs for face, eye lids, lips, hands, feet, nail, scalp, neck, body and under-arm.

Formulation Building blocks: Building blocks for different product formulations of cosmetics/cosmeceuticals. Surfactants – Classification and application. Emollients, rheological additives: classification and application. Antimicrobial used as preservatives, their merits and demerits. Factors affecting microbial preservative efficacy. Building blocks for formulation of a moisturizing cream, vanishing cream, cold cream, shampoo and toothpaste. Soaps and syndetbars.

Perfumes: Classification of perfumes. Perfume ingredients listed as allergens in EU regulation. Controversial ingredients: Parabens, formaldehyde liberators, dioxane.

Design of cosmeceutical products: Sun protection, sunscreens classification and regulatory aspects. Addressing dry skin, acne, sun-protection, pigmentation, prickly heat, wrinkles, body odor, dandruff, dental cavities, bleeding gums, mouth odor and sensitive teeth through cosmeceutical formulations.

Herbal Cosmetics: Herbal ingredients used in Hair care, skincare and oral care. Review of guidelines for herbal cosmetics by private bodies like cosmos with respect to preservatives, emollients, foaming agents, emulsifiers and rheology modifiers. Challenges in formulating herbal cosmetics.

Books recommended:

1. Harry, R.G., Reiger, M.M. (2000). Harry's Cosmeticology. 8th Ed. New York: Chemical publishing company.
2. Butler, H. (2000). Poucher's perfume cosmetics and Soaps, 10th Ed. London: Kluwar academic publishers.
3. Sharma, P.P. (2008). Cosmetics - Formulation, Manufacture and quality control. 4th Ed. New Delhi: Vardhan publishing pvt ltd.
4. Barel, A.O., Paye M, Maibach H.I. (2001). Handbook of cosmetic science and Technology. 3rd Ed. New York: Marcel Decker Inc.
5. Cosmetic and Toiletries recent suppliers catalogue.
6. CTFA directory.

MPH 205P Title of the Course: Pharmaceutics Lab II

1. To study the effect of temperature change, non-solvent addition, incompatible polymer addition in microcapsules preparation
2. Preparation and evaluation of Alginate beads
3. Formulation and evaluation of gelatin /albumin microspheres
4. Formulation and evaluation of liposomes/niosomes/ethosomes / nanoparticle
5. Formulation and evaluation of spherules
6. Improvement of dissolution characteristics of slightly soluble drug by Solid dispersion technique.
7. Comparison of dissolution of two different marketed products /brands
8. Protein binding studies of a highly protein bound drug & poorly protein bound drug
9. Bioavailability studies of Paracetamol in animals.
10. Pharmacokinetic and IVIVC data analysis by WinnolineR software
11. In vitro cell studies for permeability and metabolism
12. DoE Using Design Expert® Software
13. Formulation data analysis Using Design Expert® Software
14. Quality-by-Design in Pharmaceutical Development
15. Computer Simulations in Pharmacokinetics and Pharmacodynamics
16. Computational Modeling of Drug Disposition
17. To develop Clinical Data Collection manual
18. To carry out Sensitivity Analysis, and Population Modeling.
19. Development and evaluation of Creams
20. Development and evaluation of Shampoo and Toothpaste base
21. To incorporate herbal and chemical actives to develop products
22. To address Dry skin, acne, blemish, Wrinkles, bleeding gums and dandruff.



Second Year

MPH 301 Title of the Course: Research Methodology & Biostatistics

UNIT – I

General Research Methodology: Research, objective, requirements, practical difficulties, review of literature, study design, types of studies, strategies to eliminate errors/bias, controls, randomization, crossover design, placebo, blinding techniques.

UNIT – II

Biostatistics: Definition, application, sample size, importance of sample size factors influencing sample size, dropouts, statistical tests of significance, type of significance tests, parametric tests (students “t” test, ANOVA, Correlation coefficient, regression), non-parametric tests (wilcoxon rank tests, analysis of variance, correlation, chi square test), null hypothesis, P values, degree of freedom, interpretation of P values.

UNIT – III

Medical Research: History, values in medical ethics, autonomy, beneficence, non-maleficence, double effect, conflicts between autonomy and beneficence/non-maleficence, euthanasia, informed consent, confidentiality, criticisms of orthodox medical ethics, importance of communication, control resolution, guidelines, ethics committees, cultural concerns, truth telling, online business practices, conflicts of interest, referral, vendor relationships, treatment of family members, sexual relationships, fatality.

UNIT – IV

CPCSEA guidelines for laboratory animal facility: Goals, veterinary care, quarantine, surveillance, diagnosis, treatment and control of disease, personal hygiene, location of animal facilities to laboratories, anesthesia, euthanasia, physical facilities, environment, animal husbandry, record keeping, SOPs, personnel and training, transport of lab animals.

UNIT – V

Declaration of Helsinki: History, introduction, basic principles for all medical research, and additional principles for medical research combined with medical care.

Brief Profile of Faculty Members

	<p>Dr. Vivek Dave Associate Professor and Head Specialization: Pharmaceutics</p>		<p>Dr. Shakti P Pattanayak, Associate Professor Pharmacology (Pharmacy)</p>
	<p>Dr. Gireesh Kumar Singh, Assistant Professor Specialization: Pharmacology</p>		<p>Dr. Dhananjay Kumar Singh, Assistant Professor Specialization: Pharmacology</p>



4. SCHOOL OF SOCIAL SCIENCES & POLICY

We live in an age of global social, technological and economic transformations. In the School of Social Sciences and Policy (SSSP), we seek to understand these changes and to shape transformations through our education and research. We make our distinctive contributions by giving our students the skills, and confidence to embrace and shape change, and through our connected and engaged research, backed by clear strategies to have impacts in the economy and society. The broad objectives of the School are nurtured through her various departments. The School has currently five Departments viz., Department of Development Studies, Department of Economic Studies and Policy, Department of Sociological Studies, Department of Political Studies and Department of Historical Studies and Archaeology. These departments offer both Post-Graduate and Ph.D Programmes. All the departments under the SSSP endeavours to blend its teaching engagement with empirical research. Academic programmes based on the emerging debates both in the theoretical and empirical planes in respective disciplines also see its engagement in continuous search for building up a new knowledge-base relevant to the developing world particularly. For teaching, research and training, the SSSP looks forward to learn from the development experiences of the world at large. In the process, it does not exclude the local economy, society and polity. It's agenda and implementation of the same by way of organising seminar, workshop and development dialogue embed the essence of the School. As Social scientists are employed by governmental, industry and non-profit organizations on a large scale, strong skill and knowledge in social sciences are vital for the new generations. We believe that our education and research through the various departments can influence change by focusing on real world problems.



4.1 Department of Development Studies

The Department of Development Studies is the pioneering department of the Central University of South Bihar, which runs under the aegis of the School of Social Science and Policy. During the last 10 years of her existence, the Department could train hundreds of development practitioners to cater to the requirements of various sectors of our economy. Being a multi-disciplinary subject, Development studies is one of the most opted course under the branch of social science. However, only a very few institutions of repute offer this course at present. Development studies is an ever-evolving and ever-changing subject, which teaches topics of varied interests such as public policy and planning, demography, human development, NGO management, social exclusion and inclusion, social entrepreneurship, corporate social responsibility, poverty, empowerment, gender budgeting and so on and so forth. It is our strong conviction that the present socio-economic issues of India can be better appreciated and solved only when the younger generation is equipped with such a transdisciplinary theory and practice of development management. It is in this background, that the curriculum and syllabus of the MA Programme in Development Studies has been framed. Field work and rural immersion are part and parcel of this programme. Apart from this, the Department provides students an atmosphere of both theoretical and practical exposure to the enlarging social and economic issues through class room-based teaching, field level experiences, academic conference and deliberations and engagements with industry-related stakeholders.

**[III] Programmes Offered****1. Ph.D Programme in Development Studies**

Adhering to the UGC regulations and ordinance issued by the University from time to time, we offer Ph.D. programme in Development Studies with the following courses.

Course Code	Course Title	Credit
DVS 901	Research Methodology	4
DVS 902	Tools and Techniques of Research	4
DVS 903	Preparation and Presentation of Research Proposal	4
	Total Credits	12

2. M. A. Development Studies

Through this course, we combine both the theory and practice of core subjects such as Economics, Political Science and Sociology to evolve solutions to the development problems facing the country. So, it is truly a multi-disciplinary programme which spans for two years over four semesters. Along with the class room instructions, the course is delivered through field work, research and rural immersion. Practical application of theoretical knowledge in statistical and ethnographic methodology lies at the heart of this programme. All the class rooms are connected by smart boards with wifi-connectivity. We have in place MoUs and internships with reputed development sector organisations. Many of our alumnae have been placed in leading NGOs like CARE INDIA, AGHA KHAN FOUNDATION etc., and have also cleared numerous public service commission examinations. Some of them have also forayed into academic research in reputed institutions like IITs, JNU, DSEs and South Asian Universities. A snapshot of the courses offered by us for the M.A. in Development Studies programme are given in the table below:

Course Code	Title	Credits	Name of the Instructor(s)
Core Courses (4) Semester I			
MADVS1001C04	Sociology of Development	4	Mr. APA Kabeer
MADVS1002C04	State, Governance and Development	4	Dr. Anju Helen Bara
MADVS1003C04	Economics of Development	4	Dr. Krishnan Chalil
MADVS1004C04	Rural Development and Community Engagement	4	Dr. Samapika Mohapatra
Core Courses (5) Semester II			
MADVS2001C04	Research Methodology in Social Sciences	4	Mr. APA Kabeer
MADVS2002C04	Law and Development	4	Dr. Anju Helen Bara
MADVS2003C04	Gender and Development	4	Dr. Samapika Mohapatra
MADVS2004C04	Human Development	4	Dr. Firdaus Fatima Rizvi
MADVS2005C04	Statistical Methods for Development Research	4	Dr. Krishnan Chalil
Core Courses (3) Semester III			
MADVS3001C04	Public Policy and Planning	4	Dr. Anju Helen Bara
MADVS302C04	Master's Thesis-I: Review of Literature, Research Proposal and Data Collection	4	All Faculty
MADVS3003C04	Internship	4	All Faculty
Core Courses (2) Semester IV			
MADVS4001C04	Agriculture and Food Security	4	Dr. Firdaus Fatima Rizvi
MADVS4002C04	Master's Thesis-II: Data Analysis and Report Writing	4	All Faculty
Elective Courses			
Semester I			
MADVS1001E04	Social Exclusion and Inclusive Development	4	Dr. Samapika Mohapatra
MADVS1002E04	Demography and Development	4	Prof. Krishnan Chalil
MADVS1003E04	Environment, Climate Change and Development	4	Dr. Firdaus Fatima Rizvi & Dr. Anju Helen Bara
Semester II			
MADVS32001E04	Development Communication	4	Mr. APA Kabeer
MADVS2002E04	Human Rights and Conflict Resolution	4	Dr. Anju Helen Bara
MADVS2003E04	Ageing and Development	4	Prof. Krishnan Chalil









Semester III			
MADVS3001E04	Education, Society and Development	4	Mr. APA Kabeer
MADVS3002E04	Urban Development and Planning	4	Mr. Aditya Mohanty
MADVS3003E04	Public Health System and Management	4	Dr. Anju Helen Bara
MADVS1004E04	NGO Management and the Practice of Development	4	Mr. Aditya Mohanty
MADVS1005E04	Political Economy of Development	4	Mr. Aditya Mohanty
MADVS2006E04	Globalization, Labor and Informal Sector	4	Dr. Firdaus Fatima Rizvi
Semester IV			
MADVS4001E04	Social Entrepreneurship and Development	4	Mr. Aditya Mohanty
MADVS4002E04	Disaster Management	4	Dr. Anju Helen Bara
MADVS4003E04	Corporate Social Responsibility	4	Mr. Aditya Mohanty
MADVS4004E04	Tourism and Cultural Heritage	4	Mr. APA Kabeer
MADVS4005E04	Sports, Society and Development	4	Dr. Samapika Mohapatra
MADVS4006E04	Unnat Bharat: Bringing Development through Participatory Learning	4	Dr. Krishnan Chalil
MADVS4007E04	Technology, Innovation and Development	4	Dr. Anju Helen Bara
MADVS4008E04	Social Movements and Development process in India	4	Mr. APA Kabeer
Skill based non-credit courses			
MADVS1001S04	Communication Skills	0	All faculty

Suggested SWAYAM/MOOCs Courses are following:

MADVS3001S04	Tourism Planning and Sustainable Development
MADVS3002S04	International Human Rights System
MADVS3003S04	Introduction to Public Administration
MADVS3004S04	Information and Communication Technology
MADVS3005S04	Intellectual Property
MADVS3006S04	Communication Technology in Education

Brief Profile of Faculty Members

	Prof. Krishnan Chalil , M. Phil (Economics), Ph.D(Economics), PGDDE., DPR&DJ., D.Litt (Hon.) Specialization : Banking and Rural Development, e-Governance, Higher Education		Dr. Samapika Mohapatra Associate Professor M.Phil. and Ph.D. (CSSS/SSS, JNU) Specialization : Gender Studies, Sports Studies, Social Exclusion and Inclusive Development
	Dr. Anju Helen Bara Assistant Professor MPhil and Ph.D. (IIT Mumbai) Specialization : Environmental Governance, Public Policy, and Sustainable Rural Development		Dr. Firdaus Fatima Rizvi Assistant Professor Ph.D. (Economics), M.Sc (Environment and Ecology), LLB., University of Allahabad Specialization : Agriculture and Development, Labour Studies and Housing Markets
	Mr. Aditya Mohanty Assistant Professor M.A. (Sociology) (JNU, New Delhi) Specialization : Development Management, Urban Planning and Postcolonial Futures		Mr. A. Kabeer Assistant Professor MPhil (HCU) Specialization : Sociology of Education, Media & Public Sphere and Social Movements



4.2 Department of Economic Studies and Policy

The Department of Economic Studies and Policy looks at academic engagement with a difference. While the major focus of the Department is on teaching of basic principles of economics, its search is for new epistemology, both in theory and practice. It keeps on improving its course curriculum on a regular basis based on the evolving theoretical paradigms in the field of economics by different schools of thought that have ontological bearings. The diverse knowledge base in economics and its ramifications on the society continues to be a primordial source of choice for direction of research. The Department nurtures creative impulses of both faculty and students and continuously provides forums for developing critiques of existing theories and practices only to create a new space for the latter. In this process, it contextualizes emerging theoretical postulations at all levels including local, sub-regional, national, and international. The Department aspires and attracts students and teachers from all over the country and abroad to develop it as a unique place of learning and develop collaboration with other institutions for teaching and research.

4.2.1 Ph.D. in Economics

The students of this programme are encouraged to develop analytical perspectives required to explore new horizons of knowledge in the field of economics. The compulsory courses of this programme help to stimulate creative impulses of the students besides exposing them to various methodological aspects of research. Eventually, the students are able to produce a good research output examining the validity or otherwise of the existing theoretical paradigm(s) at the backdrop of the empirical research that has sound implications for policy.

List of Courses in Ph.D. in Economics

Course Code	Course Title	Credits
ECO 901	Research Methodology	4
ECO 902	Tools and Techniques of Research	4
ECO 903	Preparation & Presentation of Research Proposal	4
Total Credits		12

4.2.2 M.A. Economics Programme

The two years (four semesters) post-graduate programme is designed to train the students on the ever-expanding knowledge base in economics – both theoretical and applied. The students are not only exposed to alternative theoretical paradigms in economics but also trained to improve their analytical and quantitative skills for evaluating the policies emanating from the theories. The students undergoing such trainings would be equipped to undertake studies at a higher (doctoral) level and join academic profession or to adopt professional career in the corporate/government sectors.

Course Code	Nme of the Course	Credit
Semester - I		
MAECO1001C04	Microeconomics I	4
MAECO1002C04	Macroeconomics I	4
MAECO1003C04	Mathematical Methods in Economics I	4
MAECO1004C04	Statistical Methods and Applications	4
MAECO1005C04	Development Economics I	4
Elective Courses (any one from here or from courses of other Departments)		
MAECO1001E04	Money and Banking	4
MAECO1002E04	History of Economic Ideas	4
MAECO1003E04	Tourism, Planning and Sustainable Development (Available at UGC-MOOCs) [http://ugcmoocs.inflibnet.ac.in/courses.php]	4
Skill-Based Courses (optional)		
MAECO1001S00	Developing Soft Skills and Personality (Available at SWAYAM) [Link: http://swayam.gov.in/courses/4773-july-2018-developing-soft-skills-and-personality]	0 (Non Credit)
MAECO1002S00	Computer Fundamentals (Available at SWAYAM) [Link: https://swayam.gov.in/courses/4067-computer-fundamentals]	0 (Non Credit)



Semester - II		
MAECO2001C04	Microeconomics II	4
MAECO2002C04	Macroeconomics II	4
MAECO2003C04	Mathematical Methods in Economics II	4
MAECO2004C04	Introductory Econometrics	4
MAECO2005C04	Development Economics II	4
Elective Courses (any one from here of from courses of other Departments)		
MAECO2001E04	Financial Economics I	4
MAECO2002E04	Economics of Education and Health	4
Skill-Based Courses (optional)		
MAECO2001S00	Mind Education (Available at SWAYAM) [Link: http://swayam.gov.in/courses/4617-mind-education]	0 (Non Credit)
MAECO2002S00	Probability and Stochastics for Finance (Available at SWAYAM) [Link: http://swayam.gov.in/courses/1349-probability-and-stochastics-for-finance]	0 (Non Credit)
Semester - III		
MAECO3001C04	International Economics	
MAECO3002C04	Indian Economic Development	
Elective Courses (any one from here of from courses of other Departments)		
MAECO3001E04	Econometric Methods	
MAECO3002E04	Software Applications of Econometrics	
MAECO3003E04	Law and Economics	
MAECO3004E04	Agricultural Economics I	
MAECO3005E04	Financial Economics II	
MAECO3006E04	Industrial Economics I	
MAECO3007E04	Research Methodology (Available at UGC- MOOCS) [http://ugcmoocs.inflibnet.ac.in/courses.php]	
Semester - IV		
MAECO4001C04	Public Finance	
MAECO4002C04	Field Survey and Report Writing	
Elective Courses (any one from here of from courses of other Departments)		
MAECO4001E04	Financial Economics III	
MAECO4002E04	Financial Econometrics	
MAECO4003E04	Advanced Topics in Applied Econometrics	
MAECO4004E04	Game Theory with Application to Economics	
MAECO4005E04	Agricultural Economics II	
MAECO4006E04	Environmental Economics	
MAECO4007E04	Industrial Economics II	

1. Elective courses would be offered depending upon the availability of specialised faculties. Courses to be offered as elective papers in a particular semester would be announced before its commencement.
2. Each student would obtain at least 08 credits and a maximum of 16 credits from courses offered by other departments / UGC-MOOCS courses in lieu of the elective courses of the parent department.

**Brief Profile of Faculty Members**

	Dr. Abodh Kumar Assistant Professor Ph.D. (University of Mumbai) Specialization : Microeconomics and Development Economics		Mr. Atish Kumar Dash Assistant Professor M.A. (Economics) Specialization : Mathematical Economics, Econometrics, Macroeconomics and Financial Economics
	Dr. Sanjay Kumar Assistant Professor Ph.D.(Magadh University, Bodh Gaya) Specialization : Indian Economics, Development Economics, Economics of Education, Agriculture Economics, and Macroeconomics		Dr. Rikil Chyrmang Assistant Professor Ph.D. (Jawaharlal Nehru University, New Delhi) Specialization : Development Economics, Economics of Migration and Microeconomics

4.3 Department of Political Studies

The **Department of Political Studies (CPS)** is one of the Departments in the School of Social Sciences and Policy which embodies cohesiveness of multiple disciplines that seek their relevance in understanding and analysing human behaviour in an integrated framework. The department continuously endeavours to blend its teaching engagement with empirical research. DPS strives to cover all aspects of the discipline in the context of Traditional, Modern and Post-Modern approaches. It emphatically identifies the new problem areas of the polity and politics and tries to offer solutions through teaching, research and creation of new knowledge. The Department endeavors to put political studies into practice through deconstruction of impending social, political and economic issues as part of its Post-Graduate programme. In its inter-disciplinary approach, the Department provides an opportunity to combine both theory and practice. The Department ensures to equip the students with the philosophical and theoretical perspectives along Indian and Western traditions as well as its practical applications. It continues to nurture motivation in students for the advancement of political analysis at all levels: regional, national and international. Alongside the Post-Graduate programme, the Department also caters to the need of Undergraduate integrated programmes of the University, e.g. Five-year Integrated BA.LLB. programme and Four-year Integrated BA.B.Ed. programme. Overall the Department has taken initiatives to provide good, ethical, knowledgeable, and employable citizens to the society.

4.3.1 Ph.D in Political Science & International Relations -Department of Political Studies is currently offering Ph.D. in Political Science & International Relations.

List of Courses in Ph.D. Political Science & International Relations

Course Code	Course Title	Credit
PSC 901	Research Methodology	4
PSC 902	Tools and Techniques of Research in Political Science & IR	4
PSC 903	Presentation of Research Proposal	4
	Total Credits:	12

4.3.2 M.A. in Political Science and International Relations

The two-year (four semesters) Post Graduate Programme is designed to equip the students with the philosophical and theoretical perspectives in the Indian and Western traditions along with their practical applications as mentioned above. It also aims to impart critical thinking and methodological skills of academic and action-oriented research. The programme endeavours to study issues that polity and politics have been confronting with in the Indian, comparative, international, regional and local milieus. It also inculcates among the students contextually appropriate sensibilities towards traditional, modern and postmodern approaches to the discipline of Political Science.

**List of Courses in M.A. Political Science and International Relations (96 Credits)**

SEMESTER I		
Course Code	Title	Credits
MAPSC1001C04	Introduction to Politics	4
MAPSC1002C04	Contemporary Political Theory	4
MAPSC1003C04	Indian Administration	4
MAPSC1004C04	Politics in India	4
MAPSC1005C04	Theories of International Relations	4
*** **	An Elective (at other Department/School)	4
Total Credits		24
SEMESTER II		
MAPSC2001C04	Western Political Thought	4
MAPSC2002C04	Theories of Comparative Politics	4
MAPSC2003C04	Administrative Theories	4
MAPSC2004C04	Issues in International Relations	4
MAPSC2005C04	International Organizations	4
*** **	An Elective (at other Department/ School)	4
Total Credits Range		24

SEMESTER III		
MAPSC3001C04	India's Foreign Policy	4
MAPSC3002C04	Introduction to Research Methodology	4
PSC ***	Two Electives Courses (Intra-Departmental)	8
*** **	At least two Elective Courses (Intra-Departmental/Inter-departmental/inter-school) equivalent to 8 Credits	8
Total Credits		24
SEMESTER IV		
MAPSC4001C04	Indian Political Thought	4
MAPSC4002C04	Field Work: Data Collection, Analysis & Presentation	4
PSC ***	Two Elective Courses (Intra-Department)	8
*** **	At least Two Elective Courses (Intra-Department/Inter-Departmental/Inter-School) equivalent to 8 Credits	8
Total Credit		24
Grand Total (for CGPA Calculation)		96

Elective Basket (Inter-departmental: Designed for Other Departments)

S.No.	Course Code	Title
1	MAPSC1006E04	Introduction to Human Rights
2	MAPSC1007E04	India's Political Economy
3	MAPSC1008E04	Environment, Security & Governance
1	MAPSC2006E04	Political Sociology
2	MAPSC2007E04	Nationalism and Nation Building

Mooc Course Available online for Students [I (Odd)]: Subject to Availability

1	MAPSC1009E04	Introduction to Public Administration (4 Credits): https://swayam.gov.in/courses/5001-introduction-to-public-administration
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Elective Basket (Intradepartmental)

SN	Code	Semester III (4 Credits Each Course)
1	MAPSC3003E04	Major Ideas and Institutions in Ancient Indian Political Thought
2	MAPSC3004E04	Marxism after Marx
3	MAPSC3005E04	International Law
4	MAPSC3006E04	Development Administration
5	MAPSC3007E04	An Introduction to Multiculturalism
6	MAPSC3008E04	State Politics in India
7	MAPSC3009E04	Globalization: Issues and Debates
8	MAPSC3010E04	Peace and Conflict Resolution
9	MAPSC3011E04	Geo-Politics and Geo-Economics in International Law



SN	Code	Semester IV (4 Credits Each Course)
1	MAPSC4003E04	Public Policy Analysis
2	MAPSC4004E04	International Political Economy
3	MAPSC4005E04	Democracy: Resistance and Liberation
4	MAPSC4006E04	Local Government in India
5	MAPSC4007E04	International Peace and Security
6	MAPSC4008E04	SAARC: Patterns of Conflict and Co-operation
7	MAPSC4009E04	Government & Politics in Africa
8	MAPSC4010E04	State and Politics in Japan
9	MAPSC4011E04	Democracy and Human Rights in India

Non Credit Skill based MOOC Course from the Swayam Portal [I (Odd)]: Subject to Availability

MAPSC1009E04: **Knowledge Society (Non-Credit): <https://swayam.gov.in/courses/5009-knowledge-society>**

Notes:

- As at least one elective course has to be chosen by a student from other department in the first two semesters, the Department resolved that student must chose at least one elective course from other department (s) in each of the first two semesters.
- During first and second semesters the department shall offer some of those elective courses which will be offered for other Departments/Schools. In house students shall be eligible for choosing courses from these courses.
- To encourage CBCS at the University level all the courses to be offered by the Department are open for students of Post-Graduate Programme of other Centres/Departments
- The number of Elective courses offered by the Department/Centre during a particular semester shall be decided by the Centre Committee depending upon the availability of expertise and number of students.
- The MA Program shall be governed by the CBCS Regulation of the University
- The List of Essential and Additional Readings for each course shall be revised and updated by the faculty concerned as and when a course is administered.

Brief Profile of Faculty Members

	<p>Dr. Praveen Kumar Associate Professor Ph.D (Political Science, JNU, New Delhi) Specialization : Political Theory, Indian and Western Political Thought, Geopolitics, Public Policy</p>		<p>Dr. Sumit Kumar Pathak Assistant Professor Ph.D. Specialization : Political Philosophy, Political Theory, Indian Government and Politics and Public administration</p>
	<p>Dr. Abhay Kumar Assistant Professor M.Phil., Ph.D. Specialization :International Politics, Foreign Policy, Nuclear Policy, Japanese Studies, Human Security, Geopolitics, International Peace and Security.</p>		<p>Dr. Pranav Kumar Assistant Professor Ph.D. (African and West Asian Studies, School of International Studies, JNU); M.Phil. (Specialization : African Studies, Geopolitics, International Politics, Non-traditional Security (Energy & Maritime), India's Foreign Policy, Comparative Politics and Governance, International Political Economy, International Organization</p>



4.4 Department of Sociological Studies

Sociology originated as an intellectual response to the crisis confronting the mid nineteenth century European society. Its development over a century and a half since then has been influenced by a variety of socio-economic and political conditions where it has been taught and practiced. It is now established as a multi-paradigmatic academic discipline, with its body of theoretical knowledge enriched and its methodological techniques and procedures systematized.

As Sociology helps us see the world from many vantage points keeping self-reflexivity and critical reflexivity, the Department focuses on teaching as well as research in theoretical, methodological and applied understanding emphasizing on inter-disciplinary approach. As per the mandate of the CUSB, the Department seeks to explore various issues and problems related to the socio-cultural understanding in the context of national development for knowledge generation. Apart from teaching courses in Sociology, the Department accentuates on training students in social sciences methodology and the techniques of social research in both qualitative and quantitative aspects.

Human development is the core of all development discourse. Human resource development through higher education is of great importance for a successful societal development and welfare of a nation. To this end, the Department has been striving to contribute its share by training competent Sociologists who can promote socioeconomic development and welfare at all levels of the diverse cultures and communities of India. Its various offered common courses are aimed at producing competent and skilled citizens who can help in transforming their own people's lives. The Department encourages students in terms of learning and understanding of the courses through active participation in and outside classroom. Apart from the classroom teaching, students will be evaluated continuously on their active engagement through tutorial, book review, term paper/assignment, presentation, seminar, workshop, etc.

Vision:

To be recognised globally by acting locally through generating applicable knowledge in the field. This will help increase understanding about Society, its problems and needs. Therefore, the Department is visionary in its action and scope in such a way that will produce professionals who can serve as effective leaders and actors in any development endeavours across the world.

Mission:

To place the Department on the top of the academic excellence all across the world in general and India in particular by providing an environment where the learners could fulfil their dreams and achieve their maximum merit, and will be working to nurture the local talents and disseminate knowledge.

Objectives of the Centre:

- 1) To equip the students with latest sociological knowledge pertaining to various sub-fields within the discipline of sociology.
- 2) To orient the students for comprehending, analyzing and critically assessing the social reality from sociological perspective.
- 3) To inculcate the analytical ability, research aptitude and relevant skills in the students useful for their social and professional life
- 4) To prepare the students for undertaking research, jobs in Colleges/Universities/Research Institutions, various Government Departments and Non-governmental organizations as well as for various competitive examinations.

4.4.1 Ph. D. in Sociology

The Department aims at teaching and research that largely include – Theory and Thought; Methodological and theoretical Orientations; and Substantive Studies on different dimensions of social life. In this programme, interdisciplinary orientation is reflected in the contents of the courses offered. The main areas of the research include Indian Social Thought, Sociology of Religion, Sociology of Peace and Conflict, Gender Studies, Social Demography, Social Exclusion, Culture and Development, Social Stratification, Dalit Studies, Rural Sociology, Education, Health Care.

List of Courses in Ph.D. in Sociology

Course Code	Course Title	Credit
SOC 901	Research Methodology	4
SOC 902	Tools and Techniques of Research	4
SOC 903	Preparation and Presentation of Research Proposal	4
Total Credits:		12

**4.4.2 M.A. in Sociology**

The teaching and research at the Department primarily include three aspects of sociological studies - Theory and Social Thought; Methodological Orientation and Methods of Social Research; and Substantive Studies on Different Dimensions of Social Life. In this programme, interdisciplinary orientation is reflected in the structure as well as in the contents of the courses offered at M.A. For Master's Programme, the Department provides some core courses on Classical Sociological Thinkers, Indian Society: Structures and Processes, Social Stratification, Sociology of Family and Marriage, Sociological Theories, Methods and Techniques of Social Research, etc.

List of Courses in M.A. in Sociology (96 Credits)

Odd Semester (Semester – I)			
Course Code	Title	Course Instructor	Credits
CORE			
MASOC1001C04	Classical Sociological Thinkers	Dr. Anil Kumar Singh Jha	4
MASOC1002C04	Methodology of Social Research	Dr. Priya Ranjan	4
MASOC1003C04	Social Stratification and Mobility	Dr. Jitendra Ram	4
MASOC1004C04	Indian Social Thought	Dr. Sanat Kr Sharma	4
ELECTIVE			
MASOC1001E04	Sociology of Rural and Urban Life	Dr. Haresh Narayan Pandey	4
MASOC1002E04	Gender and Society	Dr. Anil Kumar Singh Jha	4
MASOC1003E04	Social Exclusion and Inclusion	Dr. Jitendra Ram	4
Even Semester (Semester – II)			
CORE			
MASOC2001C04	Sociological Theories	Dr. Haresh Narayan Pandey	4
MASOC2002C04	Methods and Techniques of Social Research	Dr. Jitendra Ram	4
MASOC2003C04	Indian Society: Structure and Processes	Dr. Anil Kumar Singh Jha	4
MASOC2004C04	Sociology of Movement	Dr. Priya Ranjan	4
ELECTIVE			
MASOC2001E04	Political Sociology	Dr. Parijat Pradhan	4
MASOC2002E04	Globalisation and Social Change	Dr. Haresh Narayan Pandey	4
MASOC2003E04	Sociology of Ageing	Dr. Anil Kumar Singh Jha	4
MASOC2004E04	Sociology of Sanitation		4
Odd Semester (Semester – III)			
CORE			
MASOC3001C04	Advanced Sociological Theories	Dr. Haresh Narayan Pandey	4
MASOC3002C04	Indian Sociological Thinkers	Dr. Parijat Pradhan	4
MASOC3003C04	Kinship, Family and Marriage	Dr. Priya Ranjan	4
ELECTIVE			
MASOC3001E04	Ethnicity, Pluralism and Nation Building	Dr. Jitendra Ram	4
MASOC3002E04	Sociology of Tribes and Other Indigenous People	Dr. Parijat Pradhan	4
MASOC3003E04	Field Exposure and Report Writing		4
Even Semester (Semester – IV)			
CORE			
MASOC4001C04	Modern Indian Social Thought	Dr. Sanat Kr Sharma	4
MASOC4002C04	Sociology of Development	Dr. Haresh Narayan Pandey	4
MASOC4003C04	Economy and Society	Parijat Pradhan	4
ELECTIVE			
MASOC4001E04	Sociology of Religion	Dr. Sanat Kr Sharma	4
MASOC4002E04	Sociology of Education	Dr. Priya Ranjan	4
MASOC4003E04	Field Work and Report Writing		4

**4.4.3 M. A. in Social Work**

Students joining the Social Work bring various academic and personal background. They come with their own distinctive professional and personal reasons for pursuing a master's degree in social work. Thus the curriculum is designed in such a manner that the students can easily build on what they have, by taking advantage of new teaching methods, which strengthen their basic skills and concepts. Keeping this and the changing prospects from the profession in mind, the Department has fabricated its course curriculum. The M.A. Programme is divided into four Semesters.

Course Structure M.A. in Social Work (96 Credits)

Odd Semester (Semester – I)			
CORE			
Course Code	Title	Course Instructor	Credits
MASWK1001C04	Nature and Development of Social Work	Dr. Haresh Narayan Pandey	4
MASWK1002C04	Social Work: Theory and Practice	Dr. Jitendra Ram	4
MASWK1003C04	Dynamics of Indian Society and Social Work	Dr. Anil Kumar Singh Jha	4
MASWK1004C04	Social Security and Social Justice	Dr. Parijat Pradhan	4
MASWK1005C04	Field Work Practicum (Concurrent)-I	All Faculty Members	4
ELECTIVE			
MASWK1001E04	Ecology, Environment and Social Work	Dr. Haresh Narayan Pandey	4
MASOC1002E04	Gender and Society	Dr. Anil Kumar Singh Jha	4
MASOC1003E04	Social Exclusion and Inclusion	Dr. Jitendra Ram	4
Even Semester (Semester – II)			
CORE			
MASWK2001C04	Human Rights and Social Legislation	Dr. Priya Ranjan	4
MASWK2002C04	Contemporary Social Problems	Dr. Anil Kumar Singh Jha	4
MASWK2003C04	Community Organization and Social Action	Dr. Parijat Pradhan	4
MASWK2004C04	Social Work Research and Statistics	Dr. Sanat Kumar Sharma	4
MASWK2005C04	Field Work Practicum (Concurrent)-II	All Faculty Members	4
ELECTIVE			
MASWK2001E04	Dynamics of Development	Dr. Parijat Pradhan	4
MASOW2002E04	Globalization and Social Change	Dr. Haresh Narayan Pandey	4
MASWK2003E04	Social Work and Disaster Management	Dr. Jitendra Ram	4
Odd Semester (Semester – III)			
CORE			
MASWK3001C04	Field of Social Work-I	Dr. Priya Ranjan	4
MASWK3002C04	Field Work Practicum (Concurrent)-III	All Faculty Members	4
ELECTIVE			
MASWK3001E04	Population Dynamics	Dr. Priya Ranjan	4
MASWK3002E04	Community Development Programmes	Dr. Parijat Pradhan	4
MASOC3001E04	Ethnicity, Pluralism and Nation Building	Dr. Jitendra Ram	4
Even Semester (Semester – IV)			
CORE			
MASWK4001C04	Field of Social Work-II	Dr. Haresh Narayan Pandey	4
MASWK4002C04	Field Work Practicum (Concurrent)-IV	All Faculty Members	4
ELECTIVE			
MASWK4001E04	Social Policy and Social Welfare Administration	Dr. Priya Ranjan	4
MASWK4002E04	Corporate Social Responsibility	Dr. Jitendra Ram	4
MASWK4003E04	Dissertation		4



Brief Profile of Faculty Members

	<p>Dr. Anil Kumar Singh Jha Associate Professor Ph. D. (JNU, New Delhi) Specialization : Gender, Social Demography, Sociology of Sanitation, Social Thought</p>		<p>Dr. Sanat Kumar Sharma Associate Professor Ph.D. (BHU, Varanasi) Specialization : Indian Social Thought, Sociology of Religion</p>
	<p>Dr. Jitendra Ram Assistant Professor M. Phil. and Ph.D. in Sociology (JNU, New Delhi) Specialization : Social Exclusion, Dalit Studies, Social Stratification, Research Methodology</p>		<p>Dr. Haresh Narayan Pandey Assistant Professor Phil. and Ph. D in Sociology (JNU, New Delhi) Specialization : Modernisation, Globalisation, Development, Culture, Identity</p>
	<p>Dr. Parijat Pradhan Assistant Professor M.Phil. and Ph. D. in Sociology (BHU, Varanasi) Specialization : Caste and Social Stratification, Dalit Studies, Rural Sociology, Political Sociology</p>		<p>Dr. Priya Ranjan Assistant Professor M.Phil. and Ph. D in Sociology (JNU, New Delhi) Specialization : Sociology of Religion, Sociology of Education, Indian Social Thought</p>



4.5 Department of Historical Studies & Archaeology

The Department of Historical Studies and Archaeology offers the students an advanced system of knowledge full of new epistemological and ontological foundations and research explorations in the realm of historical studies. The reconstruction and the understanding of the past is of paramount importance to protect and preserve the cultural and intellectual heritage and also to know about the true spirit of a nation. India, as a nation, has traversed a tortuous trek on the cultural, civilizational and historical course. India abounds in stupendous historical events in different spheres of human existence from cultural to socio-economic and politico-administrative fields. Moreover, India has a distinction of waging the greatest mass movement in the form of the National Freedom Struggle, unparalleled in the world history, and unique amongst the third world countries. The colossal sacrifices of Indian masses, intelligentsia, commoners including peasants, tribes have been unprecedented in the world history. The uniqueness and vastness of India's past prompts the Department to endeavor towards further exploring the erstwhile historical phenomena entailing newer and innovative approaches exploiting the ever growing interface between education and technology. The Department endeavors to explore new frontiers of research and knowledge-creation within the existing pool of knowledge in History. Inculcation of commitment to India's culture and tradition within the contending frameworks of contemporary 'Idea of India' remains the central focus of Department's teaching-learning method.

VISION: The vision of the Department is to spearhead the research activities particularly in the field of Indian culture and the Indian Nationalism. As the university is located in Gaya, the heart of Buddhism, the Department has the unique advantage of utilizing the sources in the Buddhist studies in the pursuit of the further research in this field and also establishing academic relations with the educational institutions in other Asian countries having stronger Buddhist influence and thus promoting exchange of ideas globally. Further, this region has also remained at vanguard in the Nationalist Movement right from the revolt of 1857 to the revolt of 1942. So, the region is naturally abundant with rich historical sources to attract new researches in this field and the Department looks forward to take this advantage.

Objectives:

- The primary objective of the Department is to emphasise the importance of theory and analytical concepts in reconstructing the past.
- To promote researches in hitherto unexplored areas with a focus on the primary sources in languages ranging from Sanskrit, Pali, Prakrit to modern Indian languages, along with the archaeological sources.
- To focus on the study of contemporary Indian History along with exploring the history of other countries.
- To focus on historiography and the philosophy of history and to follow new global historiographical trends such as oral history, gender history, intellectual history, cultural history, subaltern history and the post-modernistic perspectives.

4.5.1 M.A in History

Department of History & Archaeology

The Department of Historical Studies and Archaeology offers the students an advanced system of knowledge full of new epistemological and ontological foundations and research explorations in the realm of historical studies. The reconstruction and the understanding of the past is of paramount importance to protect and preserve the cultural and intellectual heritage and also to know about the true spirit of a nation. India, as a nation, has traversed a tortuous trek on the cultural, civilizational and historical course. India abounds in stupendous historical events in different spheres of human existence from cultural to socio-economic and politico-administrative fields. Moreover, India has a distinction of waging the greatest mass movement in the form of the National Freedom Struggle, unparalleled in the world history, and unique amongst the third world countries. The colossal sacrifices of Indian masses, intelligentsia, commoners including peasants, tribes have been unprecedented in the world history. The uniqueness and vastness of India's past prompts the Department to endeavor towards further exploring the erstwhile historical phenomena entailing newer and innovative approaches exploiting the ever growing interface between education and technology. The Department endeavors to explore new frontiers of research and knowledge-creation within the existing pool of knowledge in History. Inculcation of commitment to India's culture and tradition within the contending frameworks of contemporary 'Idea of India' remains the central focus of Department's teaching-learning method.

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**Objectives:**

- The primary objective of the Department is to emphasise the importance of theory and analytical concepts in reconstructing the past.
- To promote researches in hitherto unexplored areas with a focus on the primary sources in languages ranging from Sanskrit, Pali, Prakrit to modern Indian languages, along with the archaeological sources.
- To focus on the study of contemporary Indian History along with exploring the history of other countries.
- To focus on historiography and the philosophy of history and to follow new global historiographical trends such as oral history, gender history, intellectual history, cultural history, subaltern history and the post-modernistic perspectives.

Programmes offered by the Department of History & Archaeology

1. Ph.D. Programme in History

The Department of Historical Studies & Archaeology is going to offer Ph.D. in History from this session.

List of courses in Ph.D. Programme as follows:

Course Code	Course Title	Credits
HIS 901	Research Methodology	4
HIS 902	Tools and Techniques of Research in Historical Studies	4
HIS 903	Presentation of Research Proposal	4
Total Credits		12

2. M.A in History

The Department offers Master programme in History which comprises of four semesters for the period of two years. Through a suitable structures and balanced syllabus incorporating various dimensions of historical studies, the programme emphasizes on fostering sophisticated and complex perspectives on the past. The programme is well tailored to train the students on expanding knowledge base in historical studies with analytical and conceptual clarity.

List of Courses in M.A. History (96 Credits)

Sl. No	Course Code	Course Title	Credits	Course Instructor
Semester-1				
1	MAHIS1001C04	Historiography: Concept, Methods and Evolution	4	Mr. Rohit Kumar
2	MAHIS1002C04	History of Ancient India up to 800CE	4	Dr. Neeraj Kumar Singh
3	MAHIS1003C04	Selected Issues in the History of Nationalism in India, up to 1914	4	Dr. Sudhanshu Kumar Jha
4	MAHIS1004C04	History of Ideas in Modern India	4	Mr. Rohit Kumar
5	MAHIS1005E04	History of Science and Technology in India	4	Dr. Neeraj Kumar Singh
6	MAHIS1006E04	History of Ecology and Environment in India	4	Dr. Anil Kumar
7	MAHIS1007S00	Reporting of Historical Sites	0	
			Total- 24	
Semester-2				
1	MAHIS2001C04	Concept and Methodology of Historical Research and Investigation	4	Mr. Rohit Kumar
2	MAHIS2002C04	Constructing Village or Local History through Field Work	4	Dr. Sudhanshu Kumar Jha
3	MAHIS2003C04	Major Themes in Contemporary World since 1945	4	Dr. Sudhanshu Kumar Jha
4	MAHIS2004E04	History of Indian Diaspora	4	Dr. Anil Kumar
5	MAHIS2005E04	Indian History and Tourism	4	Dr. Neeraj Kumar Singh
6	MAHIS2006E04	History of Women and Women's Movement in India	4	Mr. Rohit Kumar
7	MAHIS2007S00	Reporting of Museum or Archives	0	
			Total-24	







Semester-3				
1	MAHIS3001C04	Historiographical Traditions and Trends in India	4	Mr. Rohit Kumar
2	MAHIS3002C04	History of Medieval India from 8 th Century to 18 th Century	4	Dr. Anil Kumar
3	MAHIS3003C04	Selected Issues in the History of Nationalism in India (1917-1947)	4	Dr. Sudhanshu Kumar Jha
4	MAHIS3004C04	Economic Issues, Policies and Perspectives in Modern India	4	Dr. Sudhanshu Kumar Jha
5	MAHIS3005E04	History of Art, Architecture and Heritage in India	4	Dr. Neeraj Kumar Singh
6	MAHIS3006E04	History of Contemporary India	4	Mr. Rohit Kumar
7	MAHIS3007S00	Review of Book or Journal	0	
Total-24				
Semester-4				
1	MAHIS4001C04	State, Law and Governance in Modern India	4	Dr. Sudhanshu Kumar Jha
2	MAHIS4002C04	Impact of Global Economic Issues on Indian National Movement (1914-1950)	4	Mr. Rohit Kumar
3	MAHIS4003C04	History of Resistance- Tribal and Peasant Movements in Colonial Period	4	Dr. Sudhanshu Kumar Jha
4	MAHIS4004E04	History of Skill Development in India	4	Dr. Anil Kumar
5	MAHIS4005E04	History of Peace & Happiness in India	4	Dr. Neeraj Kumar Singh
6	MAHIS4006E04	World in the twentieth century up to 1945	4	Mr. Rohit Kumar
7	MAHIS4007S04	Making of Historical Documentaries	0	
Total-24				

Note- 1. It is mandatory for the students to earn minimum 8 credits from the courses Offered by other Departments.

2. The students may also earn the credits by selecting relevant courses offered on SWAYAM (UGC) by following the due procedure.

Brief Profile of Faculty Members

	<p>Dr. Sudhanshu Kumar Jha Assistant Professor Ph.D. (Patna University) Specialization : Indian Philosophical Traditions, Historiography, Nationalism, National Movement, Economic History, Tribal, Peasant , Gender History & Environmental History</p>		<p>Dr. Neeraj Kumar Singh Assistant Professor Ph.D. (University of Lucknow) Specialization : Indian socio-political tradition and traditional knowledge systems</p>
	<p>Dr. Anil Kumar Assistant Professor Ph.D. JNU New Delhi Specialization : Maratha History, Urbanizations, Environmental history, History and Anthropology, Family History</p>		<p>Mr. Rohit Kumar Assistant Professor Ph.D. BHU Specialization : Historiography, writings on Indian national movements, Gender History, Subaltern writings.</p>

**5. SCHOOL OF HUMAN SCIENCE**

The School of Human Sciences aims to study human beings as a social, cultural and biological species in the context of their experiences, activities, constructs and artefacts. The Human nature is not discipline bound and therefore the School emphasizes interdisciplinary approach to understand it. The school has a mission to pursue quality education and research for greater understanding of human nature and challenges faced by humanity. Disciplines like Anthropology, Psychology, Social work and other Social Sciences interactively may engage in research leading to knowledge system that serves the development of mankind. The objective of the school is to create advance scientific knowledge in various Human Sciences through research. The Centre for Psychological Sciences is established under the School of Human Sciences.

5.1 Department of Psychological Sciences

With a vision to spread and create world class knowledge in the field of Psychology, the Centre for Psychological Sciences (CPSYS) recognizes the immense potential of Psychology and its utility in improving quality of life of individuals and society. The mission of the Centre is to educate and train psychologists who can serve the humanity. It is presently offering Master's and PhD programmes in Psychology.

5.1.1 Ph.D in Psychology and Clinical Psychology - Department of Psychological Sciences is currently offering Ph.D. in Psychology and Clinical Psychology.

List of Courses in Ph.D. Psychology and Clinical Psychology

Course Code	Course Title	Credits
PSY 901	Research Methodology	4
PSY 902	Tools and Techniques of Research	4
PSY 903	Preparation and Presentation of Research Proposal	4
	Total Credits	12

5.1.2 M.A./M.Sc. in Psychology**List of courses in M.A./MSc. Psychology****SEMESTER-I**

Course Code	Course Title	Credits
MPSY1001C04	Advanced General Psychology	4
MPSY1002C04	Research Methods & Experimental Design	4
MPSY1003C04	Biological Basis of Behaviour	4
MPSY1004C04	Psychological Testing & Assessment	4
*	Elective (Interdepartmental/Interschool) I	4
**	Swayam/MOOCs (Massive open online Courses) I	4
	Total = 24	

*Any one paper offered by other department of the School of Social Sciences or any other allied Departments /Schools. The course code will depend on the course opted by the student from concerned department or

** Any one paper/course offered by SWAYAM/MOOCs.

SEMESTER II

Course Code	Course Title	Credits
MPSY2001C04	Social Psychological Perspective	4
MPSY2002C04	Quantitative Methods of Data Analysis	4
MPSY2003C04	Cognitive Processes	4
MPSY2004C04	Self-Psychology in Indian and Western thought tradition	4
MPSY2500C04#	Practical/s	4
*	Elective II	4
***		24
MPSY2556C04**	Summer Internship	4

Minimum eight practicals will be conducted by a student linked to the topics taught in the foundation courses (List of all 8 Practical topics finalized by the Departmental Committee will be made available in the first week of the commencement of Semester I; in the beginning of the Academic Year)

* Any one paper offered by other department of the School of Social Sciences or any other allied Departments /Schools. The course code will depend on the course opted by the student from concerned department.



** The student will involve in his /her Summer Internship during the summer vacation after completion of the second semester examination. Accordingly a student will prepare the internship report during the third semester. Examination/Evaluation of this paper will also be done in the third semester. Hence, the credit of the course will be counted in the third semester.

*** A student who wishes to opt Dissertation; will prepare his/her Research proposal by the end of 2nd Semester (credit will not be awarded for preparation of Research Proposal). Which will be taken up in 3rd Semester.

SEMESTER III

Course Code	Course Title	Credits
MPSY3001C04	Qualitative Method of Data Analysis	4
	*Elective III: Single Paper Specialization; to be chosen from the	
	Elective Basket of Semester III	4
	*Elective IV to VII: Four Paper Specialization ; to be chosen from the Elective	4X4= 16
	Basket of Semester III/ Dissertation**	
		24
*	Course Code will be as per the assigned Code to the respective Elective papers	

** Dissertation is of 8 credits in semester III (equivalent to two elective paper of 4 credits), candidate who will choose dissertation as elective paper, it continues in semester IV also as elective paper of 8 credits (8 credits + 8 credits= 16 credits)

SEMESTER IV

Course Code	Course Title	Credits
MPSY4001C04	Comprehensive Viva-Voce	4
	*Elective VIII: Single Paper Specialization; to be chosen from the	4
	Elective Basket of Semester IV	
	*Elective IX to XII: Four Paper Specialization ; to be chosen from the	4X4=16
	Elective Basket of Semester IV/ Dissertation**	
		24
*	Course Code will be as per the assigned code to the respective Elective Papers	

** Dissertation will choose only by those candidates who already opted it in semester III(In semester IV it is equivalent to 8 credits)

Guidelines for choosing Elective papers for Semester III & Semester IV:

In each semester students have to earn 16 credits from electives and/or Dissertation.

- Dissertation is an Elective Paper of 16 credits (8 credits each to be earned in Semester III and Semester IV respectively).
- A student (preferably with a higher grade i.e.65% in Semester I / last PG examination) who chooses Dissertation will be encouraged to choose Dissertation.
 - A student in place of Dissertation will choose Specialization Electives of 16 credits distributed in 4 papers of 4 credits each from the Elective Basket of Semester III and Semester IV.
- List of Elective Papers comprise Single Paper (4 Credits) Elective and Four papers (16 Credits) Specialization Electives; in both the Semesters III & IV. In Semester III a Student will choose four papers Specialization Electives of 16 Credits.
- In Semester IV a student can choose Single Paper Electives 4 in number from the list of 4 credits to each paper (16 Credits) or a Four Paper Specialization Electives of 16 Credits.
- A student as per his choice may also choose only two papers out of 4 papers of a Specialization Electives of 16 credits and similarly two papers out of 4 papers of another Specialization Electives; to make a total of 16 Credits from the choices of both (two papers each) Specialization Electives.

**Single Paper Elective Basket (4 Credits): SEMESTER III**

Course Code	Course Title	Credits
MPSY3002E04	Developmental Disabilities & Psychological Intervention	4
MPSY3003E04	Severe Mental Illness & Psycho-Social Rehabilitation	4
MPSY3004E04	Advanced Counselling Skills I (General Counselling Skills)	4
MPSY3005E04	A Conceptual History of Psychology	4
MPSY3006E04	Psychology & Community Oriented Services	4

**Four papers specialization paper basket (4 Credits each): Semester III
Organizational Behaviour**

Course Code	Course Title	Credits
MPSY3007E04	Organizational Behaviour in the Indian Context	4
MPSY3008E04	Learning and Development	4
MPSY3009E04	Interpersonal and Team-processes in organization	4
MPSY3010E04	Coaching and Mentoring at Workplace	4

**Semester III/IV Practicum
Clinical Psychology**

Course Code	Course Title	Credits
MPSY3011E04	Introduction to Clinical Psychology	4
MPSY3012E04	Psychopathology	4
MPSY3013E04	Psychotherapy/Therapeutic Intervention	4
MPSY3014E04	Philosophy of Clinical Psychology	4
MPSY3015E04	Practicum	-

**Semester III/IV Practicum
Developmental Psychology**

Course Code	Course Title	Credits
MPSY3016E04	Introduction to Developmental Psychology	4
MPSY3017E04	Developing Child	4
MPSY3018E04	Adolescence Adulthood and Aging	4
MPSY3019E04	Developmental Disability and Psychopathology	4
MPSY3020E04	Practicum	-

**Semester III/IV Practicum
Health Psychology**

Course Code	Course Title	Credits
MPSY3021E04	Introduction to Health Psychology	4
MPSY3022E04	Positive Emotions and Health	4
MPSY3023E04	The patients in Treatment Setting	4
MPSY3024E04	Management of Illnesses	4
MPSY3025E04	Practicum	-

**Semester III/IV Practical
Cognitive Psychology**

Course Code	Course Title	Credits
MPSY3026E04	Contemporary Approaches to the study of cognition	4
MPSY33027E04	Applied Cognitive Psychology	4
MPSY3028E04	Social Cognition	4
MPSY3029E04	Applied Social Cognition	4
MPSY3030E04	Practicum	-

**Semester III/IV Practical
Counselling Psychology**

Course Code	Course Title	Credits
MPSY3031E04	Methods and Approaches	4
MPSY3032E04	Assessment and Research	4
MPSY3033E04	Areas and Related discipline	4
MPSY3034E04	Background Fields	4
MPSY3035E04	Practicum	-

**Semester III/IV Practical Disaster management**

Course Code	Course Title	Credits
MPSY3036E04	Understanding Disaster Management	4
MPSY3037E04	Psychiatric Perspective on Disaster Trauma	4
MPSY3038E04	Post Disaster Psycho social Rehabilitation	4
MPSY3039E04	Methodological Challenges in Disaster Management	4
MPSY3040E04	Practicum	-

MPSY3041E08**Thesis &Dissertation****8****Single Paper Elective Basket (4 Credits): SEMESTER IV**

Course Code	Course Title	Credits
MPSY4002E04	Advanced Counselling Skill- II (Facilitating Methods of Personal Growth)	4
MPSY4003E04	Neuropsychology	4
MPSY4004E04	Forensic Psychology	4
MPSY4005E04	Media Psychology	4
MPSY4006E04	Rehabilitation Psychology	4
MPSY4007E04	Social Psychology	4

Psychometrics Elective Basket (4 Credits): Semester IV

MPSY4008E04	Statistics	4
MPSY4009E04	The Science of Psychological Assessment	4
MPSY4010E04	Experimental designs	4
MPSY4011E04	Practicum	4

Positive Psychology: 4 Credits

MPSY4012E04	Foundations of Positive Psychology	4
MPSY4013E04	Positive Psychology in Cultural and Social Context	4
MPSY4014E04	Positive Psychology in day to day living	4
MPSY4015E04	a. Positive Psychology in Clinical and Community Intervention b. Positive Psychology in Action(opt any one either a or b)	4
MPSY4016E04	Practicum	

MPSY4022E08**Thesis/Dissertation****8**

NOTE:

- The courses from Elective baskets will be offered as per the availability of teaching resources in the department.

A student opting for advanced counselling skill- I should preferably choose advanced counselling skill- II to get maximum benefit of teaching and training in acquiring mastery in the area specialization.

Psychology Laboratory

The existing Psychology laboratory provides three kinds of facilities- conducting experiments, psychological testing and qualitative research. The laboratory also enables students to carry out computer based experiments and lab experiments on psychosocial phenomenon. The laboratory contains numerous psychological tests such as neuropsychological tests/batteries, personality tests, intelligence tests, adjustment scales and many other important scales. The psychology lab is equipped with software such as SPSS, R and QDA to carryout analysis of the research.

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Brief Profile of Faculty Members

	<p>Dr. Dharmendra Kumar Singh Associate Professor <i>M.Phil, Ph.D (Ranchi Institute of Neuro-psychiatry and Allied Sciences, RINPAS, Kanke, Ranchi)</i> Specialization: Clinical Psychology</p>		<p>Dr. Narsingh Kumar Assistant Professor Ph.D. (IIT Guwahati) Specialization : Organizational Behaviour</p>
	<p>Dr. Das Ambika Bharti Assistant Professor Ph.D. (Banarus Hindu University) Specialization : Clinical/Health Psychology</p>		<p>Dr. Manglesh Kumar Manglam Assistant Professor M.Phil.-Ph.D. (CIP, Ranchi) Specialization : Clinical Psychology</p>
	<p>Dr. Chetna Jaiswal Assistant Professor M. Phil. Ph.D. (University of Rajasthan, Jaipur) Specialization :Organizational Behaviour and Social Psychology</p>		



6. SCHOOL OF LANGUAGES AND LITERATURE

Human civilization evolves through innumerable phases of language evolution. Knowledge too in its resurgent march unfailingly walks hand in hand with languages to streamline learning. Creative endeavours representing human behaviour mold languages to shape literature. As signifier of lingual heritage, literature showcases cultural diversities to promote learning through textual analysis and interpretations. The School of Languages and Literature is grounded in the above said ideas to facilitate studies in language and literature and promote communication and presentation skills. Interdisciplinary approach with cultural dimension in the pluralistic society forms the objective of the School. Presently, the School stands as an academic edifice with its Department of English and the Department of Hindi. The two Departments are open to incorporate various academic programmes in foreign and Indian languages, respectively, for study and research in the understanding and interpretation of cultures and the contextual correlations of language and literature worldwide.

6.1 Department of English

Human civilization evolves through innumerable phases of language evolution. Knowledge too in its resurgent march unfailingly walks hand in hand with languages to streamline learning. Creative endeavours representing human behaviour mould languages to shape literature. As signifier of lingual heritage, literature showcases cultural diversities to promote learning through textual analyses and interpretations. The School of Languages and Literature is grounded in the above said ideas to facilitate studies in language and literature and promote communication and presentation skills. Interdisciplinary approach with cultural dimension in the pluralistic society forms the objective of the School. Presently, the School stands as an academic edifice with its Department of English and the Department of Hindi. The two Departments are open to incorporate various academic programmes in foreign and Indian languages, respectively, for study and research in the understanding and interpretation of cultures and the contextual correlations of language and literature worldwide.

6.1 Department of English

The **Department of English** which started functioning from the academic session 2012 - 13 aims to encourage the students to have inter-lingual approach for the proficient understanding of foreign languages and literatures for their skillful presentation of ideas in both oral and written modes. Language proficiency is held as a major tool for cognitive development in varied contexts. Techno-sound systems are installed in the smart classrooms to meet the contemporary requirements of the challenging language tasks. The Department focuses on the methodologies for teaching English as one of the foreign languages in both theory and practice. Extra-curricular and co-curricular activities are promoted for the enrichment of learners' sensibility. The Department offers both MA in English and PhD in English programmes, the syllabi of which are revised and updated annually. Our students have qualified NET, and secured jobs through campus selection.

6.1.1 Ph.D. in English

The Ph.D. programme in English offers to the students option to choose their topics from any of the following areas of research:

Indian English Literature, Indian Literature in English Translation, Indian Poetics, British Literature, American Literature, New Literatures in English (Indian, Australian, Canadian, African, Caribbean), Comparative Literature, Film and Literature, Gender Studies, Cultural Studies, Postcolonial Studies, Literary Theory and Criticism, Translation Studies, Linguistics and ELT.

Eligibility:

M.A in English (Literature / Linguistics) from any recognised University with 55% in aggregate or its equivalent Grade B in UGC 7 point scale. A relaxation of 5% of marks from 55 to 50% or an equivalent relaxation of Grade for SC/ST/Differently abled candidates. Note: A candidate who is qualified in a national level test such as National Eligibility Test (NET-JRF), NET-LS (without fellowship), Graduate Aptitude Test for Engineering (GATE), State Level Eligibility Test (SLET) accredited by UGC/Central or State Government may be considered for direct admission to the PhD Programme without appearing in the CUCET Entrance Test. However, such candidates have to apply for the programme on CUCET portal and pay the requisite fees.

Coursework in PhD English

Course Code	Course Title	Credits	Course Instructor
ENG 901	Research Methodology	4	Dr. Vipin K. Singh/ Dr. Archana Kumari
ENG 902	Tools and Techniques of Research	4	Dr. Suresh Kurapati/ Dr. Arpana Jha
ENG 903	Preparation and Presentation of Research Proposal	4	Concerned Supervisor
Total Credits		12	

**6.1.2 M.A. in English**

The two-year (four semesters) M.A. English programme is designed to meet the requirements of language and literature studies. A broad spectrum of canonical and non-canonical texts is prescribed covering the major literary traditions spanning 16th century to 20th century and beyond. The emphasis is not on a descriptive approach based on conventional periodization of English literature but on critical approach to the literary movements across time and space. Both imaginative exploration and critical intelligence are promoted while dealing with texts of British, European, Indian, South Asian and American literatures, including their translated versions, and the New Literatures in English. Literary theories and criticism help widen the intellectual base and horizon of the students. Other than the core courses, a number of elective courses, including MOOC/SWAYAM courses, are there in the syllabus to give a wider choice to the students in consonance with the Choice Based Credit System (CBCS).

Eligibility:

Bachelor's Degree in any discipline from recognized University with a minimum of 55% marks for General / OBC candidates and 50% marks for SC/ST / PWD candidates.

Course Structure:
List of Courses in M.A. English (96 Credits)

Course Code	Course Title	Credits	Course Instructor
Semester - I			
MAENG1001C04	Shakespeare and 17 th Century British Literature and Thought	4	Prof. Prabhat K. Singh
MAENG1002C04	Introduction to Linguistics	4	Dr. Arpana Jha
MAENG1003C04	Eighteenth Century British Literature	4	Mr Abhay L. Ekka
MAENG1004C04	Romantic Literature and Thought	4	Dr. Vipin K. Singh
Semester - II			
MAENG2001C04	British Literature and Thought of the Victorian Age	4	Dr. Saroj Kumar
MAENG2002C04	Literary Criticism	4	Dr. Vipin K. Singh
MAENG2003C04	English Language Teaching	4	Dr. Archana Kumari
MAENG2004C04	Post-Colonial Literature	4	Dr. Arpana Jha
Semester - III			
MAENG3001C04	Literary Theory: The Major Texts	4	Dr. Sunil Kumar
MAENG3002C04	American Literature	4	Mr Abhay L. Ekka
MAENG3003C04	Twentieth Century British Literature	4	Dr. Archana Kumari
Semester - IV			
MAENG4001C04	Indian Writing in English	4	Prof. Prabhat K. Singh
MAENG4002C04	Research Methodology and Writing Skills	4	Dr. Archana Kumari
MAENG4003C04	European Literature in English Translation	4	Mr Abhay L. Ekka


Elective Courses			
Course Code	Courses	Credits	Course Instructor
MAENG1001E04	Advanced Writing & Communication Skills	4	Dr. Saroj Kumar
MAENG1002E04	Contemporary Indian English Novel	4	Dr. Archana Kumari
MAENG1003E04	English Language in India	4	Dr. Suresh Kurapati
MAENG2001E04	Translation: Theory and Practice	4	Dr. Vipin K. Singh
MAENG2002E04	Indian Literature in English Translation	4	Prof. Prabhat K. Singh
MAENG2003E04	Film Appreciation course (MOOC)	4	SWAYAM
MAENG2004E04	Ecocriticism and Environmental Sustainability	4	Dr Sunil Kumar
MAENG3001E04	New Literatures in English	4	Prof. Prabhat K. Singh
MAENG3002E04	Introduction to Stylistics	4	Dr. Arpana Jha
MAENG3003E04	Tribal and Dalit Literatures in English	4	Dr. Suresh Kurapati/ Mr. Abhay L. Ekka
MAENG3004E04	Contemporary World Literature	4	Dr. Sunil Kumar





MAENG4001E04	Gender, Sexuality and Social Change	4	Dr. Vipin K. Singh
MAENG4002E04	Film and Literature	4	Dr. Arpana Jha
MAENG4003E04	Material Design in ELT	4	Dr. Suresh Kurapati
MAENG4004E04	Indian Intellectual Traditions	4	Prof. Prabhat K. Singh/ Dr. Arpana Jha
MAENG4005E04	English Writing from Bihar	4	Prof. Prabhat K. Singh/ Dr. Saroj Kumar
MAENG4006E04	South Asian Literature in English	4	Dr. Vipin K. Singh/ Dr. Sunil Kumar
Self-study/Skill course			
Course Code	Course Title	Credits	Course Instructor
MAENG1001S04	Soft Skills and Personality Development	0	Dr. Saroj Kumar
MAENG2001S04	English for Academic Writing	0	Dr. Arpana Jha

NB: The syllabus will be followed in accordance with the Ordinance of MA English Programme.

Brief Profile of Faculty Members

	<p>Prof. Prabhat Kumar Singh Professor MA (Gold medalist), Ph.D. Specialization : Poetry, fiction, literary criticism and new literatures in English Prof. Singh is former Pro Vice-Chancellor, Purnea University, Purnia, and also Head, Dept. of English and Dean, Humanities, MGKV, Varanasi. A distinguished academic of 40 years of standing, Prof. Singh has to his credit fifteen books of critical and creative writings including <i>The Indian English Novel of the New Millennium</i> (2013) and <i>Random Thoughts: Essays in Criticism</i> (2015), both from Cambridge Scholars Publishing, UK. In addition, he has successfully supervised seven doctoral dissertations and has published three dozen research papers in Indian and foreign literary journals and anthologies. He has attended/chaired fifty-five national / international seminars/conferences in India and abroad. A bilingual poet and translator, he is the recipient of National Millennium Honour 2000 and Michael Madhusudan Award 2003. He has been on visits to Malaysia, Spain, Singapore, Australia and the USA with varied academic engagements at universities</p>
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	<p>Dr. Vipin K. Singh Associate Professor & HoD M.A., D.Phil., UGC Major Research Project Specialization : Gender Studies, Tribal Folkloristics, Literary and Critical Theories, Shakespeare.</p>		<p>Dr. Archana Kumari Associate Professor M.A. (English), NET (Linguistics), Ph.D. (ELT, Ranchi University, Ranchi) Specialization : Linguistics and English Language Teaching, Communication Skills, Indian English Literature, Diaspora Writing, Women's Studies, Translation Studies etc.</p>
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	<p>Dr. Suresh Kurapati Assistant Professor B.Ed. M.Phil. and Ph.D. (English, University of Hyderabad) Specialization : English Language Teaching (ELT), English in India and Psycho-linguistics, Literature Studies, especially New Literatures and Culture Studies.</p>		<p>Dr. Arpana Jha Assistant Professor M.A. (English, Linguistics), PhD (Linguistics , JNU New Delhi), PGJMC Specialization : Applied Linguistics, Curriculum and Material Design, Pragmatics and Discourse, Post-colonial Studies, and Aesthetics of Film and Literature</p>
	<p>Dr. Saroj Kumar Assistant Professor MPhil. & Ph.D. (English; EFL University, Hyderabad) Specialization : Sociolinguistics, English Language Education, Phonetics and Phonology</p>		<p>Mr. Abhay Leonard Ekka Assistant Professor MA (English), NET, M. Ed. Specialization : English language and Literature, Mr Ekka has interest in Diasporic Literature, Tribal Literature and Modern Critical Theories</p>
	<p>Dr. Sunil Kumar Assistant Professor M.Phil. & Ph.D. (English EFL University, Hyderabad), (UGC-NET-JRF & SRF) Specialization : Contemporary Literary and Cultural Theory, Contemporary Fiction, Environmental Humanities</p>		

6.2 हिंदी विभाग

‘विश्वविद्यालय केन्द्रीय बिहार दक्षिण’ का ‘हिंदी विभाग’ भाषा और साहित्य के अध्ययन-अध्यापन के अध्यापन साथ-विद्यार्थियों में उच्चस्तरीय शोध-अभिरुचि विकसित करने के लिए प्रतिबद्ध है। यह भाषा और साहित्य के माध्यम से भारतीय समाज की बहुआयामी सांस्कृतिक विविधताओं का अध्ययन करता है। यह साहित्य और समाज की उत्कृष्ट परंपराओं एवं विरासत को अक्षुण्ण रखते हुए, रचनाशीलता के विकास तथा ज्ञान के नये अनुशासनों की रचना एवं उनमें परस्पर संवाद की ओर उन्मुख है। इसके साथ, यह विभाग बदलते वैश्विक परिदृश्य में नयी तकनीक एवं संचार की दिशा में अग्रसर होते हुए, भारतीय भाषाओं को रोजगार परक बनाने के लिए भी प्रयासरत है। वर्तमान में इस विभाग में ‘पी-एच.डी. हिन्दी’ और ‘स्नातकोत्तर हिन्दी’ (‘एम.ए. हिन्दी’) - दो कार्यक्रम संचालित हो रहे हैं।

‘विभाग’ की भावी योजनाओं में ‘भित्ति-पत्रिका’ व ‘शोध-पत्रिका’ (छमाही) का प्रकाशन, विभागीय ब्लॉग व फ़िल्म-अभिलेखागार का निर्माण, ‘मीडिया और रचनात्मक लेखन’ विषय में स्नातकोत्तर डिप्लोमा कोर्स शुरू करना, साहित्यकारों और भाषाविज्ञानियों की स्मृति में व्याख्यानमाला का आरम्भ, पार्श्ववर्ती क्षेत्रों में लोक-साहित्य का सर्वेक्षण, समाज के वंचित समूहों से सम्बद्ध अध्ययन के लिए ‘सावित्रीबाई फुले अध्ययन पीठ’ और ‘हिन्दी’ व ‘उर्दू’ में शोध-पीठ स्थापित करना आदि शामिल हैं।

6.2.1 ‘पी-एच.डी. हिन्दी’:- इस कार्यक्रम का उद्देश्य ‘हिन्दी’ भाषा, साहित्य और उसकी सैद्धान्तिकी से सम्बद्ध विविध क्षेत्रों और तत्सन्दर्भित दिनानुदिन उभर रहे नवीन क्षितिजों में स्तरीय व गुणवत्तापूर्ण अनुसन्धान को बढ़ावा देना है, जिसका स्वभाव अन्तरानुशासिक और रुझान सामाजिक हो और जिसे शोधार्थी शोध-निर्देशक/निर्देशिका के ‘अधीन’ होकर नहीं, बल्कि उसके ‘साथ’ रहकर सम्पादित कर सके। इस कार्यक्रम के अन्तर्गत, सर्वप्रथम शोधार्थियों को शोधक्षम बनाने के लिए, 1 सेमेस्टर (छह माह) के कोर्सवर्क की व्यवस्था है, जिसके द्वारा वे अछूते शोध-विषयों के अन्वेषण के विवेक और तदुपयोगी (परम्परागत व



नवाचारी) शोध की विधियों, प्रविधियों व उपकरणों से समृद्ध होते हैं। इस पाठ्यक्रम का ढाँचा ऐसा रखा गया है, जिससे यह अपने केन्द्रीय लक्ष्य - शोध-प्रबन्ध लेखन - को पूर्ण करने के साथ-साथ, शोध-निर्देशक/निर्देशिका और शोधार्थी को विविधोन्मुखी मौलिक शोध-पत्रों की रचना हेतु भी उत्प्रेरित करे, ताकि दोनों का सम्मिलित अध्ययन-सृजन की महत्तर परियोजना में रचनात्मक व सार्थक योगदान कर सके।

पाठ्यक्रम की संरचना :

कोर्स-कोड	कोर्स का शीर्षक	क्रेडिट	कोर्स(शिक्षक) अनुदेशक-
HIN 901	शोध-कार्यप्रणाली	4	डा. पाठक कुमार रवीन्द्र
HIN 902	शोध : उपकरण और प्रविधि	4	डा.शान्ति भूषण
HIN 903	शोध-प्रस्ताव : निर्माण और प्रस्तुति	4	
	कुल क्रेडिट	12	

6.2.2 'स्नातकोत्तरहिंदी' ('एम.ए. हिन्दी') :- द्विवर्षीय 'स्नातकोत्तरहिंदीकार्यक्रम' हिंदीभाषाऔरसाहित्य मेंनवीन एवंमौलिक शोध में रुचि रखनेवालों के साथ उनके लिए भीउपयोगीहै, जोअनुवाद, सर्जनात्मकलेखन, अखबार, टेलीविजन, सिनेमाऔरनयेमीडियामेंअपनीप्रतिभाकाविनियोगकरनाचाहतेहैं। यह पाठ्यक्रम अध्यापक औरविद्यार्थी के अंतःसंबंध, उनकीपरस्पर-संदर्भितस्वायत्तताऔरअंतर-अनुशासनात्मकता के साथविशेषज्ञतापरजोरदेताहै, इसलिए इसपाठ्यक्रममेंअनिवार्यकोर्स के साथवैकल्पिकविषयों के अध्ययन-अध्यापनकाभीप्रावधानकियागयाहै।इसकाउद्देश्य मौखिक एवंलिखितभाषिक दक्षताऔरविश्लेषण-क्षमताविकसितकरने के साथ-साथ, हिन्दी-साहित्य कोहिन्दीतरभारतीय साहित्य, विश्व-साहित्य तथाज्ञान के विविधअनुशासनों के परिप्रेक्ष्य में समझनाहै।इसपाठ्यक्रम की सहायतासेविद्यार्थियोंमेंसाहित्य की विविधरूपआस्वादन-क्षमताकाहीनहीं, बल्किज्ञान व जीवन के विविधआयामोंमेंप्रयोगकरने योग्य आलोचनात्मकविवेककाभीविकाससम्भवहै। पाठ्यक्रम के अंतर्गतस्नातकोत्तरस्तरपरहीविद्यार्थियोंको शोध की दिशा मेंउन्मुख औरप्रशिक्षितकियाजानाभी लक्ष्यीभूतहै।

'स्नातकोत्तर हिन्दी कार्यक्रम' के अध्यादेश के अनुसार, विद्यार्थी एक सेमेस्टर में न्यूनतम 20और अधिकतम 32क्रेडिट ले सकते हैं और इस प्रकार पूरे कार्यक्रम के दौरान उन्हें कुल 96[आधारभूत वर्ग - 56, वैकल्पिक वर्ग -40] क्रेडिट लेने होंगे। अग्रांकित14 आधारभूत पत्र (56 क्रेडिट) उनके लिए। हैं अनिवार्यवैकल्पिक वर्ग के 40 में से न्यूनतम 8 क्रेडिट उन्हें अन्य विभागों से लेने अनिवार्य हैं। इस वर्ग में वे अधिकतम 16 क्रेडिट अन्य विभागों से ले सकते हैं।

एम(हिन्दी) .ए.की पाठ्यक्रम संरचना :

	कोर्स-कोड	कोर्स का शीर्षक	क्रेडिट	कोर्स(शिक्षक) अनुदेशक-
		पहला सेमेस्टर		
आधारभूत पत्र	MAHIN1001C 04	हिन्दी साहित्य का इतिहास	4	डा.शेखर प्रताप योगेश
	MAHIN1002C 04	हिन्दी कहानी	4	डा. लुगुन अनुज
	MAHIN1003C 04	आधुनिक हिन्दी कविता : एक	4	डा. आर्य कर्मानंद
	MAHIN1004C 04	भाषाविज्ञान और हिन्दी भाषा	4	डा. पाठक कुमार रवीन्द्र
वैकल्पिक पत्र	MAHIN1001E 04	साहित्य और सिनेमा	4	डा. भूषण शान्ति
	MAHIN1002E 04	प्रयोजनमूलक हिन्दी	4	डा.नसीम अहमद कफील



दूसरा सेमेस्टर				
आधारभूत पत्र	MAHIN2001C 04	आधुनिक हिन्दी कविता : दो	4	डा. लुगुन अनुज
	MAHIN2002C 04	हिन्दी उपन्यास	4	डा. शेखर प्रताप योगेश
	MAHIN2003C 04	हिन्दी नाटक और रंगमंच	4	डा. भूषण शान्ति
	MAHIN20004 C04	निबन्ध और विविधगद्यरूप-	4	डा. आर्य कर्मानंद
वैकल्पिक पत्र	MAHIN2001E 04	हिन्दी भाषा-दक्षता	4	डा. पाठक कुमार रवीन्द्र
	MAHIN2002E 04	कम्प्यूटर, सोशल मीडिया और हिन्दी	4	डा. आर्य कर्मानंद
तीसरा सेमेस्टर				
आधारभूत पत्र	MAHIN3001C 04	प्राचीन और मध्यकालीन हिन्दी काव्य	4	डा. शेखर प्रताप योगेश
	MAHIN3002C 04	साहित्यशास्त्र और भारतीय : पाश्चात्य	4	डा. पाठक कुमार रवीन्द्र
	MAHIN3003C 04	अस्मितामूलक साहित्य	4	डा. आर्य कर्मानंद
वैकल्पिक पत्र	MAHIN3001E 04	हिन्दी पत्रकारिता और जनसंचार	4	डा. नसीम अहमद कफील
	MAHIN3002E 04	अनुवाद प्रयोग और सिद्धान्त :	4	डा. भूषण शान्ति
	MAHIN3003E 04	साहित्य वैचारिक का अध्ययन- परिप्रेक्ष्य	4	डा. लुगुन अनुज
चौथा सेमेस्टर				
आधारभूत पत्र	MAHIN4001C 04	हिन्दी आलोचना और सैद्धांतिक : व्यावहारिक	4	डा. भूषण शान्ति
	MAHIN4002C 04	हिन्दी क्षेत्र का लोकसाहित्य-	4	डा. आर्य कर्मानंद
	MAHIN4003C 04	समकालीन हिन्दी साहित्य	4	डा. लुगुन अनुज
वैकल्पिक पत्र	MAHIN4001E 04	भारतीय साहित्य	4	डा. पाठक कुमार रवीन्द्र
	MAHIN4002E 04	प्रवासी हिन्दी साहित्य	4	डा. भूषण शान्ति
	MAHIN4003E 04	सूफी साहित्य	4	डा. नसीम अहमद कफील
	MAHIN4004E 04	गजानन माधव मुक्तिबोध	4	डा. लुगुन अनुज

शिक्षण-विधि :- व्याख्यान, ट्यूटोरियल, समूह-चर्चा, कार्यशाला, परियोजना-कार्य, क्षेत्र-कार्य आदि के जरिये पाठ्यक्रम के उक्त उद्देश्यों की उपलब्धि इस पाठ्यक्रम में लक्ष्यीभूत रखा गया है। इस प्रक्रिया में हिन्दी भाषा और साहित्य के प्राध्यापकों/प्राध्यापिकाओं के अलावा, आवश्यकतानुसार अन्य अनुशासनों के विशेषज्ञों से सम्पर्क या संवाद भी शामिल होंगे।



भारतीय भाषा केंद्र उपलब्धि/विशेषज्ञता/विवरण शैक्षिक का शिक्षकों के (उर्दू/हिन्दी)

	<p>प्रोफेसर सुरेश चन्द्र।</p>		<p>डा. कुमार रवीन्द्र पाठकसहप्राध्यापक- एम. (हिन्दी) ए. पी. (हिन्दी) डी. एच- विशेषज्ञता के क्षेत्र : 1. भाषाशास्त्र और हिन्दी व्याकरण स्त्री और जेंडर अध्ययन</p>
	<p>डा. प्रताप योगेश शेखरसहायक प्राध्यापक, पी. (हिन्दी) डी. एच- विशेषज्ञता के क्षेत्र : 1. प्राचीन एवं मध्यकालीन हिन्दी काव्य, 2. उपन्यास, आलोचना</p>		<p>डा. आर्य कर्मनंदसहायक प्राध्यापक पी. (हिन्दी) डी. एच- विशेषज्ञता के क्षेत्र : 1. भारतीय काव्यशास्त्र, 2. अस्मितामूलक साहित्य, 3. आधुनिक साहित्य, 4. प्रयोजनमूलक हिन्दी</p>
	<p>डा. भूषण शान्ति सहायक प्राध्यापक पी. (हिन्दी) डी. एच- विशेषज्ञता के क्षेत्र : 1. नवजागरण एवं आधुनिक हिन्दी गद्य साहित्य, 2. व्यंग्य 3. अनुवाद</p>		<p>डा. लुगुन अनुज (सहायक प्राध्यापक पी. (हिन्दी) डी. एच- विशेषज्ञता के क्षेत्र : 1. आदिवासी भाषा एवं साहित्य 2. समकालीन हिन्दी साहित्य</p>
	<p>डा. कफील अहमद नसीमसहायक प्राध्यापक पी. एच. डी. (उर्दू) विशेषज्ञता के क्षेत्र : 1. उर्दू भाषा और साहित्य का इतिहास 2. उर्दू कविता की आलोचना</p>		



7. SCHOOL OF MEDIA, ARTS & AESTHETICS

Human life is nourished by the elements of arts and aesthetics and the media is the school of Human communication. In this respect Media, Arts and Aesthetics are the integral segments of human life. The academic study of these aspects of life is significant so far as the total development of human life is concerned. To fulfil the academic needs, behavioural patterns and cultivation of futuristic ideas and pattern of life are the mission of teaching, training and research in the school of Media, Arts and Aesthetics of CUSB.

The core idea behind School of Media, Arts and Aesthetics in CUSB is to develop such master level programs, which combine various media, culture and arts forms together. India has a long history of Arts and Aesthetics, it is imperative to develop curricula which give holistic and practical input to the students. Dance, music, theatre, painting, films and media are integral part of any society and Indian culture has a long and very robust heritage. The School of Media, Arts and Aesthetics wishes to be interdisciplinary in nature which enlarges student's umbrella of knowledge and understanding. Besides this the school aims to give hand-on practical knowledge of various forms of Media, Arts, and Aesthetics with rigorous industrial training modules. At present the school provides M.A. in Journalism and Mass Communication under the Department of Mass Communication and Media. The program was established in 2011 with an objective to provide extensive media training. There is a dearth of good educated media professionals academic. The specialization papers in the second year offer in-depth knowledge whereas the first year papers provide stout foundation. The Department of Mass Communication and Media believes in fabricating effective communicator in field of print, electronic, online, films, advertising and public relations etc.

Department of Mass Communication and Media

Department of Mass Communication and Media (DMCM) have been established with an aim to promote quality media education for creative and innovative minds. It intends to produce effective communicators in varied fields of media. During the last couple of decades the media in the country has grown by leaps and bounds and is now rated amongst the four biggest media industries of the world. Remarkable improvements have been observed in the areas of content and their presentation, production techniques, technical quality, transmission of programmes and media consumer feedback and research. The number of broadcast channels, internet/multimedia users and newspaper circulation has increased exponentially over the years, thereby, increasing the demand for well-educated and trained media professionals in the conventional as well as the non-conventional fields of media like online, print, broadcast journalism, fiction and non-fiction programmes for radio and television, media research and other allied disciplines. Covid-19 has changed the world of learning to the extent, dependency over the ICT has increased enormously, DMCM is ready to cater all the need of its stakeholders with all latest equipment and state of arts infrastructure.

Laboratory Facilities & Resources

The Department has two labs, namely, Electronic Media Production lab is newly established infrastructure with all latest technology and a Computer lab. Electronic Media Production lab is well equipped with professional Video Cameras, audio console, video mixer and Apple Mac-Pro editing suite with necessary software. Computer lab comprises a set of Fifteen (15) computers loaded with Quark Express, Adobe Masters Collection CS 5.5 which consists of Photoshop, InDesign, Illustrator, Flash, Dreamweaver, Fireworks, Adobe Premiere, and Adobe Audition. Further, handy cameras, digital still cameras, provision of film screening are also available in the lab. Besides, Hindi and English newspapers, magazines are also available to students to inculcate good reading habits; and a television set with digital connection to give practical inputs regarding the latest trends in electronic media.

Ph.D. in Communication and Media Studies – Department of Mass Communication and Media is currently offering Ph.D. in Communication and Media Studies. Department has introduced this course in 2017 and at present department has 20 students. Department has provided separate cubicals for all the scholars where they can do self-studies and discussion with other fellow scholars. There is also a reference section in the library, where they can find all the research work of the department.

List of Courses in Ph.D. Communication and Media Studies

Course Code	Course Title	Credits
CMS901	Research Methodology	4
CMS902	Tools and Techniques of Research	4
CMS903	Preparation and Presentation of Research Proposal	4
Total Credits		12

**M.A. In Journalism and Mass Communication**

List of course in M.A. In Journalism and Mass Communication (100 Credits)

SEMESTER- I		
Course Code	Course Title	Credit
MAJMC1001C04	Communication: Concepts and Processes	4
MAJMC1002C04	Growth & Development of Media	4
MAJMC1003C04	Print Journalism	4
MAJMC1004C04	Photo Journalism	4
MAJMC1005C04	Use of Computer in Media	4
	Elective Basket-I (DSE*)	4
	Elective Basket – II (SEC/SSC**)	Non Credit
Credit		24

SEMESTER-II		
Course Code	Course Title	Credit
MAJMC2001C04	Broadcast Journalism	4
MAJMC2002C04	Media Laws and Ethics	4
MAJMC2003C04	Advertising	4
MAJMC2004C04	Corporate Communication PR & Event Management-I	4
MAJMC2005C04	Internship/Project	4
	Elective Basket-I (DSE*)	4
	Elective Basket – II (SEC/SSC**)	Non-Credit
Credit		24

SEMESTER-III		
Course Code	Course Title	Credit
MAJMC3001C04	Development Communication	4
MAJMC3002C04	Communication Research	4
MAJMC3003C04	Media Management	4
	Elective Basket - I (DSE*)	4
	Elective Basket - I (DSE*)	4
	Elective Basket - III(IDC/SWAYAM***) / Elective Basket- IV (IDC from outside Department/School)	4
	Elective Basket - III(IDC/SWAYAM***) / Elective Basket- IV ISC (Inter-School Courses)	4
Credit		28

SEMESTER-IV		
Course Code	Course Title	Credit
MAJMC4001C04	New Media and Online Journalism	4
MAJMC4002C04	Dissertation	8
	Elective Basket - I (DSE*)	4
	Elective Basket - I (DSE*)	4
	Elective Basket - III(IDC/SWAYAM***) / Elective Basket- IV ISC (Inter-School Courses)	4
Credit		24

*Department Specific Elective (mandatory for students)

**Skill Enhancement Courses/ Self Study Course (Non-credit paper, not mandatory)

***Inter-Department Courses or SWAYAM

****Inter-Department Courses from outside Department/School

*****Inter School Courses of the University



Elective Basket – I			
Department Specific Elective (DSE*)			
Course Code	Course Title	Credit	Opt in
MAJMC1001E04	Writing for Media	4	1 st SEM
MAJMC1002E04	Folk & Community Media	4	
MAJMC2001E04	Political and International Communication	4	2 nd SEM
MAJMC2002E04	News Production for Broadcast Media	4	
MAJMC2003E04	Inter Cultural Communication Studies	4	
MAJMC3001E04	Corporate Communication PR & Event Management-II	4	3 rd SEM
MAJMC3002E04	Radio Fiction Non-fiction program production- I	4	
MAJMC3003E04	TV Fiction Non-fiction program production- I	4	
MAJMC3004E04	Science Communication	4	
MAJMC3005E04	Film Studies	4	
MAJMC4001E04	Newsletter & Website Designing	4	4 th SEM
MAJMC4002E04	Advance Print	4	
MAJMC4003E04	Radio Fiction Non-fiction program production-II	4	
MAJMC4004E04	TV Fiction Non-fiction program production-II	4	

Elective Basket – II			
Skill Enhancement/Self Study Courses (SEC/SSC**)			
Course Code	Course Title	Credit	Opt in
MAJMC1001S04	Communication Skills (Written & Spoken)	Non-Credit	1 st SEM
MAJMC1002S04	Contemporary Issues in Media-I	Non-Credit	
MAJMC2001S04	Indian Society, Polity, Gender and Culture	Non-Credit	2 nd SEM
MAJMC2002S04	Contemporary Issues in Media-II	Non-Credit	

Elective Basket – III			
Inter-Department Courses/SWAYAM (IDC/SWAYAM***)			
Course Code	Course Title	Credit	Opt in
	Film Appreciation	4	3 rd SEM
	Consumer Behaviour	4	
	Basics of Photography	4	
	Privacy and Security in Online Social Networks (SWAYAM)	4	4 th SEM
	Visual Semiotics for Visual Communication (SWAYAM)	4	

Elective Basket – IV			
Inter-Department Courses from outside Department/School****)			
Course Code	Course Title	Credit	Opt in
	Organizational Behaviour in Indian Context	4	3 rd SEM
	Organizing and Visualizing Data	4	
	The Science and Practices of Sustainable Development	4	4 th SEM
	Indian Society	4	



Inter School Courses of the University		
Courses to be offered at University level by the CMS Department *****		
Course Code	Course Title	Credit
	Media Culture & Society	4
	Communication Skills (Writing and Speaking)	4
	Communication for Conflict and Disaster Management	4
	Digital and Social Media Management	4
	Documentary Making	4

Brief Profile of Faculty Members

	<p>Prof. Atish Prashar HoD Specialization: <i>Communication Research, Advertising, Media Management, Journalism</i></p>		<p>Dr. Kinshuk Pathak, Assistant Professor Specialization: Editing and Reporting Growth and Development of Indian Journalism with special reference to Hindi Journalism. Study of contribution of great Editors in Indian Journalism</p>
	<p>Dr. Sujeet Kumar, Assistant Professor Specialization: <i>Online Journalism and New Media, Communication Technology, Development Communication, History of Journalism</i></p>		<p>Dr. Anindya Deb, Assistant Professor Specialization: New Media Research, Communication Research, Media Management, Communication for Development. Four Research Publications in Peer Reviewed Journal</p>
	<p>Dr. Ravi Suryavanshi, Assistant Professor Specialization: Specialization: Television and Film Production</p>		



8. SCHOOL OF MANAGEMENT

8.1 Department of Commerce & Business Studies

In the present age of Economic and Information Technology reforms, the world has become a small village and accordingly the policies all over the world including India have undergone metamorphosis. Now, the customer is not only king or queen but has become God for the business houses. With the changing scenario, there is pressing need for providing professional education and training to commerce students in such a way that they are able to handle the problems with ease and comfort and thus succeed in delivering the desired results effectively and efficiently. It is through commerce education and training that a pool of competent human resources can be churned out who are able to make innovative plans, execute these plans with creativity and bring remarkable changes in their performance. It is the magic of professional skills which is capable of converting a human being into a super human being. It is through motivation that nothing appears impossible and even the toughest task is achieved tactfully.

The School of Management is presently running the Department of Commerce & Business Studies formally set up in 2018. It has imbibed the CUSB tradition of exploring new frontiers of knowledge and innovation in academics. The Vision of the School is to emerge as a Centre of Excellence in interdisciplinary approaches to studies and research involving Commerce and Management. Following the University Motto “Collective Reasoning”, emphasis is being given on application of theories in real life situations to enhance business skills and employability of students through various other measures like personality development, project work, mock interviews and role plays etc.

The Department of Commerce & Business Studies offers two years (four semester) Master Degree Programme in Commerce with specialization in Accounting and Finance, Marketing, Human Resource Management and Banking & Insurance. The M. Com Degree Programme has been designed, updated and imparted to develop conceptual and analytical skills among students in line with the industry requirements. The course structure has a judicious mix of theoretical and practical reasoning to meet the industry requirements which gives a comprehensive insight of commerce along with an overview of other management areas. The Department has experienced faculty and has plan to invite experts from industry as well as academia from reputed institutions on need basis. The course is enriched to inculcate research culture and to get an exposure to the working of corporate environment.

A Placement Cell is also in operation to explore opportunities for students placements with various industries. The students under the supervision of the faculty members also undertake social outreach activities such as participation in social and co-curricular activities in the campus and outside the campus (in the villages adopted by CUSB). The students of the Department are also being encouraged to organise commerce fests, quiz competitions, seminars and workshops etc. The Department also facilitates ethical entrepreneurial activities such as the “HONESTY SHOP - A Shop Without A Shopkeeper” being one such accolade out of the many in the pipeline.

1.1.Ph.D

The Department of Commerce and Business Studies is currently offering Ph.D with diverse field of specialization including Finance, Accounting, Marketing, Human Resource Management, International Business and other allied specialization. The objective of this programme is to equip students with necessary skills to identify and carry out advance study and research on complex issues of commerce and business studies. This programme aims to enable the students to methodologically identify the relevant contemporary issues in business and industry and equip them to provide rigorous solution through empirical study and investigation. The research output will benefit the academician, industry practicer and policy maker. The compulsory courses of this programme help to stimulate the students to undertake comprehensive and rigorous research adding value to the existing body of knowledge.

List of Courses in Ph.D Commerce

Course Code	Course Title and Course Instructor	Credits
COM 901	Research Methodology	4
COM 902	Methods, Tools and Techniques of Business Research	4
COM 903	Research Proposal Writing and Presentation	4
Total		12

1.2 M.Com. Degree Programme

The M.Com. Degree Programme has a distinct objective to equip the students with knowledge, skills and attitude to become more suitable for the present as well as emerging job markets. The design of the syllabus is student-centred where there is flexibility for the students to have a greater choice of courses appropriate to their interests, needs and sustainability. The courses are offered with Choice Based Credit System (CBCS) thus facilitating the students to have 100 Credits spread over 4 semesters for mastering the subject for the award of Master Degree in Commerce. The students can opt for elective courses of his/her choice and based on his/her aptitude from four elective groups of courses. Another important aspect of the M. Com Degree Programme is that it gives students an opportunity to study and opt for the inter-disciplinary courses other than the Commerce domain with minimum of 08 Credits which can go up to 16 Credits in the form of Elective courses in order to leverage the competitive advantage of the M. Com. Students.



To be precise, the objectives of M. Com. Degree programme are as under:-

- The Degree Programme is intended to impart intensive knowledge and ethical education to students in the subject and help them to acquire wider perspectives both for research and for professional applications.
- To provide foundation for further advanced studies and research in the area of Commerce such as M.Phil. and Ph.D. Programmes. It shall aim to enable master graduates in Commerce to qualify UGC-NET/SET and JRF examinations so that they can take-up the work of teaching or research of high quality and to prepare future commerce teachers who will be sharing their knowledge and skills with utmost sincerity and seriousness.
- To provide qualitative education at post-graduate level by imparting entrepreneurial skills for starting new business ventures.
- To allow M. Com. Graduates to choose for further advanced studies in different specialisation of Commerce such as Accounting and Finance, Human Resource Management and Marketing etc.
- To make the students business-oriented so as to improve their employability and enable M. Com. Graduates for a wide range of career dealing with the flow of money, from accountant to investment banker/financial analyst, and money manager to personal finance consultant etc.
- To provide a platform that facilitates all round development of a student's personality.

Programme Highlights: The Degree Programme are detailed in such a way that it will provide ample exposure to the students in pursuit of their career in the field of corporates, academics and research organizations involved in policy-making and policy analysis etc.

1. The M. Com. Degree Programme of the University has three types of courses, viz, Core courses, Elective courses, and Self-study/Skill-based courses.
2. The Department has crafted a teaching-learning methodology which has a strong interface with cutting-edge technology in the form of smart classes with innovative Continuous Assessment System comprising of written test, class participation, oral quiz, surprise tests etc.
3. M.Com. students will be given access to various databases like Prowess, EBSCO, Bloomberg, etc. and train them to work on statistical software like SPSS, R & E-Views for understanding market research, trends while facilitating an overall understanding of academia-industry interface.
4. Thrust will be given on sharpening of personality traits in order to make the candidate employable & industry ready. The Department shall appoint a Mentor for each student from amongst the faculty members of the Department.
5. Efforts shall be made to provide special assistance, subject to availability of resources, to economically & socially backward as well as physically challenged students in preparation of various competitive examinations like UGC-NET, JRF, Banking & Insurance and Civil services etc.

Employment Opportunities

Master of Commerce is one of the reputed post-graduate Degree Programme available in India. M.Com. degree serves as a basis for further higher studies and research leading to the award of M.Phil. /Ph.D. degree. After successfully completing M. Com. Degree programme, a student can also take up teaching assignments by qualifying the UGC-NET/JRF in Commerce. This course is equally suitable for those candidates who are willing to pursue Chartered Accountancy (ICAI), Cost & Works Accountant (ICWA), Cost Management Accountant (ICMAI), Company Secretary (ICSI) or Chartered Financial Analysts (CFA) programme. The following are some other areas/sectors where M. Com. Students can aim for a rewarding career options –

- Various Public and Private Business Organizations in their Finance, Marketing, Research & Development and Human Resource Department etc. Research Associates with Economic Consultancy Firms
- Income Tax Department
- Customs Department
- Foreign Trade Companies
- State Public Service Commissions.
- UPSC (Indian Civil Services, Indian Economic Services, Indian Statistical Services)
- Mutual Funds/NBFCs/Banking/Insurance Industry
- E-Commerce Services/Online/Retail/FMCG Sector.

**List of Courses in M.Com (100 Credits)**

Semester - I			
Sl. No.	Course Code	Course Title	Credit
1	MCCOM1001C04	Organizational Theory	4
2	MCCOM1002C04	Business Environment	4
3	MCCOM1003C04	Managerial Economics	4
4	MCCOM1004C04	Managerial Accounting	4
5	MCCOM1005C04	Marketing Management	4
6	MCCOM1006C04 MCCOM1007E04	Human Resource Management Or Leadership Development (For students other than studying in Department of Commerce)	4
		Total Credits	24
	MCCOM1008S00	Managing Innovation Or Mind Education (SWAYAM Course No. 4617)	Non-Credit Add on Course Non-Credit Add on Course
Semester - II			
1	MCCOM2001C04	Quantitative Techniques and Statistics	4
2	MCCOM2002C04	Financial Market and Operations	4
3	MCCOM2003C04	Business Research Methods	4
4	MCCOM2004C04	Organisational Behaviour	4
5	MCCOM2005C04	Financial Decision Making	4
6	MCCOM2006C04	Fundamentals of Banking & Insurance	4
		Total Credits	24
	MCCOM2007S00	Disaster Management OR Critical Thinking (SWAYAM Course No. 3912)	Non-Credit Add on Course Non-Credit Add on Course
Semester - III			
1	MCCOM3001C04	Management Information System	4
2	MCCOM3002C04	Operations Research	4
Four Papers of Elective Group: Accounting and Finance			
3	MCCOM3201E04	Working Capital Management	4
4	MCCOM3202E04	Financial Services	4
5	MCCOM3203E04	Security Analysis and Portfolio Management	4
6	MCCOM3204E04	Strategic Financial Management	4
Four Papers of Elective Group: Marketing			
7	MCCOM3401E04	Consumer Behaviour	4
8	MCCOM3402E04	Marketing of Services	4
9	MCCOM3403E04	Sales Management	4
10	MCCOM3404E04	Marketing Research	4
Four Papers of Elective Group: Human Resource Management			
11	MCCOM3601E04	Talent and Performance Management	4
12	MCCOM3602E04	Industrial Relations in India	4
13	MCCOM3603E04	Labour Legislations in India	4
14	MCCOM3604E04	Personal and Professional Skills Development	4
Four Papers of Elective Group: Banking & Insurance			
15	MCCOM3801E04	Essentials of Bank Management	4
16	MCCOM3802E04	Banking Law and Practices in India	4
17	MCCOM3803E04	Essentials of Risk and Insurance Management	4
18	MCCOM3804E04	Insurance Legislation in India	4
19	MCCOM3003S00	Knowledge Management Or Environment Natural Resources and Sustainable Development (SWAYAM Course No. 3911)	Non Credit Add on Course Non-Credit Add on Course









Semester - IV			
1	MCCOM4001C04	Entrepreneurship and Small Business Management	4
2	MCCOM4002C04	Goods and Services Tax	4
Four Papers of Elective Group: Accounting and Finance			
3	MCCOM4201E04	Corporate Tax Planning & Management	4
4	MCCOM4202E04	Corporate Governance and Social Responsibility of Business	4
5	MCCOM4203E04	Financial Derivatives and Risk Management	4
6	MCCOM4204E04	International Financial Management	4
Four Papers of Elective Group: Marketing			
7	MCCOM4401E04	Advertising and Promotion Management	4
8	MCCOM4402E04	Agricultural Marketing	4
9	MCCOM4403E04	Industrial Marketing	4
10	MCCOM4404E04	International Marketing Management	4
Four Papers of Elective Group: Human Resource Management			
11	MCCOM4601E04	Strategic Human Resource Management	4
12	MCCOM4602E04	Labour Welfare and Social Security	4
13	MCCOM4603E04	Compensation Management	4
14	MCCOM4604E04	Developing Leadership Skills	4
Four Papers of Elective Group: Banking & Insurance			
15	MCCOM4801E04	Fund Management in Banking and Insurance Sector	4
16	MCCOM4802E04	Indian Banking System	4
17	MCCOM4803E04	Life Insurance Management	4
18	MCCOM4804E04	General Insurance Management	4
19	MCCOM4003C04	Dissertation**	4
Total Credits			28
Grand Total			100
	MCCOM4004S00	Social Entrepreneurship Or Cultural Studies (SWAYAM Course No. 4258)	Non-Credit Add on Course Non - Credit Add on Course

Notes: * Out of 4 Electives Groups, subject to the availability of resources, candidate shall have to select One Elective Group in the beginning of III-Semester, and each Elective Group shall consist of FOUR Courses in the III-Semester and another FOUR Courses in the IV-Semester.

** The initiation of the process of Allotment of Mentor/Guide to the students shall be done in III Semester and the evaluation done in IV Semester.

Brief Profile of Faculty Members

	Prof. Brajesh Kumar, Professor, Head and Dean Specialization : Business Finance, Business Economics Development Finance , Welfare Finance		Dr Subramanian Shanmugam, Associate Professor Specialization: Accounting & Finance, Banking & Financial Services, Marketing of Services
	Dr. Pawas Kumar, Assistant Professor Specialization : Human Resource Management		Dr. Rachana Vishwakarma, Assistant Professor Specialization : Finance and Corporate Governance
	Dr. Pradip Ram, Assistant Professor Specialization : Accounting and Finance		Ms. Renu Assistant Professor (Temporary) Specialization : Human Resource Management

**9. SCHOOL OF EDUCATION**

The School of Education honoured by Ministry of Education, Govt. of India is a centre for quality assurance in Learning, Pedagogy and Assessment, and was established in 2013-14 by starting Four-Year Integrated programmes in the two streams, viz. B.A.B.Ed. and B.Sc.B.Ed.. Further, to cater the demand of quality teacher educators and researchers in the field of education, the school has started Ph.D. (Education) programmes from 2016-17 and M.Ed. programme from the session 2017-18.

The courses of these programmes are updated as per the need of the hour and the latest norms. To provide quality academic exposure, the school, along with exclusive repository of print and digital books and journals, has an impressive Educational Resource Centre with a collection of educational policies documents, psychological tests and experimental equipment's, digital learning resources, teaching-aids, etc. For the holistic development of its students, a number of workshops, seminars etc. are organized in the school. In addition to these, the school is running two centres i. e. Centre for Learning and Pedagogic Studies and Centre for Assessment and Evaluation as well as National Resource Centre for Education under Pandit Madan Mohan Malviya National Mission on Teachers and Teaching Scheme, of Govt. of India. The school is regularly conducting a number of workshops and training programmes including Academic Leadership Programmes, Induction Training Programme, Online Refreshers Course, along with other numerous online programmes and activities.

The School under its Department of Teacher Education is presently offering following programmes:

Programmes offered→	Ph.D. in Education	M.Ed.	Four-Year Integrated B.A.B.Ed.	Four-Year Integrated B.Sc.B.Ed.
Duration :	03 Years	02 Years	04 Years	04 Years
Eligibility Criteria :	M.Ed./ M.A. (Education) from any recognized University with 55% marks or equivalent Grade B in UGC 7 point scale. A Relaxation of 5% of marks from 55 to 50% or equivalent relaxation of Grade for SC/ST/OBC (Non creamy layer)/Differently abled candidates.	B.Ed. or Four Year Integrated B.A B.Ed/B.Sc. B.Ed. Degree from any recognised University/institution with atleast 50% marks or equivalent grade for General/OBC category and 45% marks for SC/ST candidates.	10+2 or equivalent examination in any stream from any recognized Board/ University with at least 50% marks for General / OBC and 45% marks for SC / ST candidate.	10+2 or equivalent examination in Science stream from any recognized Board/ University with at least 50% marks for General /OBC and 45% marks for SC / ST candidate.
Intake of students :	As per norms	63*	63*	63*

* Including EWS Quota

9.1.1 Ph.D. in Education: School of Education is currently offering Ph.D. in Education.

List of Courses in Coursework of PhD (Education)

Course Code	Course Title	Credit
EDU 901	Research Methodology	4
EDU 902	Tools and Techniques of Research	4
EDU 903	Preparation and Presentation of Research Proposal	4
	Total Credits	12

9.1.2 M.Ed.

M.Ed. is a two-year (04 Semesters) professional programme for advanced study in the field of Teacher Education which aims at preparing teacher educators and other educational professionals including educational policy analysts, planners, experts in educational assessment etc. The programme offers a comprehensive overview of 'Education' embedded in the foundational disciplines of Philosophy, Sociology and Psychology; and, detailed study of chosen specialized areas of interest. It also includes advance components of pedagogy in a subject of parent discipline of prospective teacher educator. Since M.Ed. is also a degree leading to research in education, the course has a strong research component which includes dissertation writing.



List of courses in M.Ed.

Course Code	Title of Course(s)	Credits
SEMESTER-I		
MEEDU1001C04	Philosophical Foundations of Education	4
MEEDU1002C04	Psychology of Learner	4
MEEDU1003C04	Basics of Educational Research	4
MEEDU1004C04	Curriculum Studies	4
MEEDU1005C04	ICT and its Application in Education	4
MEEDU1006E04 MEEDU1007E04 MEEDU1008E04	Elective Basket-I (Any one of the following): 1. Environmental Education 2. Human Rights Education 3. Language across the Curriculum 4. Course from other Department 5. Course from SWAYAM *	4
ISB Activity-I		
SEMESTER-II		
MEEDU2001C04	Sociological, Historical, Political and Economic Foundations of Education	4
MEEDU2002C04	Psychology of Learning	4
MEEDU2003C04	Advanced Research Methodology in Education	4
MEEDU2004C04	Assessment and Evaluation in Education	4
MEEDU2005E04 MEEDU2006E04 MEEDU2007E04 MEEDU2008E04	Elective Basket-II (Any one of the following): 1. Pedagogy of Language Education 2. Pedagogy of Mathematics Education 3. Pedagogy of Science Education 4. Pedagogy of Social Sciences Education	4
MEEDU2009E04 MEEDU2010E04 MEEDU2011E04	Elective Basket-III (Any one of the following): 1. Citizenship Education 2. Guidance and Counselling 3. Teaching and Research Aptitude 4. Course from other Department 5. Course from SWAYAM *	4
Course Code	Title of Course(s)	Credits
ISB Activity-II		
SEMESTER-III		
MEEDU3001C04	Pre-Service and In-Service Teacher Education	4
MEEDU3002C04	Teaching Technology and Pedagogy	4
MEEDU3003C04	Communication, Academic Writing and Self-Development	4
MEEDU3004E04 MEEDU3005E04	Elective Basket-IV (Any one of the following): 1. Elementary Education 2. Secondary Education	4
MEEDU3006C04	Internship in Teacher Education Institutions	4
MEEDU3007E04 MEEDU3008E04 MEEDU3009E04 MEEDU3010E04	Elective Basket-V (Any one of the following): 1. Internship in Area of Specialization-Language Education 2. Internship in Area of Specialization-Mathematics Education 3. Internship in Area of Specialization-Science Education 4. Internship in Area of Specialization-Social Sciences Education	4
ISB Activity-III		
SEMESTER-IV		
MEEDU4001C04	Educational Studies and Comparative Education	4
MEEDU4002C04	Educational Planning, Management and Financing of Education	4
MEEDU4003C08	Dissertation	8
MEEDU4004E04 MEEDU4005E04 MEEDU4006E04	Elective Basket-VI (Any one of the following): 1. Economics of Education 2. Educational Resource Creation 3. Early Childhood Care Education 4. Course from other Department 5. Course from SWAYAM *	4



MEEDU4007E04 MEEDU4008E04 MEEDU4009E04	Elective Basket-VII (Any one of the following): 1. Distance Education 2. Inclusive Education 3. Management and Administration of Higher Education 4. Course from other Department 5. Course from SWAYAM *	4
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9.1.3 Four-Year Integrated B.Sc.B.Ed.

Four-year integrated programmes aim to equip the students with the contextual competency by providing basic knowledge in core subjects and a wide range of real life experience to transform them into quality subject specific teachers in an integrated manner.

The four-year (eight semesters) B.Sc.B.Ed. programme is an integrated programme, which is designed to develop teaching competence among students in the subjects like Mathematics, Science and Biology along with language proficiency and ICT skills.

9.1.4 Four-Year Integrated B.A.B.Ed.

The four-year (eight semesters) B.A.B.Ed. programme is an integrated programme, which is designed to develop teaching competence among students in the subjects like Social Sciences, Hindi and English along with language proficiency and ICT skills.

List of Courses in Integrated B.A.B.Ed. and B.Sc. B.Ed. Programme

Semester – I					
Education Courses (8 Credits)					
Course Code	Course Title				Credits
EDU 101	Language Proficiency				2
EDU 102	Holistic Education				2
EDU 103	Indian Society, Education and Development				4
03 Non-Credit Courses namely, Fine Arts in Education, Physical Education and Yoga, Performing Arts in Education.					
BA Courses (Three Subjects of 4 Credit each as per the offered combination)			BSc Courses (Three Subjects of 4 Credit each as per the offered combination)		
Course Code	Course Title	Credits	Course Code	Course Title	Credits
ENG 101	Introduction to English Language	4	MTH 101	Introductory Mathematics	4
HIN 101	fganhHkk"kk ,oa lkfgR;% mn~Hko ,oa fodkl	4	PHY 101	Mechanics - 3 credit + Practical – 1 Credit	4
ECO 101	Basic Principles of Economics	4	CHE 101	ATOMIC STRUCTURE, BONDING AND FEATURES OF s- and p-BLOCK ELEMENTS	4 (3L+1P)
PSC 101	Basic Principles of Political Science	4	ALS 101	Animal Taxonomy	4(3L+1P)
HIS 101	Ancient Indian History upto 1206 A.D.	4	PTS 101	Plant Taxonomy	4 (3L+1P)
Semester – II					
Education Courses (8 Credits)					
Course Code	Course Title				Credits
EDU 151	Language Proficiency				2
EDU 152	Environmental Education				2
EDU 153	Cognitive Psychology				2



EDU 154	Basics in Education				2
BA Courses (Three Subjects of 4 Credit each as opted in Semester-I)			BSc Courses (Three Subjects of 4 Credit each as opted in semester-I)		
Course Code	Course Title	Credits	Course Code	Course Title	Credits
ENG 151	Introduction to English Literature I: Understanding Poetry	4	MTH 151	Analysis-I	4
HIN 151	çkphu ,oa e/;dkyhudkO;	4	PHY 151	Elasticity, Waves, Thermodynamics - 3 credit + Practical – 1 Credit	4
ECO 151	Microeconomics	4	CHE 151	STATES OF MATTER AND NUCLEAR CHEMISTRY	4 (3L+1P)
PSC 151	Indian Government and Politics	4	ALS 151	Biochemistry & Cell Biology	4(3L+1P)
HIS 151	Medieval Indian History 1206 to 1756	4	PTS 151	Genetics & Evolution	4(3L+1P)
Semester – III					
Education Courses (9 Credits)					
Course Code	Course Title				Credits
EDU 201	Psychology of Learning and Learner				2
EDU 202	Secondary Education in India				2
EDU 203	Human Abilities and Measurement (HAM)				2
EDU 204	Practicum in HAM				2
EDU205	Yoga Education				1
BA Courses (Three Subjects of 4 Credit each as opted in Semester-I)			BSc Courses (Three Subjects of 4 Credit each as opted in Semester-I)		
Course Code	Course Title	Credits	Course Code	Course Title	Credits
ENG 201	Introduction to English Literature II: Understanding Drama	4	MTH 201	Linear Algebra	4
HIN 201	fganh dFkklkfgR;% mn~Hko] fodkl ,oa ikB ¼dgkuh ,oa miU;kl½	4	PHY 201	Electricity and Magnetism – 3 credit + Practical – 1 Credit	4
ECO 201	Macroeconomics	4	CHE 201	ORGANIC CHEMISTRY	4 (3L+1P)
PSC 201	Indian Political Thought	4	ALS 201	Molecular Biology & Immunology	4(3L+1P)
HIS 201	Modern Indian History 1757 to 1857	4	PTS 201	Ecology & Environmental Biology	4(3L+1P)
Semester – IV					
Education Courses (9 Credits)					
Course Code	Course Title				Credits
EDU 251	ICT in Education				4
EDU 252	Assessment of Learning				2
EDU 253	Educational Statistics				2
EDU 254	Community Awareness and Participation				1
BA Courses (Three Subjects of 4 Credit each as opted in Semester-I)			BSc Courses (Three Subjects of 4 Credit each as opted in Semester-I)		
Course Code	Course Title	Credits	Course Code	Course Title	Credits



ENG 251	Introduction to English Literature III: Understanding Prose-Fiction	4	MTH 251	Analysis- II	4
HIN 251	vk/kqfud fganh dkO;	4	PHY 251	Optics and Lasers - 3 credit + Practical – 1 Credit	4
ECO 251	Indian Economy: Problems and Prospects	4	CHE 251	PHYSICAL CHEMISTRY-I: THERMODYNAMICS, EQUILIBRIUM AND SOLUTIONS	4 (3L+1P)
PSC 251	International Relations From 1914 to the Present	4	ALS 251	Animal Biodiversity	4(3L+1P)
HIS 251	Modern Western Civilization 1776 to 1945	4	PTS 251	Plant Biodiversity	4(3L+1P)

Semester – V

Education Courses (10 Credits)					
Course Code	Course Title				Credits
EDU 301	Curriculum Development				2
EDU 302	Pedagogy of Subjects – I				2
EDU 303	Pedagogy of Subjects – II				2
EDU 304	Education and Value Inculcation				2
EDU305	Gender, School and Society				2
BA Courses (Any two Subjects of 6 Credit each out of the three subjects opted in Semester-I)		Credits	BSc Courses (Two Subjects of 6 Credit each out of the three subjects opted in Semester-I)		Credits
Course Code	Course Title		Course Code	Course Title	
ENG 301	History of English Language and Literature I	3	MTH 301	Algebra I	3
ENG 302	Novels in English	3	MTH 302	Ordinary Differential Equations	3
HIN 301	dkO;'kkL=% Hkkjrh; ,oa ik'pkR;	3	PHY 301	Electronics - 3 credit + Practical – 1 Credit	4
HIN 302	fganh fuca/k ,oa vkykspuk	3	PHY 302	Kinetic Theory & Statistical Mechanics	2
ECO 301	Elements of Statistics for Economic Analysis	3	CHE301	Transition Elements and Coordination Compounds	2(2L)
ECO 302	Elements of Mathematics for Economic Analysis	3	CHE302	Chemical Kinetics And Surface Phenomena	2 (2L)
PSC 301	Western Political Thought	3	CHE303	Chemistry Practical	2(2P)
PSC 302	Comparative Government and Politics	3	ALS 301	Animal Behaviour & Applied Animal Science	6 (4L+2P)
HIS 301	Historiography	3	PTS 301	Plant Pathology & Applied Plant Science	6 (4L+2P)
HIS 302	History of Indian National Movements 1858 to 1947	3			

Semester – VI

Education Courses (10 Credits)		
Course Code	Course Title	Credits
EDU 351	Pedagogy of Subjects – I	2
EDU 352	Pedagogy of Subjects – II	2



EDU 353	Practicum : School Observation	2
EDU 354	Micro Teaching	2
EDU 355	School Management	2

BA Courses (Two Subjects of 6 Credit each as opted in Semester-V)		Credits	BSc Courses (Two Subjects of 6 Credit each as opted in Semester-V)		Credits
Course Code	Course Title		Course Code	Course Title	
ENG351	History of English Language and Literature II	3	MTH 351	Analysis III	3
ENG352	Indian English Poetry and Drama	3	MTH 352	Partial Differential Equations and Complex Analysis	3
HIN 351	fofo/k x &.i	3	PHY 351	Quantum Mechanics - 3 credit + Practical – 1 Credit	4
HIN 352	ç;kstuewyd fganh	3	PHY 352	Relativity	2
ECO351	International Trade and Balance of Payments	3	CHE351	Organic Chemistry II	2(2L)
ECO352	Growth and Development	3	CHE352	ORGANIC CHEMISTRY- III	2 (2L)
PSC 351	Basic Principles of Public Administration	3	CHE353	CHEMISTRY PRACTICAL	2(2P)
PSC 352	India's Foreign Policy	3	ALS 351	Animal Physiology	6 (4L+2P)
HIS 351	India and Contemporary world	3	PTS 351	Plant Physiology and Plant Development Biology	6 (4L+2P)
HIS 352	History of West Asia in 20 th Century	3			

Semester – VII

Education Courses (12 Credits)

Course Code	Course Title	Credits
EDU 401	Human Development	4
EDU 402	School Experience Programme – I	8

BA Courses (Two Subjects of 6 Credit each as opted in Semester-V)		Credits	BSc Courses (Two Subjects of 6 Credit each as opted in Semester-V)		Credits
Course Code	Course Title		Course Code	Course Title	
ENG401	Literary Criticism	3	MTH 401	Algebra II	3
ENG402	Indian English Novel	3	MTH 402	Numerical Methods	3
HIN 401	ukVd ,oa jaxeap	3	PHY 401	Atomic & Molecular Physics – 3 credit + Practical – 1 Credit	4
HIN 402	vuqokn% fl)kar ,oa vuqç;ksx	3	PHY 402	Electrodynamics and Plasma Physics	2
ECO401	Public Finance	3	CHE-401	ELECTROCHEMISTRY-I (Including redox chemistry)	2 (2L)
ECO402	Money, Financial Institutions and Markets	3	CHE-402	Electrochemistry – II And photochemistry	2 (2L)
PSC 401	United Nations Organization	3	CHE-403	Chemistry Practical	2(2P)
PSC 402	Issues in Indian Politics	3	ALS 401	Developmental Biology & Endocrinology	6(4L+2P)
HIS 401	History of far East Asia in 20 th	3	PTS 401	Microbiology	6(4L+2P)



	Century			
HIS 402	History of South East Asia in 20 th Century	3		

Semester – VIII**Education Courses (14 Credits)**

Course Code	Course Title	Credits
EDU 451	School Experience Programme – II	8
EDU 452	Reflective Journal	2
EDU 453	Inclusive Education	2
EDU ***	Elective Course	2

BA Courses (Two Subjects of 6 Credit each as opted in Semester-V)		Credits	BSc Courses (Two Subjects of 6 Credit each as opted in Semester-V)		Credits
Course Code	Course Title		Course Code	Course Title	
ENG 451	Introduction to Contemporary Literary Theory and Practical Criticism	3	MTH 451	Probability and Statistics	3
ENG ***	Elective Course	3	MTH ***	Elective - I	3
HIN 451	Hkkjrh; lkfgR; ,oa fganh dk yksdlkfgR;	3	PHY 451	Solid State Physics - 3 credit + Practical – 1 Credit	4
HIN 452	Ledkyhu fganh lkfgR;	3	PHY 452	Nuclear Physics	2
ECO ***	Elective -I	3	CHE451	SPECTROSCOPY AND NATURAL PRODUCTS	2 (2L)
ECO ***	Elective-II	3	CHE452	DYES, DRUGS, MACROMOLECULES AND HETEROCYCLICS	2 (2L)
PSC 451	Regional Organizations	3	CHE453	CHEMISTRY PRACTICAL	2(2P)
PSC 452	Gandhian Philosophy and Action	3	ALS 451	Animal Biotechnology & Project Work	6(4+2)
HIS 451	History of U.S.A. in 20 th Century	3	PTS 451	Plant Biotechnology & Project Work	6(4+2)
HIS 452	History of U.S.S.R in 20 th Century	3			

Elective Basket of Education (Semester – VIII)

Course Code	Course Title	Credits
EDU 454	Guidance and Counselling	2
EDU 455	Population Education	2
EDU 456	Education of Children with Special need	2
EDU 457	Distance Education and Open Learning	2

Elective Basket of Mathematics (Semester – VIII)

(Any One electives from the following)

MTH 452	Linear Programming	3
MTH 453	Discrete Mathematics	3
MTH 454	Graph Theory	3
MTH 455	Number Theory	3
MTH 456	Statistics and Dynamics	3
MTH 457	Hydrodynamics	3



Elective Basket of Economics (Semester – VIII)		
(Any two electives from the following)		
ECO 451	Environmental Economics	3
ECO 452	Basic Econometrics	3
ECO 453	Financial Economics	3
ECO 454	Human Development	3

Elective Basket of English (Semester – VIII)		
(Any One electives from the following)		
ENG 452	American Literature	3
ENG 453	Literature and Nature	3
ENG 454	Women's Literature	3
ENG 455	Language and Linguistics	3

Notes:

1. This structure and the pattern of offering the courses is subject to change time to time, even during the programme duration of a particular batch to strengthen the programme's goals and objectives.
2. The students shall be bound to opt the combination of subjects out of combination(s) offered by the Department; communicated during the orientation in the beginning of Semester I and V.
3. In case of any typing error in nomenclature/code/credits of courses of BA/BSc component, the information recorded with concerned subject department will be treated as final.


Offered subject combinations in B.A.B.Ed.

Subject No.	Subject Name
I	Any one of the following: (i) English (ii) Hindi
II	History
III	Any one of the following i) Economics ii) Political Science

Offered subject combinations in B.Sc.B.Ed.

Subject No.	Subject Name	
	For Mathematics Group	For Non-Mathematics Group
I	Mathematics	Animal Science
II	Physics	Plant Science
III	Chemistry	Chemistry

Brief Profile of Faculty Members

	<p>Prof. Kaushal Kishore Professor, Head Ph.D. (M.J.P. Rohilkhand University, Bareilly) Coordinator, National Resource Center for Education (Under MHRD), member of national executive of Indian Association of Teacher Educators (IATE). Specilization: Educational Assessment and Evaluation, Research Methodology, Unconventional Learning etc.</p>		<p>Prof. Rekha Agrawal Professor, Dean Ph.D., D. Lit. (Education) Professor, Department of Teacher Education Nodal Officer, PMMMNMTT Scheme (MHRD, GoI) School of Education, CUSB, Gaya Specilization: Parent Education, School Education & Education for Innovation.</p>
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	<p>Dr. Tapan Kumar Basantia Associate Professor, Ph.D. (Education) Specilization: Research Methodology in Education/Social Sciences, Curriculum and Pedagogy, Educational Assessment and Evaluation, Educational Psychology/ Creativity, Distance Education and Elementary Education.</p>		<p>Ravi Kant Associate Professor, Ph.D. (Education) Specilization: ICT and Educational Technology</p>
	<p>Dr. Mitanjali Sahoo Assistant Professor Ph.D. (Education, Utkal University, Odisha) Specilization: Psychology of Education, Educational Measurement and evaluation, Guidance and Counseling, Social Science Education</p>		<p>Dr. Rinki Assistant Professor Ph.D. (Education) Specilization: Secondary School Science Education, Distance Education and Open Learning, Life Skill Education, Use of Multimedia for teaching and learning, Curriculum Reforms, Environmental Education.</p>
	<p>Dr. Tarun Kumar Tyagi Assistant Professor Ph.D. (Education, BHU Varanasi) Specilization: Research Methodology and Educational Statistics, Educational Measurement & Evaluation, Mathematical Creativity</p>		<p>Dr. Pragma Gupta Assistant Professor Ph.D. (Education, AMU Aligarh) Specilization: Educational Psychology, Inclusive Education</p>
	<p>Dr. Chandra Prabha Pandey Assistant Professor, Ph.D. (Education, BHU Varanasi) Specilization: Citizenship Education and constructivist approach of teaching and learning.</p>		<p>Dr. Ravindra Kumar Assistant Professor Ph.D. (Education) Specilization: Information and Communication Technology in Education, Educational Technology, eLearning, Pedagogy of Language Education etc.</p>
	<p>Mr. Kishor Kumar Assistant Professor M.Ed. Specilization: Pedagogy of Mathematics</p>		<p>Md. Mozammil hassan Assistant Professor M.Ed., M.Phil. Specilization_ Educational Measurement and Evaluation, Pedagogy of Science, and Educational Technology</p>
	<p>Dr. Kavita Singh Assistant Professor Ph.D. (Education, Banaras Hindu University) Specilization: Pedagogy of Social Sciences, Inclusive Education, Gender Education</p>		<p>Dr. Swati Gupta Assistant Professor Ph.D. (Education, Aligarh Muslim University) Specilization : Teaching of English, Measurement and Evaluation (Standardization and validation of tools)</p>
	<p>Mr. Manish Kumar Gautam Assistant Professor M.Ed. Specilization: Research Methodology, Mathematics Education, Entrepreneurship Education</p>		<p>Dr. Nrapendra Vir Singh Assistant Professor Ph. D. (Education, Banaras Hindu University) Specilization: Social Science Education, History Education, Philosophical and Sociological Foundation of Education</p>

**PHYSICAL EDUCATION****Ph.D. Course Work in Physical Education
Course Structure (Total Credits-12)**

Course Code	Course Title	Credits
PHED 901	Research Methodology	4
PHED 902	Tools and Techniques of Research	4
PHED 903	Preparation and Presentation of Research Proposal	4
	Total Credits:	12

Paper – I**Course Code: PHED 901****Course Title- Research Methodology****Credits – 4**

Course Objectives

1. To enable students to understand various research concepts.
2. To enable them to understand steps and types of research.
3. To make them aware about the ethical issues of research.
4. To strengthen their research skills and develop them as effective researchers
5. To enable them to use computer in the process of research.
6. To enable them to know the basic concepts and scope of research in physical education.
7. To enable them to understand basic steps and methods of research physical education.

Course Contents

(Part-A)**Credits-2****Unit-I: Research: A Conceptual Framework**

Research: its meaning and concept

Knowledge, facts, principles, theories and research as a source of knowledge

Scientific steps of enquiry and basic steps of research

Types of research: Basic Applied and Action research

Ethics in research

Methods and methodology

Intellectual property rights

Unit-II: Computer Applications

Word processing, data processing, graphical processing, uses of web tools for research, use of multimedia tools

Part-B**Credits-2****Subject Specific Research Methodology****Unit-III: Educational Research: Conceptual Framework and Scope**

Concept of educational research, Educational research as behavioral/social science research, Differentiating educational research from science research, Characteristics of research, Aims and significance of research in physical education. Understanding concepts and their roles in research: Concepts of variables, constructs, assumptions and theories, and their role of research in physical education. Stage specific (preprimary, primary, secondary, higher education stages etc.), component specific (aims of physical education, curriculum, techniques of teaching, discipline, evaluation system etc.) and area specific (sports philosophy, sports psychology, sports sociology and history of physical education including many other areas of physical education), scope and challenges of research in physical education.

Unit-IV: Steps and Methods of Educational Research

Basic Steps followed in educational research. Methods of educational research: Descriptive, experimental, philosophical, participatory, ethnographic, content analysis, evaluative and historical. Qualitative, quantitative and mixed research methods: Basic features, scope and limitations. Policy research: Process of conducting and its implication. Interdisciplinary and intra-disciplinary perspectives of educational research Designing the educational research: Designing process and steps for conducting research in different areas – experimental and non-experimental



Suggested Readings

- Ary, Donald, Jacobs, L.C., Sorenson, Chris.(2010). *Introduction to Research in Education*. Canada: Cengage Learning.
- Bailey, C.A. (2007). *A Guide to Qualitative Field Research*. California: Pinus Forge Press.
- Best, J. W. & Kahn, J.V. (2008). *Research in Education (10th edition)*. New Delhi. Prentice Hall Inc.
- Baker, P.J., & Beveridge, W.T.(1970). *Basic Computer Studies*. Edinburgh: Oliver and Boyd.
- Cohen, M. R. (1964). *Introduction to logic and scientific method*. London: Routledge & Kegan Paul,
- Edwards, A. L. (1953). *Experimental designs in psychological research*. New Delhi: Amerind Publishing Co.
- Fields, C.(1973). *About Computers*. Massachusetts: Winthrop Publishers, INC.
- Fox, D. J. (1969). *The Research Process in Education*. New York: Holt, Rhinehart and Winston, Inc.
- Good, Barr & Scates (1962). *Methodology of Educational Research*. New York: Appleton Crofts
- Gorard, Stephen. (2001). *Quantitative Methods in Educational Research: The Role of Numbers made easy*. Continuum: London.
- Keevis, J. (1988). *Educational Research Methodology: An International Handbook*. Pergamon: Oxford.
- Kerlinger F.N. (1978).*Foundation of Behaviour Research*. Delhi: Surjeet Publications.
- Lewis-Beck, MS. (Ed) (2004). *The Sage Encyclopedia of Social Science Research Methods*. New Delhi: Sage Publications.
- Martyn H. (1989). *The Dilemma of Qualitative Method*. London: Routledge.
- Mc Burney, D. H & White, T. L. (2007). *Research Methods*. 7th Edition. Delhi: Akash Publication.
- McMillan, J. H., & Schumacher, S. (2001). *Research in Education*. New York: Longman.
- Mouly, G. J. (1964). *The science of educational research*. New Delhi: Eurasia Publishing House Pvt. Ltd.
- Patton, Michael Quinn.(1982). *Qualitative Evaluation Methods*. London: Sage Publication.
- Raman, V. Raja. *Fundamentals of Computer*. New Delhi: Prentice Hall of India.
- Sax, G.(1968) *Empirical Foundation of Educational Research*. New Jersey, Englewood Cliffs
- Singh, Kultar (2007). *Quantitative Social Research Methods*. New Delhi: Sage
- Sukia S.P, & Others.(1974). *Elements of Educational Research* (3rd edition). Bombay: Allied Publishers.
- Townsend, C.(1983). *How to get started with MS-DOS*. Oregon: Dilithium Press.
- Travers, R. M. W. (1978). *An Introduction to Educational Research*. New York: Mac Millan Publishing Co., Inc.
- Tuckman, B.W. (1978). *Analysing and Designing Educational Research*. New York: Harcourt Brace Jovanovich, Inc.
- Van Dalen, D. B.& Meyer, W. J.(1962). *Understanding Educational Research – An Introduction*. New York: McGraw-Hills Books Publication.

Paper – II, Course Code: PHED 902 Course Title- Tools and Techniques of Research

Credits – 4

Course Objectives

1. To enable students to identify the frontier problems in research with proper rationale.
2. To enable them to formulate appropriate research questions, objectives and hypotheses for research.
3. To develop their skills and competency in reviewing and referencing the research materials.
4. To enable them to identify, construct and use the different tools for research.
5. To develop understanding about data scoring, data tabulation, and data analysis skills.
6. To develop skills in them for preparing appropriate research proposals and research reports in Physical Education.
7. To develop their competency to evaluate research proposals and research reports.

Course Contents

Unit-I: Problem selection, Hypothesis and Sampling in Research

Selection of problem: Characteristics, sources and importance, limitation and delimitation; Identifying issues a frontiers of knowledge; Deriving research questions.

Review of literature: Process, steps, sources and its importance in problem selection; Referencing and bibliography; Different styles of referencing.



Hypothesis: Characteristic of a good hypothesis, sources, types and importance. Sample selection: Types of sampling techniques and their steps, importance of sampling, characteristics of a good sample.

Unit-II: Tools and Techniques of Educational Research

Selection of Tools: Importance of Tools for Collection of data in research, Selection and Types of Tools used for collection of primary and secondary data.

Subjective and objective tools: Nature, characteristics and need for using subjective and objective tools in research.

Construction and uses of different types of tools in research: Tests, scales, questionnaire and schedules.

Unit-III: Data Analysis in Research

Data analysis: Scoring, tabulation and analysis of data; Procedure for data analysis and uses of parametric and non-parametric statistical techniques for data analysis

Uses of descriptive statistics in research: Measures of central tendency-Mean, median, mode; Measures of variability-range, average deviation, standard deviation, quartile deviation; and Measures of correlation- rank difference method and product moment method.

Uses of inferential statistics in educational research: Chi-square, Sign test, Median test, significance of difference between mean, ANOVA, ANCOVA.

Uses of computer in data generation, data processing and dissemination of research out comes in educational research; Use of statistical software of data analysis.

Unit-IV: Preparation and evaluation of Research Proposal and Report

Preparation of proposal for research: Format and steps

Preparations of research report: Significance, Format and Style of Reporting.

Evaluation of research proposal and research report

Suggested Reading

- Aggarwal, Y. P. (1998). *Statistical Methods*. New Delhi: Sterling Publishers Pvt. Ltd.
- Cohen, L., Manion, L. & Morrison, K. (2007). *Research Methods in Education* (6th Ed.). London: Routledge.
- Cohen, Lewis and Manion Lawrence. (1994). *Research Methods in Education*. New York: Holt Rinchart and Winston Inc.
- Cohen, Louis. (2011). *Research Methods in Education*. London: Routledge
- Cresswell, J. W. (1994). *Research design*. London: Sage
- Elhance, D.N. (1975): *Practical Problems in Statistics*. Allahabad: Kitab Mahal, ELHP 9341
- Gage, N. L. (Ed.). (1963). *Handbook of research in teaching*. Chicago: Ran McNally and Co.
- Garrett. H.E. (1988). *Statistics in Psychology and Education*. Bombay: Vakils, Feiffer & Semen's Ltd.
- Guilford, J. P. (1965). *Fundamental statistics in psychology and education*. New York: McGraw Hill Book Co.
- Guilford, J.P. & Fruchter, B. (1974) *Fundamental Statistics in Psychology & Education*. New York: McGraw Hill.
- Gupta, S.P. (2010). *Statistical Methods*. New Delhi: Sultan Chand
- Hamburg, M. (1979). *Basic Statistics: A Modern Approach*, Second Edition. New York: Harcourt Brace, HAM-B 13848.
- James H. M. and Schomachers, S. (1989). *Research in Education: A conceptual Introduction*. New York: HarperCollins.
- Kothari, C. R. (1998). *Quantitative Techniques*. New Delhi: New Age Publications.
- Koul, L. (1998). *Methodology of Educational Research*. New Delhi: Vikas Publications.
- Kurtz, A. K. & Mayo, S.T.(1980). *Statistical Methods in Education and Psychology*. New Delhi: Narosa Publishing House.
- Nagar, A.L. (1981): *Basic Statistics*. Bombay: Oxford, 1981. 299p. NAG-B 9793; 16609
- Pring, R (2004): *Philosophy of Education – Aims, Theory, Common Sense and Research*. Continuum: New York.
- Seigal, Sydne, Y.(1978) *Non-parametric Statistics for Behavioral Science*. New Delhi, McGraw Hill,



- Siegal, S. (1956). *Non-Parametric statistics for behavioral sciences*. New York: McGraw Hill.
- Singh, Arun Kumar(1986) *Test, Measurement and Research Methods in Behavioural Sciences*. New Delhi: McGraw Hill
- Togrerson, W. S. (1965). *Theory and methods of scaling*. New York: Willey.
- Tuckman, B.W. (1979) *Conducting Educational Research* (2nd edition). New York: Harcourt Brace Javanovich, Inc.
- Wayne, K. Hoy (2010). *Quantitative Methods in Education*. Los Angeles: Sage

Paper –III
Course Code: PHED 903

Preparation and Presentation of Research Proposal Credits – 4

Course Objectives

1. To enable students to develop research proposal in Physical Education as per research norms.
2. To develop research proposal presentation skills among them.
3. To develop competency among them to conduct research as per the guided research proposal.

Course Contents

The research proposal on the topic chosen by the candidate for her/his Ph.D shall be submitted as computer typed script as per the writing discipline followed by seminar presentation. Each student shall be required to articulate in about 5000 words in her/his individual subject of study in the intended area of research by selected bibliography. The written submission on the chosen topic shall be evaluated for 75 percent weightage and the seminar presentation for 25 percent weightage. The research proposal is supposed to give evidence of two things: a comprehensive review of existing literature of the past studies in the subject-area, and the student's awareness of and adherence to the discipline of writing research proposal/ paper/ dissertation and documentation.

Evaluation Procedure (Course code: PHED 901, PHED 902 and PHED 903)

The evaluation of the Course code PHED 901 and PHED 902 shall be done by concerned faculty and the evaluation report is to be sent to the controller of examination office of the University. For each of the three courses there shall be only end semester examination of 100 marks. The Grades of these courses shall be the same as that of respective PG courses of the University and shall not be placed before the Board of Examiners.

Regarding Course code PHED 903, 100 marks allotted for this will be split in to two parts, 75% for research proposal writing and 25% for its presentation. This evaluation shall be done jointly by the RAC and the CRDC/DRDC and submitted to CoE of the University.

**POST GRADUATE DIPLOMA IN YOGA (PGDY)****Preamble**

The tradition of Yoga has always been passed on individually from teacher to student through oral teaching and practical demonstration. The formal techniques that are now known as Yoga are, therefore, based on the collective experiences of many individuals over many thousands of years. The particular manner in which the techniques are taught and practiced today depends on the approach passed down in the line of teachers supporting the individual practitioner. Yoga is essentially a spiritual discipline based on an extremely subtle science, which focuses on establishing harmony between mind, body; thought and action; restraint and fulfilment; harmony between man and nature and a holistic approach to health and well-being. Yoga is not about exercise but to discover the sense of oneness with ourselves, the world and Nature. It is an art and science for healthy living.

The word "Yoga" is derived from the Sanskrit root 'yuj' meaning "to join", "to yoke" or "to unite". According to Yogic scriptures, the practice of Yoga leads to the union of individual consciousness with universal consciousness

In addition to this, Yoga is becoming popular day by day and has become a wave which is sweeping across the globe. In this course we introduce yoga as a science of Holistic living and not merely as yoga postures. During the course the student will be able to understand the concept of Preventive Healthcare, Promotion of Positive Health and Personality Development through Yoga.

i. Title of the course

The course shall be called "**Post Graduate Diploma in Yoga**" (PGDY)

ii. Aim of the course

The aim of the course is to propagate and promote yoga for positive health

iii. Objectives of the course

✚ To introduce basic concepts of preventive health and health promotion through yoga ✚ To introduce concepts of Human Body to the students so as to making their understanding clear about the benefit and contraindication of a practice.

✚ To train teachers on preventive health and promotion of positive health through yoga and personality development

iv. Duration

The minimum duration of the course will be 1 year (2 semesters) and the maximum duration will be 2 years.

v. Eligibility

The candidate should have completed Graduation (Bachelor's Degree) in any stream from a UGC recognized university.

vi. Scheme of Teaching and Examination

Sl. No.	Subject Code	Subject Title	Periods per week			Evaluation Scheme				Subject Total
			L	T	P	Seasonal			SEE	
						Credit	CT	TA		
Semester – I										
1	PGDY-CT101	Foundations of Yoga	3	1	0	4	20	10	70	100
2	PGDY-CT 102	Hatha Yoga	3	1	0	4	20	10	70	100
3	PGDY -CT103	Human Anatomy & Physiology	3	1	0	4	20	10	70	100
4	PGDY -CT104	Yogic Life Style	3	1	0	4	20	10	70	100
5	PGDY-CP105	Yoga Practicum-I			8	4	20	10	70	100
6	PGDY-CP106	Yoga Practicum-II	0	0	4	2	20	10	70	100
7	PGDY-FW107	Assignments & Self Appraisals	0	0	4	2	20	10	70	100
						32 HRS	24	TOTAL		700



Sl. No.	Subject Code	Subject Title	Periods per week			Evaluation Scheme				Subject Total
						Seasonal			SEE	
			L	T	P	Credit	CT	TA		
Semester – II										
1	PGDY-CT201	Essence of Principal Upanishads and BG	3	1	0	4	20	10	70	100
2	PGDY-CT202	Patanjala Yoga Darshana	4	0	0	4	20	10	70	100
3	PGDY-CT203	Applied Yoga	3	1	0	4	20	10	70	100
4	PGDY-CT204	Methods of Teaching Yoga & Value Education	4	0	0	4	20	10	70	100
5	PGDY-CP205	Yoga Practicum 3	0	0	8	4	20	10	70	100
6	PGDY-CP206	Yoga Practicum 4	0	0	4	2	20	10	70	100
7	PGDY-FW207	Teaching Practice	0	0	4	2	20	10	70	100
			32 HRS			24		TOTAL		700

TC- Theory Core, PC- Practice Core, L - Lecture, T-Tutorial*, P-Practical (practice/ field), CT-Cumulative Tests, TA - Teachers Assessment, SEE - Semester Examination, PR- Practical Record.

PROGRAMME DETAILS

Subject Title: **FOUNDATION OF YOGA**

Subject Code: **PGDY-CT101** Objectives:

- To give an introduction of yoga
- To give a brief introduction of Indian Philosophy
- To give a brief history and the basis different yoga traditions

Total Number of Hours: 60		Theory	Tutorial	Practical
Credits		4	0	0
Hours/ week		4	0	0
SCHEME OF EXAMINATION				
Total Marks: 100				
Theory : 100			Practical : NA	
Final Exam(SEE)	Internal Assessment (CT+TA)		Final Exam (SEE)	Internal Assessment(CT+TA/PR)
70	30		NA	NA

Unit - 1: GENERAL INTRODUCTION TO YOGA AND INDIAN PHILOSOPHY [15 Hrs.]

Brief introduction to origin of Yoga, Psychological aspects leading to origin of Yoga, History and Development of Yoga; Etymology and Definitions of Yoga, Aim and Objectives of Yoga, Misconceptions about Yoga, True Nature of Yoga; General Introduction to Schools (Streams) of Yoga, Principles of Yoga and Yogic practices for healthy living; Meaning and definitions of Darshana and Philosophy, Salient features of Indian Philosophy; (Bharateeya darshana), Branches of Indian Philosophy (Astika and Nastika Darshanas); Two-way relationship between Yoga and Indian Philosophy; General introduction to Prasthanatrayee and Purushartha Chatusthaya

Unit - 2: FOUNDATIONS OF YOGA AND YOGA TRADITIONS - I [15 Hrs.]

General introduction to Vedas and Upanishads, Yoga in Pre-vedic period, Yoga in Vedic period, Yoga in Ayurveda, Yoga in Principle Upanishads, Yoga in Yogopanishad; General introduction to Shad-darshanas, Yoga in Samkhya and Yoga Darshana, Yoga in Vedanta; General introduction to Bhagavadgita, Yoga in Bhagavadgita; Introduction to Smritis and Yoga in Smritis, Introduction to Puranas, Nature of Yoga in Bhagavat Purana ; Yoga in Yoga Vasishtha, Yoga in Narada Bhakti Sutra, Yoga in Medieval Literature, Bhakti Yoga of Medieval Saints

**Unit - 3: FOUNDATIONS OF YOGA AND YOGA TRADITIONS - II****[15 Hrs.]**

General introduction to Agamas, Tantras and classification of Tantras, Concept of Shiva and Shakti, Yoga of Shaiva Siddhanta; Yoga in Shakta Tantra: Concepts of Nadi and Prana in Tantra, Kundalini, Effects of Kundalini Shakti and Shatchakra Sadhana, Hatha Yoga Traditions and Sadhana;

Unit - 4: FOUNDATIONS OF YOGA AND YOGA TRADITIONS - III**[15 Hrs.]**

General Introduction to Non-Vedic Schools of Indian Philosophy: Jainism, Buddhism, etc.; Introduction to Jainism, Anekantavada (Syadvada), Concept of Tri-ratnas, Concept of Kayotsarga (Preksha-dhyana). Yoga in Jaina darshana; Introduction to Buddhism: Introduction to Buddhism, Skandha-vada, Concept of Aryasatya or Four Noble Truths, Arya-astangika- marga or Noble-eight-fold-path (Bouddha-Yoga); Introduction to Sufism: Meaning and Characteristic features of Sufism, Elements of Yoga in Sufism, Sufi Meditation Techniques. Concepts and practices of Yoga in other religions;

TEXT BOOK

1. Dasgupta S. N: History of Indian Philosophy, Motilal Banarsidas, Delhi, 2012
2. Sharma, Chandradhar: A Critical Survey of Indian Philosophy. Motilal Banarasidas, Delhi, 2013

BOOKS FOR REFERENCE

1. Agarwal M M : Six systems of Indian Philosophy, Chowkhambha Vidya Bhawan, varanai, 2010
2. Swami Bhuteshananda: Nararad Bhakti Sutra, Advaita Ashrama Publication-Dept.Kolkata, II Edition, 2009
3. Hiriyanna M : Outlines of Indian Philosophy, Motilal Banarsidas, Delhi, 2009
4. Bhat, Krishna K.: The Power of Yoga: SuYoga Publications Mangalore, 2006
5. Swami Prabhavananda : Spiritual Heritage of India (English). Sri Ramkrishna Math, Madras, 2004
6. Swami Vivekananda : Jnana Yoga, Bhakti Yoga, Karma Yoga, Raja Yoga. Advaita Ashrama, Calcutta, 2000
7. Pandit, M. P.: Introduction to Upanishads: Theosophical Society of India, Adyar, Madras, 1976
8. Dasgupta, S.N. : Hindu Mysticism, Motilal Banarsidas, Delhi 1927
9. Arthuv Avalan : The Serpent Power, Sivalik Prakashan, New Delhi, 2009
10. Bhat, Krishna K. : The Power of Yoga: SuYoga Publications Mangalore, 2006
11. Sing, Lalan Prasad : Tantra, Its Mystic and Scientific Bases. Concept Publishing Company, Delhi, 1976
12. Karel Werner : Yoga and Indian Philosophy, Motilal Banarasidas, Delhi, 1979
13. Swami Jnanananda : Philosophy of Yoga. Sri Ramakrishna Ashrama, Mysore.

Subject Title: **HATHA YOGA** Subject Code: **PGDY -CT102**

Objectives:

- To give an introduction of Hatha yoga**
- To give an understanding of the prerequisites of Hatha Yoga**
- To introduce the principles of Hatha Yoga**
- To introduce essential Hatha Yoga text**

Total Number of Hours: 60		Theory	Tutorial	Practical
Credits		4	0	0
Hours/ week		4	0	0
SCHEME OF EXAMINATION				
				Total Marks: 100
Theory : 100		Practical : NA		
Final Exam(SEE)	Internal Assessment (CT+TA)	Final Exam (SEE)	Internal Assessment (CT+TA/PR)	
70	30	NA	NA	

**Unit-1: HATHA YOGA ITS PHILOSOPHY AND PRACTICES****[15 Hrs.]**

Hatha Yoga, its meaning, definition, aims & objectives, misconceptions, obstacles (vighna) and helps (sahayaka) in Hatha Yoga as in Hatha Yoga Pradépika; The Origin of Hatha Yoga, Hatha Yogic Literature, Hatha Yogic Practices as explained in Hatha Yoga Pradépika (HYP); Concept of Mata, Rules & Regulations to be followed by the Hatha Yoga Practitioner, concept of Mitahara, Pathya and Apathya ; Hatha Yogic parampara. Brief introduction to Great Hatha Yogés of Natha Cult and their contributions to Yoga. Relationship between Hatha Yoga & Raja Yoga.

Unit-2: HATHA YOGA PRACTICES: SHODHANA-KRIYAS AND ASANAS**[15 Hrs.]**

SHodhana-kriyas, SHodhana-kriyas in Hatha Yoga Pradépika & in Gheranòa Samhita and their techniques, benefits and precautions; Role of SHodhana-kriyas in Yoga Sadhana and their importance in Modern day life; Yogasana: its' definition, Salient features and importance in Hatha Yoga Sadhana; Asanas in Hatha Yoga Pradépika and Gheranòa Samhita: their techniques, benefits, precautions and importance.

Unit-3: HATHA YOGIC PRACTICES: PRANAYAMA, BANDHAS AND MUDRAS**[15 Hrs.]**

Pranayama – Machanism of correct breathing, Yogic deep breathing, Concept of Püraka, Kumbhaka and Recaka; The concept of Prana, Kinds of Prana and Upa-pranas, Pranayama and its importance in Hatha Yoga Sadhana, Nadishodhana Pranayama, its technique and importance, Pre-requisites of Pranayama; Pranayama practices in Hatha yoga pradépika and Gheranòa Samhita, their techniques, benefits and precautions, Hatha Siddhi Lakshanam; Bandhas and role of Bandhatrayas in Yoga Sadhana; Fundamental Mudras in HYP and G.S, Their techniques, benefits and precautions.

Unit-4: HATHAYOGA PRACTICES: PRATYAHARA, NADANUSANDHANA AND SVARODAYA JNANA**[15 Hrs.]**

Concept of Pratyahara, Dharana and Dhyana in Gheranòa Samhita and their techniques & benefits; Concept of Samadhi in Hatha-yoga Pradépika, Samadhi Lakshanam and Hatha Yoga Siddhi Lakshanam; The concept of Nada, Four Avasthas (stages) of Nadanusandhana, and its Siddhis; Svara, Importance of Svarodaya-jnana in Yoga Sadhana with special reference to Jnana Svarodaya and SHiva Svarodaya ; Introduction to Basic Hatha Yoga Texts: Basic Hatha Yogic Texts : their nature and objectives, Siddhasiddhantapaddhati, Goraksha Samhita, and Shiva Samhita, Hatha Pradeepika, Gheranda Samhita, Breif introduction to Hatha Rathnavali.

TEXT BOOKS

1. I. K. Taimini : The Science of Yoga, (The Theosophical, Publishing House, Adyar Chennai 2005)
2. Swami Satyananda Saraswati : Hatha Yoga, Pub: BSY Mungher

BOOKS FOR REFERENCE:

1. Woods, J.H. : The Yoga System of Patanjali, M.L.B.D., Delhi, 1988
2. Swami Vivekananda: Rajayoga, Advaita Ashram, Culcutta, 2000
3. Iyengar B.K.S. : Light on Patanjali Yoga (New York, Schocken Books, 1994)
4. Swami Sri Omanandatirtha: Patanjala Yoga Pradeepa, Geeta Press, Gorakhpur, 1994
5. Swami Anant Bharati : Patanjali Yoga Shasta- a study (Hindi), Swami Keshwananda Yoga Sangthan, Delhi, 1982
6. Burley, Mikel: Hatha Yoga, Its' Context Theory and Practice (M.L.B.D. Delhi, 2000)
7. Ghosh, Shyam: The Original Yoga, Munshiram Manoharlal, New Delhi, 1999
8. Burnier, Radha: Hathayoga Pradipika of Svatmarama, The Adyar Library publications, Chennai. 2000
9. Woodroffe, Sir John: The Serpent power (Ganesh & Company, Madras, 2000)

Subject Title: **HUMAN ANATOMY & PHYSIOLOGY**Subject Code: **PGDY-CT103****Objectives:**

- i. To give a basic understanding of the human anatomy
- ii. To give a basic understanding of the human physiology
- iii. To give a deeper understanding of the human systems



Total Number of Hours: 60		Theory	Tutorial	Practical
Credits		4	0	0
Hours/ week		4	0	0
SCHEME OF EXAMINATION				
Total Marks: 100				
Theory : 100			Practical : NA	
Final Exam (SEE)	Internal Assessment (CT+TA)	Final Exam (SEE)	Internal Assessment (CT+TA/PR)	
70	30	NA	NA	

Unit-1: INTRODUCTION TO HUMAN ANATOMY AND PHYSIOLOGY, DIGESTIVE AND EXCRETORY SYSTEM

[15 Hrs.]

Introduction to Human Anatomy and Physiology, Basic Anatomical and Physiological terms; Cell: Structure & Functions, different cell organelles and their functions; Tissues and Organization of human system; Introduction to Support Systems; Maintenance Systems, Control Systems, Defence System and Concept of Homeostasis; Gross anatomy of digestive system, functional anatomy of Mouth, Oral cavity, Pharynx, Esophagus, Stomach, Small intestine, Large intestine and Anal canal; Physiology of digestion, assimilation & peristalsis, Gastric and digestive juices involved during digestion, associated glands involved in digestive system; Urinary system, kidneys, ureters, urinary bladder, Urethra; Skin and sweat gland

Unit-2: MUSCULO-SKELETAL SYSTEM

[15 Hrs.]

The Skeletal System: Skeleton, Functions of skeleton, Classification of bones, Study of joints; Structure and function of a Synovial joint; The Muscular System: Types of Muscles in the body; the characteristics, structure and functions of The Skeletal Muscles, Smooth Muscles and Cardiac Muscles

Unit-3: CARDIOVASCULAR SYSTEM, RESPIRATORY SYSTEM, BLOOD AND LYMPHATIC SYSTEM

[15 Hrs.]

Functional anatomy of the Heart, arteries, veins and capillaries; The organization of systematic and pulmonary circulation, the cardiac cycle; Blood: Composition and Functions, Blood groups and their importance; Cardiac output and Venous return; Blood pressure and Regulation of blood pressure; Gross anatomy of the respiratory passages, functional of Nasal cavity, Pharynx, Larynx, Trachea, Bronchus, Lungs and Alveoli; The process of Respiration, Lungs volumes & capacities, Mechanics of breathing and exchange of gas in alveoli; Composition of blood corpuscles – RBC, WBC and Platelets; Plasma, hemoglobin – coagulation of blood and anti coagulants, blood groups and its importance; Sites, functional anatomy of lymph nodes and their function; Lymphatic system and its' role in immune system.

Unit-4: NERVOUS SYSTEM & SPECIAL SENSES, ENDOCRINE SYSTEM

[15 Hrs.]

An introduction to Histology – nerve – structure and properties of neurons – nerve – action potential – generation propagation – factors influencing classification of neurons and nerve fibers, neuralgia cells, receptors and reflex arcs; Functional anatomy of Cerebrum, Cerebellum, spinal cord; Functions and importance of the parts of the brain viz., cerebrum, pons, medulla, thalamus, hypothalamus, cerebellum and autonomic nervous system [sympathetic and parasympathetic]; Functional anatomy and physiology of Eyes, ears, nose, tongue and skin; Anatomical structure of important endocrine glands (Pituitary, thyroid, parathyroid, pancreas, adrenal and gonads); Short anatomy of the hypothalamus and the releasing hormones secreted from it; Structure and function of anterior and posterior Pituitary; Function of thyroid, parathyroid, supra renal and islets of Langerhans.

Unit 5: REPRODUCTIVE SYSTEM

[15 Hrs.]

Functional anatomy male reproductive system, seminal vesicles and prostate glands; Spermatogenesis; Functional anatomy of female reproductive system; Ovarian hormones, menstruation, pregnancy, parturition and lactation.

TEXT BOOK

1. Evelyn C Peace : Anatomy and Physiology for Nurses (Jaypee Brothers, New Delhi, India, 1997)

**REFERENCE BOOKS**

1. Gore, M.M.: Anatomy and Physiology of Yogic practices (Kanchan Prakshan, Lonavala, 2003)
2. Shirley Telles: A Glimpse of the Human body. (V K YOGAS, Bangalore, 1995)
3. Sri Krishna: Notes on Structure and Functions of Human Body and Effects of Yogic practices on it (Kaivalyadhama S.M.Y.M Samiti, Lonavala, 1988)
4. Charu, Supriya: Sarir Rachana evam Kriya Vigyan
5. Peter L Williams & Roger Warwick: Gray's Anatomy (Churchill Livingstone, Edinburgh London, 1988)
6. Chatterjee, C.C.: Human Physiology (Vol. I & II) (Medical Allied Agency, Calcutta, 1992)
7. G Gerard J Tortora: Principles of Anatomy and Physiology and Sandra Reynolds (Harper Collins College Publishers, New York, 1992)

Subject Title: **YOGIC LIFE STYLE** Subject Code: **PGDY -CT104** Objectives:

- i. To introduce the essential elements of a yogic life style
- ii. To introduce the concept of health and disease
- iii. To give an understanding of the concept of ill health and their remedies through yoga
- iv. To give an overview of the five sheath human existence

Total Number of Hours: 60		Theory	Tutorial	Practical
Credits		4	0	0
Hours/ week		4	0	0
SCHEME OF EXAMINATION				
Total Marks: 100				
Theory : 100			Practical : NA	
Final Exam (SEE)	Internal Assessment (CT+TA)	Final Exam (SEE)	Internal Assessment (CT+TA/PR)	
70	30	NA	NA	

Unit - 1: CONCEPT OF BODY, HEALTH AND DISEASE**[15 Hrs.]**

Definition & Importance of Health According to WHO; Dimensions of Health: Physical, Mental, Social and Spiritual; Concept of Body, Health and Disease in Yoga – Yogic concept of Body from Taittiriya Upanishad, Yogic Concept of Health and Disease: Meaning and definitions, Concept of Adhi and Vyadhi according to Yoga Vasistha and remedial measures; Holistic health care through Yoga. Concepts of Trigunas, Pancha-mahabhutas, Pancha-prana and their role in Health and Healing; Concept of Panchakoshas & Shat-chakra and their role in Health and Healing

Unit - 2: CAUSES OF ILL HEALTH AND REMEDIAL MEASURES ACCORDING TO PATANJALI**[15 Hrs.]**

Potential causes of Ill-health: Mental and Emotional ill Health: Styana, Samshaya, Pramada, Avirati, Duhkha, Daurmanasya, Bhranti-darsana, Alabdha-bhumikatva and Anavasthitatva; Shuddhi Prakriyas in Yoga : Role of Shuddhi Prakriyas in preventive and curative Health, Karma Shuddhi (Yama, Niyama), Ghata Shuddhi (Shat-karma), Snayu Shuddhi (Asana), Prana Shuddhi (Pranayama), Indriya and Mano Shuddhi (Pratyahara), Mana, Buddhi, Ahamkar and Chitta Shuddhi (Dharana, Dhyana and Samadhi)

Unit - 3: YOGIC PRINCIPLES AND PRACTICES OF HEALTHY LIVING - I**[15 Hrs.]**

Dietary regulation according to Hatha yoga and Bhagavadgitha; shatkriyas and tatvashuddhi; Asana for mind body and spirit; Practice for pranamaya kosha – pranayama; Definition of Mental Health & Mental Hygiene & Total Health ; Indian approach to personality and personality integration Psycho-Social Implications of yoga; Adjustment Personal and interpersonal adjustment through yogic methods Niyamas & Yamas

Unit - 4: YOGIC PRINCIPLES AND PRACTICES OF HEALTHY LIVING - II**[15 Hrs.]**

Attitude change towards yoga through individualized counselling, Psychological & yogic method Tackling ill effects of conflict and Frustration; Yogic methods Yoga Psychology for Adjustment: Psychological, philosophical and yogic counselling; the remedial measures; Action in relaxation-the secret of Karma Yoga; Unattached action, not to the fruits of action, equanimity in success and failure.

**TEXT BOOK**

1. Ghosh, Shyam : The Original Yoga Munshiram Manoharlal, New Delhi, 1999)
2. Jnanananda Bharati : Essence of Yoga Vasishta Pub: Sanata Books, Chennai
3. Hatha Ratnavali : Tirumala Tirupathi Devasthanana, Andhra Pradesh.

REFERENCE BOOKS:

1. Gheranda Samhita : Shri Sadguru Publication, New Delhi.
2. Dr R Nagarathna and Dr H R Nagendra: Yoga and Health, Swami Vivekananda Yoga Prakashana, 2002
3. Dr R Nagarathna and Dr H R Nagendra: Yoga for Promotion of Positive Health Published by SVYP, Bangalore
4. Dr Nagendra H R : The Secret of Action - Karma Yoga, Published by SVYP, Bangalore, 2003

Subject Title: **YOGA PRACTICUM - I** Subject Code: **PGDY-PC105** Objectives:

i. To introduce a regular and rigorous practice (sadhana) of yoga practices

Total Number of Hours: 120		Theory	Tutorial	Practical
Credits		0	0	4
Hours/ week		0	0	8
SCHEME OF EXAMINATION				
Total Marks: 100				
Theory : NA		Practical : 100		
Final Exam (SEE)	Internal Assessment (CT+TA)	Final Exam (SEE)	Internal Assessment (CT+TA/PR)	
NA	NA	70	30	

Unit- 1. SHAT KARMAS**[30 Hrs.]**

Vastra Dhauti, Sutra Neti, Kapalbhathi, Nauli Chalan, Jyoti Trataka, Agnisara

Unit-2. YOGASANAS**[90 Hrs.]**

Tadasana, Vrikshasana, Urdhva-Hastottanasana, Kati Chakrasana, Ardha Chakrasana, Paada Hastasana, Trikonasana, Parshva Konasana, Veerabhadrasana, Bhunamanasana, Hanumanasana, Dandasana, Swastikasana, Sidhasana, Bhadrasana, Padmasana, Vajrasana, Utkatasana, Gomukhasana, Ushtrasana, Shashankasana, Kurmasana, Navasana, Baddha Padmasana, Janusirasana, Paschimottanasana, Supta Vajrasana, Mandukasana, Utthana Mandukasana, Vakrasana, Ardha Matsyendrasana, Simhasana, Pavanamuktasana, Utthana-padasana, Ardha Halasana, Setubandha Sarvangasana, Halasana, Sarvangasana, Matsyasana, Chakrasana, Shavasana, Makarasana, Bhujangasana, Shalabhasana, Dhanurasana, Kapotasana, Bakasana, Kukkutasana, Matsyendrasana, Padangusthasana, Hastapadangusthasana, Garudasana, Natarajasana Mayurasana, Sirshasana

TEXT BOOKS**REFERENCE BOOKS**

1. Reddy, M. Venkata and Others: Yogic Therapy, Sri M.S.R. Memorial Yoga series, Arthamuru A.P. 2005
2. Dr R Nagarathna, Dr H R Nagendra: Yoga for Asthma by Published by SVYP, Bangalore, 1998
3. Dr R Nagarathna, Dr H R Nagendra: Yoga Practices for Anxiety & Depression, Published by SVYP, Bangalore, Bangalore, 2001
4. Yoga for Back Pain by Dr H R Nagendra, Dr R Nagarathna, Published by SVYP, Bangalore, Bangalore, 2001
5. Yoga for Cancer by Dr H R Nagendra, Dr R Nagarathna, Published by SVYP, Bangalore, Bangalore, 2006
6. New Perspectives in Stress Management, by Dr. H. R. Nagendra, Dr. R. Nagarathna, Published by SVYP, Bangalore, Bangalore, 2000
7. Dr R Nagarathna, Dr H R Nagendra, Yoga for Arthritis, Published by SVYP, Bangalore, 2001
8. Dr Shamantakamani Narendran, Dr R Nagarathna and Dr H R Nagendra: Yoga for Pregnancy, Published by SVYP, Bangalore, 2008
9. Dr. R. Nagarathna and Dr. H. R. Nagendra: Yoga for Obesity, Published by SVYP, Bangalore, 2014
10. Dr R Nagarathna, Dr H R Nagendra: Yoga for Diabetes, Published by SVYP, Bangalore, 2003
11. Dr R Nagarathna, Dr H R Nagendra: Yoga for Promotion of Positive Health, Published by SVYP, Bangalore, 2004



Subject Title: **YOGA PRACTICUM-II**
Subject Code: **PGDY-CP106** Objectives:

i. To help establish a regular and rigorous practice (sadhana) of yoga practices

Total Number of Hours: 60		Theory	Tutorial	Practical
Credits		0	0	2
Hours/ week		0	0	4
SCHEME OF EXAMINATION				
Total Marks: 100				
Theory : 100		Practical :		
Final Exam (SEE)	Internal Assessment (CT+TA)	Final Exam (SEE)	Internal Assessment (CT+TA/PR)	
NA	NA	70	30	

Unit- 1: PRANAYAMA

[15 Hrs.]

Nadi Shodhana (Technique 1: Same Nostril Breathing), Nadi Shodhana (Technique 2: Alternate Nostril Breathing), Nadi Shodhana (Technique 3: Alternate Nostril Breathing + Antar Kumbhak), Surya-bhedi and Chandra-bhedi Pranayama, Ujjayi Pranayama, Sheetal Pranayama, Shitkari Pranayama, Bhramari Pranayama, Pranayama (with Antar & Bahya Kumbhaka)

Unit- 2: PRACTICES LEADING TO MEDITATION

[30 Hrs.]

Pranav and Soham Japa, Yoga Nidra (1,2,3), Antarmauna, Ajapa Dharana (Stage 1,2,3), Practices leading to Breath Meditation, Practices leading to Om Meditation, Practices leading to Vipassana Meditation, Practices leading to Preksha Meditation

Unit- 3: BANDHA AND MUDRAS

[15 Hrs]

Jivha Bandha, Jalandhara Bandha, Uddiyana Bandha, Mula Bandha, Maha Bandha, Yoga Mudra, Maha Mudra, Shanmukhi Mudra, Tadagi Mudra, Vipareet Karni Mudra

TEXT BOOKS

REFERENCE BOOKS

1. Reddy, M. Venkata and Others: Yogic Therapy, Sri M.S.R. Memorial Yoga series, Arthamuru A.P.2005
2. Dr R Nagarathna, Dr H R Nagendra: Yoga for Asthma by Published by SVYP, Bangalore, 1998
3. Dr R Nagarathna, Dr H R Nagendra: Yoga Practices for Anxiety & Depression, Published by SVYP, Bangalore, Bangalore, 2001
4. Yoga for Back Pain by Dr H R Nagendra, Dr R Nagarathna, Published by SVYP, Bangalore, Bangalore, 2001
5. Yoga for Cancer by Dr H R Nagendra, Dr R Nagarathna, Published by SVYP, Bangalore, Bangalore, 2006
6. New Perspectives in Stress Management, by Dr. H. R. Nagendra, Dr. R. Nagarathna, Published by SVYP, Bangalore, Bangalore, 2000
7. Dr R Nagarathna, Dr H R Nagendra, Yoga for Arthritis, Published by SVYP, Bangalore, 2001
8. Dr Shamantakamani Narendran, Dr R Nagarathna and Dr H R Nagendra: Yoga for Pregnancy, Published by SVYP, Bangalore, 2008
9. Dr. R. Nagarathna and Dr. H. R. Nagendra: Yoga for Obesity, Published by SVYP, Bangalore, 2014
10. Dr R Nagarathna, Dr H R Nagendra: Yoga for Diabetes, Published by SVYP, Bangalore 2003
11. Dr R Nagarathna, Dr H R Nagendra: Yoga for Promotion of Positive Health, Published by SVYP, Bangalore, 2004

Subject Title: **ASSIGNMENTS & SELF APPRAISALS**

Subject Code: **PGDY-FW107**

Objectives:

- To introduce the principles of teaching yoga**
- To introduce class and lesson management**
- To help overcome obstacles in self-practice through self-appraisals**

**iv. To assess through regular viva voce and help deepen the understanding of yoga**

Total Number of Hours: 120		Theory	Tutorial	Practical
Credits		0	0	4
Hours/ week		0	0	8
SCHEME OF EXAMINATION				
Total Marks: 100				
Theory : NA		Practical : 100		
Final Exam (SEE)	Internal Assessment (CT+TA)	Final Exam (SEE)	Internal Assessment (CT+TA/PR)	
NA	NA	70	30	

Unit-1: TEACHING PRACTICE**[90 Hrs]**

Illustration of the need for a lesson plan; Illustration of the need for a content plan; Demonstration of types of teaching methods; Demonstration of optimum use of teaching aids viz. audio-visual aids; Practical training on class management; Practical demonstration of critical observation, active supervision and interaction; Method of preparing for an ideal setting based on the specific requirement of the class; Demonstration on use and importance of body language, communication skills and personal conduct in an ideal class; Evaluation methods of an ideal Yoga class; Methods of customizing Yoga class to meet individual needs. The student will have demonstrations and training in the above mentioned aspects of teaching methods.

Each candidate is expected to complete 5 hours of individual class, 5 classes for a small group, 5 classes for a large group demonstrating the use of essential requirements for an ideal class. (e.g.: One on Shat Karma, One on Asana, one on Pranayama, one on Bandha /Mudra, and one lesson on Meditation) under the supervision of their Yoga Practical Teacher. Each student will also have to prepare and give at least one Lecture cum Demonstration on different topics of Yoga. The record of each of these classes has to be maintained in the 'Practical Record' format for evaluation.

The practice teaching lessons and a Lecture cum Demonstration assignment should be observed / examined by the Yoga Practical Teacher. These marks shall be considered as the Particulate Class Tests (internal assessment) of this practical paper.

Unit-2: VIVA-VOCE**[30Hrs]**

Viva-voce shall be on Methods of Yoga Teaching and Presentations of Lessons

SEMESTER-IISubject Title: **ESSENCE OF PRINCIPLE UPANISHADS AND BHAGAVAD GITA**Subject Code: **PGDY -CT201****Objectives:**

- i. To teach the essence of the principal Upanishads**
- ii. To teach the essence of the Bhagavad Gita**

Total Number of Hours: 60		Theory	Tutorial	Practical
Credits		4	0	0
Hours/ week		4	0	0
SCHEME OF EXAMINATION				
Total Marks: 100				
Theory : 100		Practical :		
Final Exam (SEE)	Internal Assessment (CT+TA)	Final Exam (SEE)	Internal Assessment (CT+TA/PR)	
70	30	NA	NA	

UNIT - 1: ESSENCE OF UPANISHADS- I**[15 Hrs]**

Aitriya; Isha Upanisad; Mandukya; Manduka; Taitriya Upanisad;

**UNIT - 2: ESSENCE OF UPANISADS-2****[15 Hrs]**

Katha Upanishad; Kena Upanishad; Bruhataranyaka; Chandogya; Prashna Upanishad; Shwetashwata Upanishad

UNIT - 3: YOGA IN BHAGAVAD GITA - I**[15 Hrs]**

General Introduction to Bhagavad Gita (B.G.). Definitions of Yoga in Bhagavad-Gita and their relevance & Scope; Essentials of B.G from Units II, III, IV, V, VI, XII & XVII: The meanings of the terms Atmaswara, Stithaprajna, Sankhya Yoga, Karma Yoga, Sannyasa Yoga and Karma Swarupa (Sakama and Nishkama) etc.

Unit - 4 : YOGA IN BHAGAVAD GITA - II**[15 Hrs]**

Essentials of B.G (Contd.): Samnyasa, Dhyana, Nature of Dhyana, Preparation of Dhyana and Dhyana Yoga etc ; Essentials of B.G. (Contd.): Bhakti, Nature of Bhakti, Means and Goal of Bhakti-Yoga; Essentials of B.G (Contd.): The Trigunas and modes of Prakriti; Three Kinds of Faith. Food for Yoga Sadhaka, Classification of food etc. The Glory of B.G.

TEXT BOOKS

1. Holy Geeta : Swami Chinmayananda, Central Chinmayananda Mission Trust, 1992, Mumbai.
2. Swami Ranganathananda: Message of Upanishads, Bharatiya Vidya Bhavan, Bombay, 1985

REFERENCE BOOKS

1. Swami Venkatesananda: Vasistha's Yoga, State University of New York Press, Albany, 1993.

Subject Title: **PATANJALA YOGA DARSHANA**Subject Code: **PGDY -CT202****Objectives:**

- i. To teach an overview of the Patanjali Yoga Sutras**
- ii. To teach the essence of the Patanjali Yoga Sutras**

Total Number of Hours: 60		Theory	Tutorial	Practical
Credits		4	0	0
Hours/ week		4	0	0
SCHEME OF EXAMINATION				
Total Marks: 100				
Theory : 100		Practical : NA		
Final Exam (SEE)	Internal Assessment (CT+TA)	Final Exam (SEE)	Internal Assessment (CT+TA/PR)	
70	30	NA	NA	

Unit-1: INTRODUCTION TO PATANJALI'S YOGA SUTRAS, ITS' PHILOSOPHY AND PRACTICES AND MODERN PSYCHOLOGY**[10 Hrs]**

Yoga, its meaning & purpose & a brief introduction to Patanjali's Yoga Sutras and its author; Nature of Yoga according to Patanjali in light of Vyasabhashya and other traditional commentators, Importance of Yoga Sūtra in comparison to other Yogic literature; Concept of Citta, Citta-bhumis, Citta-vrittis, Citta-vritti nirodhopaya (Abhyasa and Vairagya) Citta-Vikshepas (Antarayas), Citta-prasadanam and its' associates; Metaphysics of Saikhya & its' relationship with Yoga Darshana of Patanjali, Philosophical Foundations & Practices of Patanjali's Yogas, its' importance & relevance and Yoga Samanvaya; Concept of mind – eastern and western perspective; psychology principles and methods – TA, etc;

Unit-2: SAMADHI PADA AND SADHANA PADA**[10 Hrs]**

Kriya-yoga, Theory of Kleshas, Nature of Drshya & Drshya and means of elimination of Kleshas/ Vivekakhya; Types and nature of Samadhi in Yoga Sūtra, Rtambharaprajna and Adhyatmaprasada; Samprajnata, Asamprajnata, Sabija & Nirbija Samadhi, Difference between Samapattis and Samadhi; Concept of Ishvara and qualities of Ishvara.

**Unit-3 : CONCEPT OF VIBHUTI AND KAIIVALYA [10 Hrs]**

Ashtanga Yoga: Yama, Niyama, Asana, Pranayama, Pratyahara, Dharana, Dhyana, and Samadhi; Samyama & three Parinama of Samyama. The concept and description of Ashtha Siddhis; Nature of Kaivalya, Kaivalya in relation to Triguna and Dharmamegha Samadhi; Ashtanga Yoga & Kriya Yoga in Yoga Sutras and their importance & relevance in modern age.

Unit-4 : PARINAMAS AND THE PERSONALITY TRANSFORMATION [10 Hrs]

The critical analysis of the three parinamas; The parinamas as the tool for transformation; The parinamas and the higher states of consciousness; The discussion of parinams in the light of psychology.

Unit-5: ASTA-SIDHIS, PARA-NORMAL PHENOMENON AND SPIRITUAL TRANSFORMATION [10 Hrs]

A critical discussion on Asta-siddhis; A study of para-normal phenomenon; A comparative study of siddhis and para-normal experiences; Spiritual psychosis and spiritual transformation.

TEXT BOOKS:

1. Swami Vivekananda : Rajayoga (Advaita Ashram, Calcutta, 2000).
2. Woods, J.H.: The Yoga System of Patanjali (M.L.B.D., Delhi, 1988)

REFERENCE BOOKS:

1. Iyengar B.K.S.: Light on Patanjali Yoga (New York, Schocken Books, 1994)
2. Rukmini T.S.: Yoga Vartika of Vijnanbhikshu (Tr.) Vol I, II, III & IV, Munshiram Manoharlal Pvt. Ltd. New Delhi
3. Swami Omanandathirtha: Patanjali Yoga Pradeepa, Geeta Press, Gorakhpur, 1994
4. Swami Anant Bharati: Patanjali Yoga Shasta- a study (Hindi), Swami Keshwananda Yoga Sangthan, Delhi
5. K. Taimini : The Science of Yoga (The Theosophical Publishing House, Adyar Chennai 2005).

Subject Title: **APPLIED YOGA** Subject Code: **PGDY - CT203** Objectives:

- i. To give an overview of the applications of yoga
- ii. To teach the concept of yoga and psychology
- iii. To teach the concept of yoga and personality development
- iv. To teach the concept of yoga and stress management
- v. To teach the concept of yoga and sports

Total Number of Hours: 60		Theory	Tutorial	Practical
Credits		4	0	0
Hours/ week		4	0	0
SCHEME OF EXAMINATION				
Total Marks: 100				
Theory : 100		Practical :		
Final Exam (SEE)	Internal Assessment (CT+TA)	Final Exam (SEE)	Internal Assessment (CT+TA/PR)	
70	30	NA	NA	

UNIT - 1: YOGA FOR STRESS MANAGEMENT [15 Hrs]

Mental Health: Meaning and Importance; Yogic Perspective of Mental Health, Indicators of Mental Health; Stress: Meaning and Definition; Symptoms, Causes and Consequences of Stress; Conflict, Frustration and Pressure; Stress according to Yoga and its management; Avidya cause of stress; Strong likes and dislikes; Recognition is half the solution; Stress levels; Stimulation the pointers of awareness – physical, mental, emotional, intellectual and spiritual level; Depth of perception and expansion of awareness; Group awareness; Progress and tune with nature; Holistic life style for stress management; Solutions through Mandukya karika - Relaxation and stimulation combined as the core for stress management; Stress Management through Patanjali Yoga and Bhagavad Gita.



UNIT - 2: YOGA FOR PERSONALITY DEVELOPMENT

[15 Hrs]

Physical level: Shat Kriyas (Detoxifying), Asans (Strength), Mudras (steadiness), Pranayama (lightness), Dhyana (perception); *Vital Level:* Pranayama; *Mental level:* Personal discipline, Social Discipline (Yama, Niyama), cultivation of four fold attitudes, Practice of Dharna, Dhyana ; *Emotion level:* Ishwara Pranidhana (Surrendering to the supreme); *Spiritual level:* Practice of Higher states of Meditation (Super consciousness states), Ashta Siddhis

Unit - 3: YOGA AND SPORTS

[15 Hrs]

Ideal performance and Peak performance for sport persons; Enhancing Physical capacities: Kriyas, Asanas, Yogic Diet; *Vital Level:* Pranayama (Lung capacity), *Emotional capacity:* Emotional balance through emotional culture (surrender to the Divine); *Mental capacity:* Practice of Karma Yoga and Meditation, spiritual capacity: State of Samadhi through Brahmari Pranayama and effortless Dhyana;

Unit - 4: YOGA FOR CHILDREN'S WITH SPECIAL NEEDS

[15 Hrs]

Yoga for Down syndrome, Autism, ADHD, Cerebral Palsy, Learning Disabilities: determining tailor made instructional approach to meet the cognitive, emotional, physical needs of child; Practices which helps in strength, endurance, speed, agility, flexibility, mental and self confidence; emotional behaviour disorder, physical disability; Integrated system of yoga practices to increase cognitive and motor skills in children with learning and developmental disabilities; Warm up or loosening exercises; Strengthening poses Relaxing postures, yogic breathing practices, yogic games - to develop strength, concentration, imagination, confidence.

TEXT BOOKS:

1. Nagendra H R & Nagarathna: New perspective of Stress Management, SVYP, 2010
2. Nagendra H R & Nagarathna: Personality Development Series, SVYP, 2012

REFERENCE BOOKS:

1. Basavaraddi I V: Yoga: Teachers manual for school children, MDNIY New Delhi , 2010
2. Basavaraddi I V: Yoga in School Health, MDNIY New Delhi, 2009
3. Jayadev H J: Growing with Yoga, The Yoga Institute, Santacruz, Mumbai, 2004
4. Swati & Rajiv Chanchani : Yoga for Children: A complete illustrated guide to Yoga, UBSPublishes Distributors Pvt. Ltd, 2008
5. Nancy Williams : Yoga Education: Philosophy and Practice, Deep & Deep Publications Pvt. Ltd, 2007
6. Yoga for the Special Child: A Therapeutic Approach for Infants and Children with Down Syndrome, Cerebral Palsy, and Learning Disabilities, Special Yoga Publications, 1998
7. Yoga therapy for every Special Child, Singing Dragon London and Philadelphia, 2010

Subject Title: **METHODS OF TEACHING YOGA AND VALUE EDUCATION**Subject Code: **PGDY -CT204****Objectives:**

- i. To teach teaching techniques to the students
- ii. To teach class management and lesson planning
- iii. To introduce educational tools of yoga teaching
- iv. To teach the concept of yoga education and values

Total Number of Hours: 60		Theory	Tutorial	Practical
Credits		4	0	0
Hours/ week		4	0	0
SCHEME OF EXAMINATION				
Total Marks: 100				
Theory : 100			Practical :	
Final Exam (SEE)	Internal Assessment (CT+TA)	Final Exam (SEE)	Internal Assessment(CT+TA/PR)	
70	30	NA	NA	

Unit 1: PRINCIPLES AND METHODS OF TEACHING YOGA**[15 Hrs]**

Teaching and Learning: Concepts and Relationship between the two; Principles of Teaching: Levels and Phases of Teaching, Quality of perfect Yoga Guru; Yogic levels of learning, Vidyarthi, Shishya, Mumuksha; Meaning and scope of Teaching methods, and factors influencing them; Sources of Teaching methods; Role of Yoga Teachers and Teacher training

Unit 2: BASICS OF YOGA CLASS MANAGEMENT**[15 Hrs]**

Practice of Yoga at different levels (Beginners, Advanced, School Children, Youth, Women and Special attention group); Techniques of Individualized; Teaching Techniques of group teaching; Techniques of mass instructions; Organization of teaching (Time Management, Discipline etc.)

Unit 3: LESSON PLANNING IN YOGA**[15 Hrs]**

Essentials of Good Lesson Plan: concepts, needs, planning of teaching Yoga (Shatkriya, Asana, Mudra, Pranayama & Meditation); Models of Lesson Plan; Action Research of Yoga: Meaning, Roles, Steps in action research in Yoga Teaching; Effective use of Library and other resources; Lesson Plan and its Practical applications

Unit 4: EDUCATIONAL TOOLS OF YOGA TEACHING**[15 Hrs]**

Yoga classroom: Essential features, Area, Sitting arrangement in Yoga class etc; Class room problems: Types and Solutions, Characteristics and essentials of good Yoga teaching; Time table: Need, Types, Principles of Time table construction; Time Table for Yoga teaching; Meaning, Importance and Types of Educational technology; Role of Educational Technology in Yoga.

Unit 5: YOGA AND VALUE EDUCATION**[15 Hrs]**

Concept of Value, Definition of value, Types of Values; Value Oriented Education, Value- education and its components; Value oriented personality, Role and function of values in Society; Yoga as global value, Yoga as value and yoga as Practice; Contribution of Yoga towards the development of values

TEXT BOOKS

1. Swami Satyananda Saraswati: Yoga Education for Children, Bihar Schools of Yoga, Munger, 1990

BOOKS FOR REFERENCE

1. Dr. Gharote M L: Teaching methods for Yogic practices, Kaivalyadhama, Lonavala, 2007
2. Dr. Shri Krishna: Notes on basic principles & methods of teaching as applied to yogic practices and a ready reckoner of yogic practices, Kaivalyadhama, Lonavala, 2009
3. Dr. Raj Kumar : Principles & methods of Teaching, Printo graphics, Delhi
4. Duggal, Satyapad : Teaching Yoga, The Yoga Institute, Santacruz, Bombay, 1985
5. Nagendra, H.R. and Nagaratna R : New Perspectives in Stress Management, V.K. Yogas, 1988
6. Swami Satyananda Saraswati: Yoga Education for Children, Bihar Schools of Yoga, Munger, 1990



7. Gawande, E.N.: Value Oriented Education, Sarup & Sons, New Delhi – 110002
8. Gharote, M.L.: Yoga Applied to Physical Education Lonavala; Kaivalyadhama.
9. Dr R Nagarathna & Dr H R Nagendra :Integrated Approach of Yoga Therapy for PositiveHealth, Swami Vivekananda Yoga Prakashana, Bangalore, 2003

Subject Title: **YOGA PRACTICUM - III** Subject Code: PGDY - CP 205 Objectives:

- i. To help maintain the yoga practise or Sadhana
- ii. To teach yoga modules specific to Physical Stamina, Voice Culture, Eye sight, Memory, Concentration, Creativity, IQ, Anger Management

Total Number of Hours:		Theory	Tutorial	Practical
Credits		0	0	4
Hours/ week		0	0	8
SCHEME OF EXAMINATION				
Total Marks: 100				
Theory : 100			Practical :	
Final Exam (SEE)	Internal Assessment (CT+TA)	Final Exam (SEE)	Internal Assessment (CT+TA/PR)	
70	30			

Unit 1: PRACTICES FOR PHYSICAL STAMINA, VOICE CULTURE ANDEYE SIGHT [15 Hrs]

Characteristics of physical development: Flexibility, stamina, endurance, longevity; loosening the joints, stretching-relaxation of muscles, improve strength and stamina; physical revitalisation; Need for control on breath; special exercises for voice culture; Cleansing practices, eye muscle strengthening practices

Unit 2: PRACTICES FOR MEMORY AND CONCENTRATION [15 Hrs]

Short-term, long-term memory, stages of memory foundation and maintenance; yoga modules to improve memory; Barriers to concentration; concentration according to modern psychology; concentration according to eastern psychology; dharana as per Patanjali – binding to a particular; practices to improve concentration.

Unit 3: PRACTICES FOR CREATIVITY AND IQ [15 Hrs]

Physiology and creativity; creativity eastern concept, silence and creativity; yogic approach to creativity; yogic practices for creativity development; Facets of intelligence; concept of intelligence according to yoga; yoga module of IQ development;

Unit 4: PRACTICES FOR ANGER MANAGEMENT ANDSTRESS MANAGEMENT [15 Hrs]

What is anger? Expression of anger, outcome of anger, yogic management of anger; Concept of Stress; Solutions through Mandukya karika - Relaxation and stimulation combined as the core for stress management; Practice of Stimulation and relaxation

TEXT BOOKS

Dr H R Nagendra, Dr R Nagarathna: Yoga for Personality Development Series, Published bySVYP, 2013

Subject Title: **YOGA PRACTICUM - IV** Subject Code: PGDYS - CP206 Objectives:

1. To get the practical experience and training to teach Advance Yoga techniques

Total Number of Hours:		Theory	Tutorial	Practical
Credits		0	0	4
Hours/ week		0	0	8
SCHEME OF EXAMINATION				
Total Marks: 100				
Theory : 100			Practical :	
Final Exam (SEE)	Internal Assessment (CT+TA)	Final Exam (SEE)	Internal Assessment (CT+TA/PR)	
70	30			

**Unit-I: HEALING AT THE PHYSICAL LEVEL [15 Hrs]**

Cyclic Meditation (S-VYASA); Mindfulness based Stress Reduction Technique (Kabatzin)

Unit-II: HEALING AT THE PRANA LEVEL [15 Hrs]

Vipasana Meditation; Preksha Meditation

Unit-III: HEALING AT THE MENTAL LEVELMind Sound Resonance Technique (S-VYASA) ; Raja Yoga Meditation (Brahmakumaris)
Transcendental Meditation (Mahesh Yogi); ZEN Buddhist Meditation**Unit-IV: HEALING AT THE CONSCIOUS LEVEL**

Yoga Nidra (BSY)

TEXT BOOK:

1. Lajpat, Rai & others: Meditation, Anubhava Rai Publications, Gurgaon, 1999
2. Dr H R Nagendra, Dr R Nagarathna, Advance Yoga Techniques series, Published by SVYP, 1998

REFERENCE BOOKS:

1. Swami Niranjanananda Saraswati : Dharana Darshan, Yoga Publications Trust, Munger, Bihar, India, 1996
2. Lajpat, Rai : Discovering Human Potential Energy, Anubhava Rai Publications, Gurgaon, 1999

Subject Title: **TEACHING PRACTICES** Subject Code: **PGDYS -FW207** Objectives:

1. To inculcate the practise of teaching with a teaching internship to junior students in certificate and post-graduate diploma programmes

Total Number of Hours: 120		Theory	Tutorial	Field Work
Credits		0	0	2
Hours/ week		0	0	8
SCHEME OF EXAMINATION				
Total Marks: 100				
Theory : NA		Practical : 100		
Final Exam (SEE)	Internal Assessment (CT+TA)	Final Exam (SEE)	Internal Assessment (CT+TA/PR)	
NA	NA	70	30	

The student is expected to teach yoga modules to Certificate and Diploma students and also teach personality development modules to School children and write a report therein.

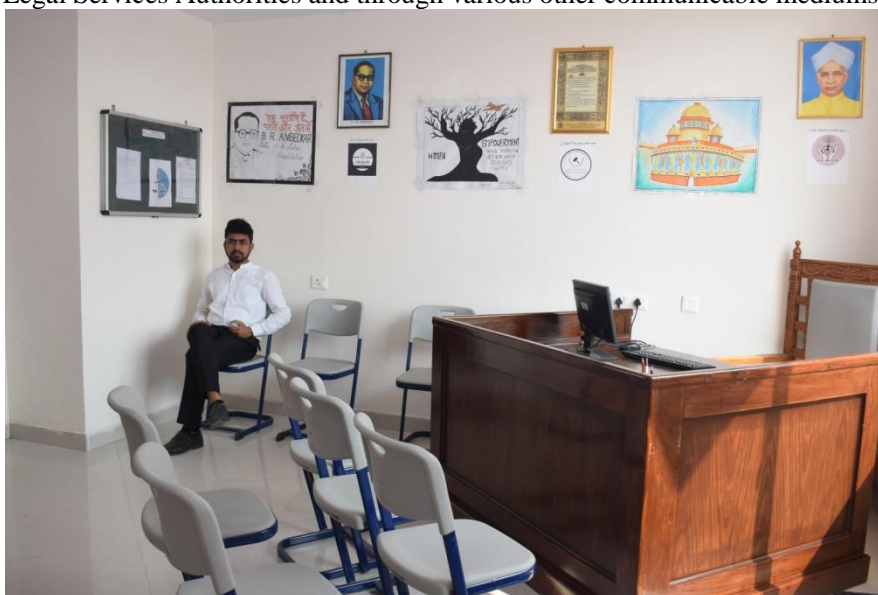


10. SCHOOL OF LAW AND GOVERNANCE

STUDENTS SUPPORT EXTENSION ACTIVITIES AND OUTREACH PROGRAMME

Legal Aid Clinic:

The importance of Legal Aid and Awareness Campaigns as a mechanism for social progress is something that has been repeatedly stressed upon by the Government of India. In the backdrop of poverty and inequality, legal aid is an effective way towards attainment of the ideals of 'Social, Economic and Political' Justice that are enshrined in our Constitution under the Directive Principles of State Policy. Imparting legal awareness is the first step towards ensuring prompt and effective access to justice. Keeping this in mind, the Bar Council of India mandated all law colleges and universities in India to establish and run legal aid centres or clinics. The idea was to fulfil certain standards of legal education, but more importantly, it was also aimed at engaging the students in serving their community by promoting legal awareness through these legal aid clinics and programmes. The entire purpose of setting up nationwide collegiate clinics is to acclimatize several thousand law students of the nation to the problems faced by the masses ignorant about their rights and remedies under the law. Under the School of Law and Governance, CUSB Legal Aid Clinic is one successful beacon. The clinic functions by organising legal literacy camps, seminars, legal counselling, public speaking, poster making, street plays and liaisoning with Legal Services Authorities and through various other communicable mediums.



Legal Aid Clinic



Moot Court



School of Law and Governance has started working from the academic Year 2013-14. It offers three programmes Integrated B.A.LL.B. (Hons.), LL.M. (One Year) and Ph.D. in Law. Each programme has been designed in compliance with BCI and UGC norms. Its syllabus is structured with an objective to meet the global demand of modern legal education. In compliance to Legal Education Rules, 2008 the School has established Legal Aid Clinic to sub-serve the interest of vulnerable classes and to inculcate among the students the sense of social responsibility. It also provides training of Moot Court, Model United Nations and Parliamentary Debating Skills to all the students. The school is striving towards imparting quality legal education to meet the professional demand as well as to promote overall personal development. The mission of the school is to equip the students with critical thinking, analytical and applied skills and further to enable them to become efficient members contributing to the bar and bench. It is mandatory for every student to undergo two month summer internship every year. The school intends to transform its students as responsible and capable citizen of this country. It has structured its course content taking into consideration the changing needs of the society. Students are trained with an objective to meet the standard global parameters.

Central University of South Bihar (CUSB) has adequate infrastructural facilities to provide the perfect ambience for interdisciplinary studies in law, in its true sense. School of law and governance, CUSB, is not only imbued with multidisciplinary approach to the legal studies and research but it is making genuine efforts to disseminate such approach to both the privileged and underprivileged learners and researchers of law and jurisprudence. The school is striving towards imparting quality legal education to the students including the students who are from poor, oppressed, downtrodden and backward communities of the society. In academic session 2018-19; students of the School have brought many laurels, such as; 14 PG students qualified UGC NET Examination, 12 students selected as Civil Judge (Junior Division) in Bihar Judicial Services. Our students are the regular participant in various National and International Moot Court Competitions.

The School of Law and Governance is continuously organizing different programmes in the school for the overall development of the students. In the session 2018-19, Constitution Day Celebration, 3rd Intra-Moot Court Competition, 2019, Debating Premier League *etc.* were organised with the participation of students and witnessed a grand success.



10.1.1 **Ph.D in Law**

List of Courses in Ph.D. in Law

Course Code	Course Title	Credits
LAW 901	Research Methodology	4
LAW 902	Tools and Techniques of Research	4
LAW 903	Preparation and Presentation of Research Proposal	4
Total Credits		12

**10.1.2 One-Year LL.M. Degree Programme**

One Year LL. M Degree Programme intends to enable the existing legal education system to compete with the systems prevailing in developed countries like USA and UK. The students will get an opportunity to pursue this pioneering post-graduation programme from an Indian University of excellence. The School of Law and Governance, Central University of South Bihar structured its One Year LL. M. Degree Programme as per UGC One Year LL.M. Guidelines 2013 under the auspices of Centre for Post-Graduate Legal Studies (CPGLS). The vision of the University is to impart excellence in legal education and become a renowned center of higher education and academic research Centre in law. This program provides option of four elective groups; Criminal Law, Corporate and Commercial Law, Intellectual Property Rights, and Human Rights. Students have to elect one group and they will study six optional courses of that group.

Syllabus for LL.M. One-Year Programme Admission

1. Legal Philosophy
2. Constitutional Law
3. Law of Contract
4. Law of Torts
5. Public International Law
6. Environmental Laws
7. Interpretation of Statutes

List of Courses in one year LLM programme (26 Credits)

Course Code	Course Title	Total Credits
SEMESTER – I		
MLLAW1001C03	Research Methods and Legal Writing	3
MLLAW1002C03	Comparative Public Law/ System of Governance	3
MLLAW1003C03	Law and Justice in a Globalizing World	3
	Optional Course I	2
	Optional Course II	2
	Optional Course III	2
SECOND SEMESTER		
	Optional Course IV	2
	Optional Course V	2
	Optional Course VI	2
MLLAW2001C05	Dissertation	5

The University has following Optional / Specialization subjects from which a student can choose his / her area of specialization. However, the optional / specialization subject shall be offered only if minimum required students choose it as an option. In this regard school will take the final decision.

Total Credits of the Programme: 26

Part-A: Mandatory Subjects:

1. Research Methods and Legal Writing
2. Comparative Public Law/ System of Governance
3. Law and Justice in a Globalized World

Part – B: Elective Groups

1. Criminal Law
2. Corporate and Commercial Law

**Part C: Nomenclatures of group wise courses:****1. Criminal Law :**

Course Code	Course Title	Credits
MLLAW1001E02	Police Law and Administration	2
MLLAW1002E02	Criminology and Criminal Justice Administration	2
MLLAW1003E02	Criminal Justice and Human Rights	2
MLLAW2001E02	International Criminal Law	2
MLLAW2002E02	Sentencing and Criminal Justice	2
MLLAW2003E02	Corporate Crime/ white collar crimes	2

2. Corporate and Commercial Law

Course Code	Course Title	Credits
MLLAW1004E02	Corporate Governance	2
MLLAW1005E02	Merger and Acquisition	2
MLLAW1006E02	Cyber Law	2
MLLAW2004E02	International Trade Law	2
MLLAW2005E02	Laws relating to Securities and Financial Markets	2
MLLAW2006E02	Competition Law	2

10.1.3 Integrated BA.LLB (Hons.)

The five-year (10 semesters) Integrated BA.LLB (Hons.) programme is designed to impart quality legal education to the students with subjects like Political Science, Sociology, Economics, Philosophy, Psychology, Legal History along with English. It consists of total 56 Courses in ten semesters. These include 8 Honors Law Courses, 24 General Law Courses, 6 Elective Courses, 4 Clinical Law Courses, 2 English Language Courses, and 12 Social Science Courses.

List of courses in Five Year Integrated B.A. LL.B. (Hons.) Programme

School of Law and Governance

Semester-wise Course Structure

[As per BCI Regulation 2008 and based on CBCS [Choice Based Credit System]

[Effective from Batch 2018-2023]

5 Year B.A.LL.B. (Hons.)course***SEMESTER- I (24 CREDITS)***

SN	Course Code	Courses	Credit
1	BALAW1001C04	Legal Method	4
2	BALAW1002C04	Law of Torts including MV Accident and Consumer Protection Laws	4
3	BALAW1003C04	Political Science- I [Political Theory]	4
4	BALAW1004C04	Economics- I [General Principles of Micro Economics]	4
5	BALAW1005C04	English- I [Communication Skill]	4
6	BALAW1001E04	History- I [Ancient justice System]	4
	BALAW1002E04	Sociology- I [Concept and Theory] [Open Elective I]	
7	BALAW1001S00	Moot Court Practice	Non Credit

**SEMESTER- II (24 CREDITS)**

SN	Course Code	Courses	Credit
1	BALAW2001C04	Contract- I [General Principles of Law of Contract]	4
2	BALAW2002C04	Constitutional Law- I	4
3	BALAW2003C04	Political Science- II [Political Obligation]	4
4	BALAW2004C04	Economics- II [General Principles of Macro Economics]	4
5	BALAW2005C04	English- II [Legal Language]	4
6	BALAW2001E04	History II [Legal History]	4
	BALAW2002E04	Sociology- II [Indian Sociology]	
7	BALAW2001S00	Legal Aid and Parliamentary Debate	Non Credit

SEMESTER- III (24 CREDITS)

SN	Course Code	Courses	Credit
1	BALAW3001C04	Contract- II [Special Contract]	4
2	BALAW3002C04	Constitutional Law – II	4
3	BALAW3003C04	Law of Crimes- I [IPC]	4
4	BALAW3004C04	Political Science- III [International Relations]	4
5	BALAW3005C04	Economics - III (Indian Economy)	4
6	BALAW3001E04	History- III (Constitutional History)	4
	BALAW3002E04	Sociology- III	

SEMESTER- IV (24 CREDITS)

SN	Course Code	Courses	Credit
1	BALAW4001C04	Law of Crimes- II [Criminal Procedure Code]	4
2	BALAW4002C04	Family Law- I	4
3	BALAW4003C04	Public International Law	4
4	BALAW4004C04	Interpretation of Statutes and Principle of Legislations	4
5	BALAW4005C04	Administrative Law	4
6	BALAW4006C04	Political Science- IV [Indian Political Thought]	4

SEMESTER- V (24 CREDITS)

SN	Course Code	Courses	Credit
1	BALAW5001C04	Family Law- II	4
2	BALAW5002C04	Civil Procedure Code and Limitation Act	4
3	BALAW5003C04	Jurisprudence	4
4	BALAW5004C04	Company Law-I	4
5	BALAW5005C04	Political Science - V [Public Policy and Administration in India]	4
		ELECTIVE I	
6.	BALAW5001E04	Media & Law	4
	BALAW5002E04	Equity & Trust	
	BALAW5003E04	Women & Criminal Law	
	BALAW5004E04	Human Rights Law and Practice	

SEMESTER- VI (24 CREDITS)

SN	Course Code	Courses	Credit
1	BALAW6001C04	Company Law-II	4
2	BALAW6002C04	Evidence Law	4
3	BALAW6003C04	Property Law	4
4	BALAW6004C04	Environmental Law	4
5	BALAW6005C04	Political Science - VI [Comparative Government and Politics]	4
		ELECTIVE II	
6.	BALAW6001E04	Election Law	4
	BALAW6002E04	Intellectual Property Law	
	BALAW6003E04	International Organisation	

**SEMESTER- VII (20CREDITS)**

SN	Course Code	Courses	Credit
1	BALAW7001C04	Principle of Taxation Law	4
2	BALAW7002C04	Labour and Industrial Law- I	4
		ELECTIVE III	4
3	BALAW7001E04	Cyber Law	4
	BALAW7002E04	Health Laws	
	BALAW7003E04	Outer Space Laws	
4		Hons. I	4
5		Hons. II	4

SEMESTER-VIII (20 CREDITS)

SN	Course Code	Courses	Credit
1	BALAW8001C04	Labour and Industrial Law- II	4
2	BALAW8002C04	Clinic I ADR	4
		ELECTIVE IV	4
3	BALAW8001E04	International Trade Law	4
	BALAW8002E04	Animal Protection Laws	
	BALAW8003E04	Law on Education	
4		Hons. III	4
5		Hons. IV	4

SEMESTER- IX (20 CREDITS)

SN	Course Code	Courses	Credit
1	BALAW9001C04	Clinic II- Drafting, Pleading & Conveyancing	4
2	BALAW9002C04	Supreme Court Rules and Regulation and Limitation Act	4
		ELECTIVE V	4
3	BALAW9001E04	Conflict of Laws	4
	BALAW9002E04	Insolvency Laws	
	BALAW9003E04	Carriage Laws	
4		Hons. V	4
5		Hons. VI	4

SEMESTER- X (20CREDITS)

SN	Course Code	Courses	Credit
1	BALAW10001C04	Professional Ethics [Clinical Paper – III]	04
2	BALAW10002C04	Moot Court Exercise and Internship [Clinical Paper- IV]	04
		ELECTIVE VI	
3	BALAW10001E04	Right to Information	04
	BALAW10002E04	Legislative Drafting	
	BALAW10003E04	Maritime Law	
4		Hons. VII	04
5		Hons. VIII	04

Specialized Honours Programme

SN	Course Code	Honours Papers	Course Title
Group-A Business Law Honours			
1.	BALAW7003H04	Hons.-I	Banking Law
2.	BALAW7004H04	Hons.-II	Investment Law
3.	BALAW8003H04	Hons.-III	Financial Market Regulation
4.	BALAW8004H04	Hons.-IV	Insurance Law
5.	BALAW9003H04	Hons.-V	Corporate Governance
6.	BALAW9004H04	Hons.-VI	Merger & Acquisition
7.	BALAW10003H04	Hons.-VII	Competition Law
8.	BALAW10004H04	Hons.-VIII	Law of Infrastructure Development



Group-B		Crime and Criminology Honours	
1.	BALAW7006H04	Hons.-I	Criminology and Victimology
2.	BALAW7007H04	Hons.-II	Criminal Justice Administration
3.	BALAW8007H04	Hons.-III	Cyber Crime and Cyber Forensic
4.	BALAW8008H04	Hons.-IV	Probation and Parole
5.	BALAW9005H04	Hons.-V	Comparative Criminal Procedure
6.	BALAW9006H04	Hons.-VI	Corporate and White Collar Crime
7.	BALAW10006H04	Hons.-VII	Police Administration
8.	BALAW10007H04	Hons.-VIII	International Criminal Law

Brief Profile of Faculty Members

	<p>Prof. (Dr.) S.P. Srivastava Professor of Law PhD (Law, JamiaMilliaIslamia, New Delhi) Specialization: Intellectual Property Law, International Trade Law, Cyber Law and Law & Governance</p>		<p>Prof. (Dr.) Pawan Kr. Mishra Professor of Law Ph.D. (University of North Bengal) Specialization: Criminal Law, Gender Justice, Constitutional Law, Human Rights, Law relating to Women & Children</p>
	<p>Dr. Pradip K. Das Associate Professor <i>Ph.D. (Intellectual Property Laws, University of Burdwan)</i> Specialization: Business Laws, Intellectual Property Laws and Human Rights.</p>		<p>Mrs. Poonam Kumari Assistant Professor LL.M (NLSIU, Bangalore), PhD (Pursuing, Central University of South Bihar) Specialization: Human Rights, Constitutional Law, International Law, Business Law, Refugee Law.</p>
	<p>Dr. Deo Narayan Singh Assistant Professor <i>Ph.D. (Insurance Law, Banaras Hindu University)</i> Specialization: Insurance Law, Law of Evidence, Code of Civil Procedure, and Family Law</p>		<p>Dr. Digvijay Singh Assistant Professor <i>Ph.D. (Intellectual Property Law, Banaras Hindu University)</i> Specialization: Intellectual Property Law, Labour and Industrial Laws</p>
	<p>Dr. Pallavi Singh Assistant Professor Ph.D. (Banaras Hindu University) Specialization: Criminal Law, Cyber Law, Intellectual Property Law</p>		<p>Dr. Anant Prakash Narayan Assistant Professor Ph.D. (Jawaharlal Nehru University) Specialization: Gender, Society and Law</p>
	<p>Mr. Mani Pratap Assistant Professor LL.M. (Baba BhimraoAmbedkar University) Specialization: Environmental Law, Intellectual Property Law, Insurance Law, Administrative Law, Taxation Law, Family Law, Merger& Acquisition etc.</p>		<p>Dr. Kumari Nitu Assistant Professor M.Phil, Ph.D. (International law, Jawaharlal Nehru University, New Delhi) Specialization: International law and Human Rights law.</p>



ADMISSION OF FOREIGN NATIONALS IN VARIOUS PROGRAMMES

The Central University of South Bihar (CUSB) invites applications from Foreign Nationals under different categories for the various programmes as per the university prospectus and guidelines for the respective academic session. Application forms together with prospectus can be downloaded from the university website (www.cusb.ac.in). The guidelines of application process are given below:

Definition

For the purposes of admission to the CUSB, the term “Foreign National” implies any candidate holding a passport of a foreign country. This category would also include any Person of Indian Origin (PIO) or, Overseas Citizen of India (OCI) card holder who has a foreign country’s passport. The NRIs with Indian Passport are Indian Nationals and, therefore, they cannot be considered as Foreign Nationals.

Number of Seats

Foreign Nationals will be admitted over and above the approved intake in a course up to a maximum of 10% of the approved intake in each programme, depending upon the availability of necessary infrastructure. However, the programmes recognized by a statutory body (like NCTE, BCI, AICTE etc.) with an approved intake shall be the exception. In such programmes, 10% seats of the approved intake may be filled by Foreign Nationals. However, in such programmes, if any seat(s) identified for Foreign National remains vacant in a particular year, it may be filled by the Indian National as per the University rules.

Admission Procedure

There shall be two categories of foreign candidates seeking admission in CUSB.

- a) Self-financing candidates
- b) Sponsored candidates (Foreign Nationals seeking admission through Indian Council for Cultural Relations (ICCR) or any other funding agency recognized by the Government of India. Such students may apply to the University in the prescribed form through the respective bodies.

Eligibility

- i) **Age Limit:** The applicant should have completed 17 years of age; there is no maximum age limit for Foreign Nationals, subject to the rules and regulations of statutory body of a programme, if any.
- ii) **Academic Qualification:** A prospective Foreign National has to fulfil the eligibility conditions, as laid down in the prospectus for the Indian students of the concerned programme. The conditions are available on the University website (www.cusb.ac.in). In case a student’s parent University/Institution does not have a program which is the same as prescribed as minimum eligibility condition, equivalent program may be considered. In this respect the Admission Committee’s decision shall be final.

The Degrees/Certificates of the candidates must have been recognized and approved by the Association of Indian Universities (AIU)/Commonwealth Universities/International Association of Universities (IAU) as equivalent to the corresponding Indian Degrees/Certificates. All Foreign Nationals with foreign qualifications are required to submit the equivalence certificate from any of these bodies.

- iii) **Language Proficiency:** Proficiency in English is a pre-condition for admission of Foreign Nationals to all the programmes except in some selected programmes which may require proficiency in Hindi or other language as mentioned in the eligibility criteria of the programme.

Documents to be submitted

1) At the time of Application:

- a. Duly filled in application form which can be downloaded from the University website along with the processing fee.
- b. The applications of scholarship-holding Foreign Nationals (under various schemes) should be routed through the Indian Council for Cultural Relations/ Ministry of Human Resource Development (Department of Education), Govt. of India, New Delhi. The address of regional office of ICCR is Regional office Patna, 67-68/40. Officers flats, Opposite Suchna Bhavan, Patna-800001, Bihar, India. In the event of their selection, the Council will be informed accordingly.



- c. Copy of valid foreign passport
- d. Photocopies of Certificate for Proof of Age and Qualifications.
- e. The antecedents of the candidate should have been verified by the forwarding Agencies/Ministry and should be certified as found in order. Transcripts from High School onwards with certified English translation, if the documents are in any other language. Candidates are suggested to enclose such documents, which in their opinion could convince the Admission Committee regarding their suitability for admission to the course(s) applied
- f. Statement of Purpose (In case of PhD admission)

2) At the time of Admission:

A student selected for admission is required to report to the International Students Centre, CUSB with the following documents, in original, along with one photocopy of each document. Certified English translation of such copies should also be submitted, if these are in a different language.

- a) All the certificates and transcripts of different examinations, (including grade conversion formula from the institution (if marks not mentioned/awarded in percentage).
- b) Valid Passport and VISA,
- c) Medical fitness certificate from a recognized hospital. Applicants may be subjected to Medical Test (HIV). In case found HIV positive, admission will not be granted.
- d) Health Insurance Policy.
- e) Payment of all the fees/charges as per University norms, subject to revision if any. The University reserves the right to change the fee structure whenever necessary.

All Foreign Nationals applying for admission as self-financing students are required to provide detail of the Bank account etc. and a certificate from their respective banks/ (latest bank statements) to the effect that they have sufficient funds available in their bank account to sustain their studies in India for the duration of the programme.

Process of selection:

1. The applications shall be received by the International Students Centre of the University for Initial Scrutiny and onward transmission to Departments/Centres/Schools.
2. The Admission Committee of the Department/Centre/School concerned will do the final scrutiny and assess the student's suitability for admission.
3. The Department/Centre/School concerned will submit the list of selected candidates along with all the documents to the International Students Centre of the University.
4. The International Students Centre of the University will issue intimation to the selected candidates for verification of the documents.
5. These candidates will report to the International Students Centre of the University for Verification of all concerned documents.
6. All the admissions shall be provisional subject to verification of copies of mark-sheets/certificates and other documents with the originals.
7. Since the admission of the applicant is provisional, it is liable to be cancelled without giving any further notice forthwith at any time during the entire period of the concerned Course of Study if at any stage it is detected that the applicant has/had produced fake/forged certificate(s)/document(s), indulged in any act of misconduct/indiscipline/moral turpitude and has/had concealed any other relevant information at the time of seeking provisional admission. Such applicant is liable to be prosecuted besides being debarred from appearing in any of the Entrance Tests of University in future.
8. Each candidate shall deposit the fee within 3 working days of his/her provisional admission failing which admission shall be cancelled. A photocopy of the fee receipt shall be submitted by each admitted student immediately to the concerned Dean/Principal/Head/Coordinator.
9. All newly admitted students must get themselves enrolled preferably within a month of admission or the timeline fixed by the University.
10. The allotment of hostel accommodation is subjected to availability.

**FEE FOR FOREIGN NATIONALS**

11. Fee structure for all the categories of Foreign Nationals is given below. Any kind of 'Fee' or 'Charges' (in US Dollars or equivalent Indian Currency) are to be paid in the form of Demand Draft in favour of "The Registrar, Central University of South Bihar" payable at Gaya or any other mode as decided by the University, from time to time.

Note: The quantum of any type of fee may be modified by the CUSB from time to time.

Fee Structure		
S. No.	Particulars (Processing Fee)	Fee Per Academic Year (in US Dollar)
Academic Programme Fee		
1	PG Programme	850=00
	M.A.	1000=00
	M.Sc. / M.Ed. / M.Com	1500=00
	M.Tech / LLM	
2	Integrated Programme	
	(a) 4-Year Integrated B.A.B.Ed. / 5-Year Integrated B.A.LLB	900=00
	(b) 4-Year Integrated B.Sc.B.Ed.	1000=00
3	Research Programmes	
	(a) Ph.D. in School of Education/ School of Languages & Literature/ School of Law & Governance/ School of Social Sciences & Policy	1200=00
	(b) Ph.D. in School of Earth, Biological and Environmental Sciences / School of Human Sciences / School of Mathematics, Statistics & Computer Science / School of Media, Arts and Aesthetics / School of Physical and Chemical Sciences / School of Vocational Studies	1500=00
4	Other Fees	
	Transportation Fee	300=00
	Hostel (Optional)	
	Accommodation Fee	500=00
	Mess Fee	On actual basis

IMPORTANT NOTES**VISA**

A candidate selected for admission will be given provisional intimation of admission, which can be used by the candidate to obtain VISA from his/her local Indian Consulate. It is essential that a PhD student should obtain a valid "Research VISA" and other students a valid "Student VISA". Admission will not be granted on Tourist VISA/X-VISA.

The VISA must be endorsed in the name of Central University of South Bihar. No other endorsement will be acceptable.

Health Insurance

All the prospective students are required to have comprehensive health insurance policy coverage before arriving in India. It is essential that the student's health insurance policy remains valid throughout the period of the student's stay in this University. This will be checked at the time of admission.

Hostel Accommodation

If requested, hostel accommodation may be provided at one of the available hostels of the University, subject to availability, as per CUSB norms.

Registration with Foreign Regional Registration Office

Under the Registration of Foreigners Rules 1939, every foreigner who is in India, for stay in excess of (90) ninety days (for purpose of other than tourism) is required to register himself/herself within (14) fourteen days of arrival in India with the Foreigners Regional Registration Officer in the place of ordinary residence and declare his/her registered address. The International Student Centre would assist the students in preparing necessary documents for the purpose.



Rules and Regulations

1. Every Foreign National student is expected to follow all the laws, rules and regulations of India as well as the norms of the University. The students should not engage themselves.
 - a. in any kind of indiscipline
 - b. in any crime or indulge in any illegal activities,
 - c. in any political or otherwise controversial activities,
 - d. activities prejudicial to the interest of the host country,
 - e. activities embarrassing the relations between the host country and any foreign country.

The University reserves the right to cancel the admission of any student found to be engaged in activities prejudicial to the interest of the University or the country and take steps for the cancellation of VISA as well as deportation from the country.
2. After completion of the programme, no student shall be entitled to the University accommodation.
3. Candidates admitted to any programme in this University shall not be eligible to pursue simultaneously any other *full-time* Course in this or in any other University/Institution.
4. If the applicant has passed the qualifying Exam *where grades are awarded and*:
 - a. Where the Grade Sheet does not mention the equivalent percentage of marks from grade points, the candidate should submit such a certificate of conversion from the concerned Institution mentioning either the converted percentage, or the formula for the actual conversion of grade point average to percentage of marks.
 - b. Where the Grade Sheet itself mentions the equivalent percentage of marks from grade points, or the formula for such conversion, the candidate should get both sides of the Degree/Grade Sheet photocopied showing the equivalent percentage of marks/conversion formula and enclose with the Application Form.
5. Aggregate percentage of marks” does not include grace marks awarded to a candidate.
6. After submitting the Application form, no student is allowed to take back his/her Application Form.
7. Submission of Application Form does not guarantee admission.
8. Request for change of programme at any stage will not be entertained under any circumstances.
9. Foreign Nationals taking admission in any of the programme, shall not be entitled to any financial assistance from the University.
10. All students seeking admission to CUSB are strongly advised not to use the services of third party/ agents/ admission service firms. CUSB has not authorized any agency/ individual/ agent to act on its behalf and/or to charge any fee from prospective students. Applications/ inquiries received through middlemen/ third party will not be entertained and will be categorically rejected.

Salient Features of Various Programmes at CUSB for International Students:

1. Central University of South Bihar is a centrally funded University and it was established in 2009 under the Central Universities Act, 2009 (Section 25 of 2009), Government of India. It is situated presently in Patna, an ancient city of Bihar, and will soon be shifting to its permanent campus at Panchanpur, Gaya (Bihar) the well-known Buddhist pilgrimage city.
2. Applications from Foreign Nationals/PIO/OCI are invited for admissions to the various academics programmes of CUSB under self-financing or through sponsoring / funding agency by Govt. of India in the academic session 2020-21. The foreign national students are exempted to appear in entrance exam of (CUCET-2021) for admission. However they should have minimum eligibility criteria for the admission as prescribed in the prospectus of CUSB.



3. Foreign Nationals will be admitted over and above the approved intake in a course up to a maximum of 10% of the approved intake in each programme.
4. The Graduate, Postgraduate and Ph.D. Programs of the university in various disciplines have been crafted with a view to cater to the needs of Indian and Foreign students.
5. The courses are detailed in such a way that it will provide ample exposure to the students in pursuit of their career in the field of academics, journalism, administrative services, social work, research organizations, think-tanks, organizations involved in policy-making and policy analysis, national and international non-governmental organizations, and international organizations like United Nations, World Bank, International Monetary Fund etc.
6. The university has crafted a teaching-learning methodology which has a strong interface with cutting-edge technology at global level with innovative Continuous Assessment System where Evaluation is also a part of teaching-learning methodology itself in each of the courses.
7. The University has internationally acclaimed group of faculty members in various programmes including science and humanities with several years of experience across the world.
8. The cutting edge researches in major thrust areas in various programmes are supported by various national and international funding agencies. Research laboratories are equipped with advance instrumentation facilities.
9. Various programmes of the university are both job-oriented as well as tech-intensive to meet the global imperatives.
10. Foreign students will have better benefit/cost ratio compared to universities at their country.



Dear Student,

Upon receiving an eligibility letter for admission from CUSB, you must complete any and all necessary formalities in your country, as per your country's rule for students studying abroad and procure a **Student Visa**. If you are a PhD student, you must obtain a **Research Visa** from the Indian Embassy in your country. PhD students, who are OCI, **MUST** obtain approval for Ph.D. research studies through a Letter of Permission from the Ministry of Home Affairs, Government of India. You should enroll preferably within one month of admission, but must enroll within the period of eligibility, usually within the following two terms after receiving admission.

Once you have your visa/approval letter, you are required to report **IN PERSON**, not by email or letter, to the International Student Centre of Central University of South Bihar, Patna, Bihar to complete the remaining paper work. For hassle-free registration process, please carry the following documents **IN ORIGINAL (and make several photocopies of each)**:

1. Eligibility letter for Admission, issued by Central University of South Bihar.
2. Proof of Age / PASSPORT with copies / Passport size photographs
3. Marksheets/Certificates/Transcripts of Academic records; Migration/Transfer Certificate, as issued by the institution last attended.
4. Valid Appropriate Student Visa or Research Visa stamped into Passport, OR Letter of Permission for OCIs. Please note that the visa endorsement should be specifically for Study and acceptable to Banaras Hindu University.
5. For Nepal & Bhutan nationals only: Citizenship Certificate (in absence of Visa), duly countersigned by the Consular Wing of the Mission of India in the respective country (AND in case of PhD Admission, a NO OBJECTION LETTER from the Mission.
6. For Iran nationals: NOC from the Islamic Republic of Iran in India (in addition to the Visa issued by the Indian Embassy abroad).

After your documents are confirmed by the International Student Centre, you are required to undergo a medical **HIV test**. Please note that currently if you are found HIV-positive, the Government of India usually will not allow admission.

After the HIV Test is completed, the International Student Centre will issue you a **Certificate of Clearance** which you will then carry to your concerned Centre/ Department/Programme/ Academic section/Controller of examinations (CoE) office for verification of your original academic records entries and signature made in the Application form etc.

Once the Academic Section/ Controller of examinations office completes all necessary formalities, you will be asked to deposit the Tuition and University Fees for the Academic Year specific to your course, **within three working days**, failing which admission shall be cancelled. **Late admissions cannot be accepted**. Upon payment, you will receive an original Fee Receipt.

Controller of examinations (CoE)/Academic Section will issue an **Enrolment Number** to you within 3-5 days after checking your records.

Report to the concerned Dean/Head/Coordinator/Principal, along with the fee receipts immediately for entering your name in the records of the Centre/Department/Programme. Obtain Identity Card, complete it and get it signed by your Dean/Head/Coordinator/ Principal. Day Scholars must obtain a signature from the City Delegacy. You must carry the Identity Card with you at all times as a student.



Further, you may avail the **library, medical computer Wi-Fi and hostel facilities** (subject to its availability) **etc.** by applying at the Respective Units of the University.

As an international student at CUSB, you MUST register with the Senior Superintendent Office Patna/FRO

(<https://indianfrro.gov.in/frro/> (Foreigners Registration Office) within ten days of admission.

- Complete Online Form C-Arrival Report of Foreigner, obtain Bonafide Student's Certificate from your Faculty/Department/ School and Warden of the Hostel (in case hosteller) and **submit it to the International Student Centre for endorsement.**
-
- Report to the Senior Superintendent of Police Office/FRO, located at Police Head Quarters Gandhi Maidan, Patna-4, Bihar as stipulated in your Passport, along with Form C, your CUSB paper work, letter of admission, Fee Receipt Identity Card and Bonafide Student's Certificate issued by the concerned faculty/department and **duly countersigned by the International Student Centre.**

By accepting admission as a student of CUSB, you agree that you will:

- ✓ abide by the guidelines issued periodically by the Government of India and/or the Central University of South Bihar
- ✓ deposit University fee at the appropriate times annually during the entire duration of your course
- ✓ fulfill the attendance requirements for class and for appearing at all examinations
- ✓ take any absence from CUSB only **after prior intimation and permission** from the concerned Head/Dean (and Regional Officer, for ICCR Scholars)
- ✓ obtain extension for the period of your Student/Research Visa as needed, and notify any changes to the concerned Head/Dean/Coordinator/Principal and **to the International Centre** immediately

As a student of CUSB, you agree that you will NOT:

- ✗ engage or involve yourself in any political or other controversial activities;
- ✗ join any activities prejudiced against the interest of your own country or against India;
- ✗ participate in any activities that may embarrass relations between India as your host country & any foreign country

NOTE on Academic Integrity: Admissions are provisional and subject to verification of the original with copies of mark sheets, certificates and other documents, by the respective Dean of Faculty /Head of Department/ Coordinator/Principal, through the respective Committees involved with admission. Genuineness of the document(s) must be satisfied for obtaining admission.

Provisional admission may be cancelled at any time during the entire period of the concerned course of study, if at any stage it is detected that the applicant provided fake or forged certificates or documents, indulged in any act of misconduct/ indiscipline/ moral turpitude, OR concealed any other relevant information at the time of seeking provisional admission. Such applicant is liable for prosecution by the Government of India and will be debarred from admission to any courses at CUSB in the future.



RULES & REGULATIONS GOVERNING HOSTEL ADMINISTRATION AND RESIDENCY
PART- I:
GENERAL ADMINISTRATION

CHAPTER 1

UNIVERSITY HOSTEL ADMINISTRATION (UHA)

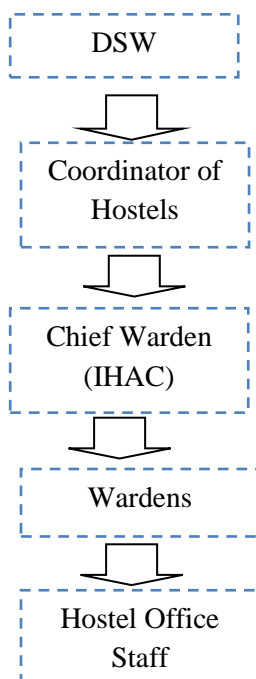
1.1 DEFINITION OF HOSTEL: “Hostel” means a unit of residence, by whatever name called, for students of the University provided, maintained or recognised by it.

1.2 OBJECTIVES OF THE HOSTEL LIFE

- (a) To ensure that the students are able to devote adequate time for their studies and research;
- (b) To ensure that students coming from different parts of the country and even abroad learn to live together and strengthen their relations with mutual cooperation and goodwill; and
- (c) To develop a climate congenial for co-curricular and extra-curricular activities of students.

1.3 ORGANISATION AND STRUCTURE OF THE HOSTEL ADMINISTRATION

(i) **Organizational Chart (Hierarchy):**



- (ii) The University Hostel Administration shall come under the umbrella of **Dean of Students' Welfare (DSW)**, who shall look after the general welfare of Students residing in the hotels, and advise the Coordinators of Hostels/s and the Chief Wardens on matters concerning their functions.
- (iii) There Shall be one Coordinator of Hostels for each *Cluster* of hostels comprising of around 4 hostels for the purpose of lookingafter affairs of the hostels. The Coordinator of Hostels shall advise Chief Wardens on the matters concerning their functions. In case Coordinator of Hostels in not existing, his/her functions and duties shall be performed **by the DSW**.
- (iv) There shall be a University Hostel Administration Committee (UHAC) at the University level, which shall be the apex deliberating body dealing with matters pertaining to all the hostels, including common menu, if required. The DSW shall be ex-officio Chairperson of the UHAC (refer to Clause 1.5.1 for details).
- (v) There shall be three committees at the hostel level, namely, Intra-Hostel Administration Committee (IHAC), Hostel Students Committee (HSC) and Hostel Mess Committee (HMC). The IHAC shall be the highest deliberating body at the hostel level. The other two committees shall ensure students participation in the hostel administration. The structure and functions of the Committees may be changed by the DSW as per the requirements after approval of the Vice-Chancellor (refer to Clause 1.6 for details)



1.4 AUTHORITIES OF THE HOSTEL ADMINISTRATION: FUNCTIONS, POWERS AND ENTITLEMENTS

1.4.1 Dean of Students' Welfare (DSW)

- (i) The DSW shall provide general instructions and guidance to the Coordinator of Hostels and the Chief Wardens on matters concerning to their functions. As far as hostel administration is concerned, the DSW's office shall be engaged in a range of other facilities for hostlers and for other students also.
- (ii) The DSW shall be the Head of the Department so far as Hostels are concerned.

1.4.2 Coordinator of Hostels

1.4.2.1 Appointment

The Coordinator of Hostels shall be appointed by the Vice-Chancellor. The name shall be picked by the VC preferably from a panel of names among teachers of the University recommended by the DSW.

The Vice-Chancellor may, however, terminate the assignment of any Coordinator of Hostel anytime without assigning any reason. .

1.4.2.2 Tenure

The Coordinator of Hostels ordinarily shall hold office for three (3) years. He/she shall be entitled for re-appointment, other things being the same.

1.4.2.3 Entitlement/Honorarium

The Coordinator shall be entitled for honorarium as per rates decided by the University from time to time.

1.4.2.4 Jurisdiction

- (i) The Coordinator of Hostels shall work under overall supervision of the DSW.
- (ii) The Coordinator of Hostels shall look after the affairs of a particular *cluster* and shall advise the Chief Wardens on matters concerning their functions.
- (iii) All kinds of leave applications of the wardens will be forwarded by the concerned Coordinator of Hostels with their specific recommendations.

1.4.2.5 Powers and Functions

The Coordinator of Hostels:

- (i) Shall supervise the hostels in his or her *cluster* in matters relating to the hostels' overall functioning, the inmate-students' welfare and discipline.
- (ii) Shall periodically visit the hostels and be in contact with the Chief Wardens/Wardens, staff and students.
- (iii) Shall encourage sports, cultural and other activities at the *cluster level* so as to promote inter-hostel cooperation.
- (iv) May impose fines or waive fines up to the limit set in the List of Rates.
- (v) Shall sanction leave to the Chief Wardens in the *cluster* as per rules.
- (vi) Shall declare the allotment list for the cluster of Hostels.
- (vii) Perform such other functions as assigned by the DSW or any higher authority from time to time.

1.4.3 Wardens (Applicable to all Wardens including the Chief Warden)

There shall be three Wardens for each hostel. However, if situation demands, the Vice-Chancellor in consultation with the DSW may club works of two or more wardens, or may appoint additional Warden/Wardens.



1.4.3.1 Appointment

- (i) Wardens shall be appointed for three (3) years by the Vice-Chancellor from the panel of teachers submitted by the DSW for this purpose. They shall be eligible for re-appointment on the recommendation of the DSW.
- (ii) The Vice-Chancellor may, however, terminate the assignment of any Warden anytime without assigning any reason. .

1.4.3.2 Entitlement/Honorarium

- (i) The Wardens shall be entitled to honorarium as per rates decided by the University from time to time and shall be entitled for an accommodation, subject to availability, preferably inside the University Campus. But they shall have to pay house rent as per rules of the University.
- (ii) On the expiry of their term or on termination of their appointment, the Wardens shall be required to vacate the accommodation provided to them immediately.

1.4.3.3 Jurisdiction, Powers and Functions

- (i) The Wardens of Hostel shall perform such duties as are assigned to them by the Coordinator of Hostels or Chief Warden, whatever case may be, from time to time and they shall function under the overall charge of the Chief Warden.
- (ii) In addition to the specific duties assigned by the Coordinator of Hostels/Chief Warden, the Wardens:
 - (a) Shall keep close contact with the inmates and shall pay attention to their health, hygiene and general life in the hostel.
 - (b) Functioning under the overall charge/**coordination** of the Chief Warden will be individually and collectively responsible for the smooth functioning of the hostels.
(Note:Each warden shall be responsible for his/her portfolio and such responsibilities as assigned to them by the Coordinator of Hostels/Chief Warden from time to time. Under the collective responsibility principle, they are responsible together for the overall smooth functioning of the hostel and to meet any contingency. All other wardens should communicate the higher authority through proper channel only, i.e., Chief Warden.)
 - (c) Shall be responsible for the assigned inmates, if any.
 - (d) Shall ensure that the inmates in his or her charge observe the hostel rules properly and maintain discipline and decorum and shall promptly report to the Chief Warden all cases of misbehaviour, indiscipline, and sickness of the inmates in his or her charge.
 - (e) May impose fines upon inmate-students as per defined limit.
 - (f) Should be available in the hostel office everyday at specified hours (to be notified in the hostel office) to attend to official business and to inmates' problems.
 - (g) Shall be responsible for the proper upkeep and maintenance of such properties of the concerned hostel as are under his or her charge.

1.4.4 Chief Warden

1.4.4.1 Appointment and Tenure

- (i) The VC in consultation with the DSW shall designate one of the Wardens in a hostel as Chief Warden separately for three (3) years on the basis of the person's all-round experience and capacity to cope with diverse contingencies relating to hostel management. However, the Vice-Chancellor may appoint any teacher as Chief Warden who has not been appointed as Warden. The VC may re-appoint the outgoing Chief Warden again for the next three years.

1.4.4.2. Entitlement & Honorarium

- (i) The Chief Warden shall be entitled for the honorarium that shall be generally more than that of other wardens.
- (ii) An imprest is granted to the Chief Warden of each hostel for making certain classes of disbursements.



1.4.4.3. Jurisdiction, Powers and Functions

- (i) The Chief Warden in a hostel is the principal authority and executive in all matters relating to inmate students' welfare, their discipline and messing as well as the administration and security of the particular hostel. The Chief Warden shall be responsible to the Coordinator of Hostels for the proper maintenance and management of the hostel and of its attached mess.
- (ii) To assist the Chief Warden, each hostel has appropriate office staff as well as two or three more wardens to look after general administration, mess, common room, health and recreational facilities, and maintenance and sanitation.
- (iii) Chief Wardens shall distribute work between Wardens in a hostel every year at the beginning of **the academic year**, which shall be subject to change as per requirement from time to time.
- (iv) Chief Wardens shall approve a warden to take leave from hostel.
- (v) Chief Wardens shall supervise all matters concerning the functioning of the hostel.
- (vi) Chief Wardens shall chair the meetings of the IHAC in the hostel, which will be held as regularly as may be necessary, but generally in a month.
- (vii) Chief Warden may impose fines upto the defined limit.
- (viii) Chief Warden may transfer an inmate from one wing/room of the hostel to another.
- (ix) Chief Warden shall regulate expenditure out of the authorized hostel budget and for timely adjustment of temporary advances.
- (x) Chief Warden shall be responsible for the maintenance of imprest accounts and for the custody of imprest money.
- (xi) Chief Warden shall issue 'No Dues' Certificate to the hostel inmates.
- (xii) Chief Warden shall ensure the timely completion of all accounts and records and will examine the bank reconciliation statement of all accounts pertaining to the hostel.
- (xiii) Chief Warden shall ensure proper checking by Office In-charge and shall verify the wage bills pertaining to the staff employed in the hostel.
- (xiv) Chief Warden shall be responsible for proper pursuance of complaints relating to civil/electrical works, repairs/replacements of furniture, fittings etc.
- (xv) Chief Warden shall sanction leave to staff of the University working.
- (xvi) In addition, the Chief Warden shall normally perform the following responsibilities as Warden (Administration):
 - (a) Shall allot hostel rooms and supervise them.
 - (b) Shall check the inmate related registers and the Visitors' Register.
 - (e) Shall be responsible for the overall security of the hostel and will coordinate his/her responsibility with the Office of the Chief Proctor of the University.
 - (f) Shall periodically verify the furniture and fittings of the hostel with the assistance of the Attendant, and take action for their repairs/replacement or for obtaining additional furniture.
 - (g) Shall issue Warning Letter (s) /Memo (s) to inmates and other office staff deployed at the concerned Hostel.
 - (h) Shall recommend leave for the Attendant and other staff deployed at the Hostel.
 - (i) Shall make appropriate arrangement for identification of inmates.

1.4.6 Wardens

1.4.6.1 Powers and Functions Relating to Health & Recreation

Warden:

- (i) Shall be responsible for general matters relating to health with the advice of the University doctor.
- (ii) Shall look after the common room and the sports and cultural programmes of the hostel and will regulate disbursements out of the hostel's recreation grant.
- (iii) Shall check the bills prepared by the Attendant for purchase of newspapers and magazines.
- (iv) Shall arrange disposal of old newspapers and magazines as per the policy of CUSB and ensure that sale proceeds are deposited in the appropriate Head of Account.
- (v) Shall ensure maintenance of discipline and decorum in the common room.
- (vi) May permit the common room to stay open beyond the prescribed hour on special occasions.
- (vii) Shall pursue, at appropriate level, all complaints relating to common room items like television, etc.



1.4.6.2 Powers and Functions Relating to Sanitation & Maintenance

Warden:

- (i) Shall be responsible for all matters relating to hygiene, sanitation and cleanliness of the hostel in consultation with/ upon the advice of the Chief Medical Officer (CMO).
- (ii) Shall supervise the work of the sanitation staff, keep a control over their attendance and maintain the Attendance Register.
- (iii) Shall keep a watch over the proper use of sanitation articles supplied to the hostel from time to time.

1.4.6.3 Powers & Functions Relating to Mess

Warden:

- (i) With the assistance of the Mess Committee, he/she will supervise the functioning of the mess.
- (ii) Shall keep a watch over the cleanliness of the dining hall and the kitchen and of the food prepared.
- (iii) Shall conduct regular inspection of the kitchen room and the dining hall, especially when the inmates take their meals.
- (iv) Shall enforce discipline and decorum in the dining hall.
- (v) Shall ensure that stores are kept in good and efficient condition.
- (vi) Shall stop mess facilities in respect of inmates defaulting payment of mess bills and recommend action to the Chief Warden as per rule.
- (vii) Shall stop mess facilities in respect of those who have vacated the hostel or have been evicted, other things being the same.
- (viii) Shall make recommendations to the Chief Warden about refund of mess security to students.
- (ix) Shall arrange disposal of empties, crockery etc., if any, and ensure depositing of sale proceeds in the appropriate Head of Account.

1.5 UNIVERSITY LEVEL HOSTEL COMMITTEE AND ITS FUNCTIONING

1.5.1 University Hostel Administration Committee (UHAC): (composition, quorum, meetings, powers & functions)

The UHAC's composition shall generally be as follows:

- (i) Dean of Students' Welfare: Chairperson
- (ii) Chief Proctor or Chief Proctor's representative: Member
- (iii) All Coordinators of Hostels: Members
- (iv) All Chief Wardens: Members
- (v) Assistant Registrar (AR) or his Nominee: Member-Secretary

Note:- DSW may invite any other Warden/person to the UHAC meeting, if he/she so desires.

- (vii) Quorum: 50 percent members of the committee, including the Chairperson, shall form quorum for holding the meetings.
- (viii) Notice of Meetings.
 - (a) Ordinary meeting may be called at generally 2 days advance notice.
 - (b) Emergency meetings: Any time.
 - (c) Meetings of UHAC may be held as and when required, generally once in a semester or as may be decided by the DSW.
 - (d) Powers of UHAC:
 - (i) The UHAC will be competent to consider and decide or recommend to the VC/ or any other competent authority of the University, as the case may be, all matters relating to hostel administration, students discipline and general health and well-being of the hotels.
 - (ii) Any matter referred to the DSW by the VC or any other competent authority for placing before the UHAC.
 - (iii) Any other matter as may be decided by the DSW in consultation with the Coordinator (s) of Hostels.



1.6

HOSTEL LEVEL COMMITTEES: STRUCTURE & FUNCTIONS:**1.6.1 Intra-Hostel Administration Committee (IHAC):**

The IHAC shall comprise of all the wardens including the Chief Warden, who shall be ex-officio chairperson of the Committee. The IHAC shall be highest deliberative body at the hostel level. Each hostel having strength of approximately 300 inmates shall be managed by the Chief Warden and assisted by other wardens. The Chief Warden in a hostel shall be the principal authority and executive in all matters relating to inmates' welfare, their discipline and messing as well as the administration and security of the hostel. The Chief Warden will also be custodian of finance in the hotel including the imprest. However, he/she may allocate some money from the imprest to other wardens if it is required. The Chief Warden shall be also assisted by office staff. The Wardens shall be responsible for their respective portfolios and are accountable to the Chief Warden. Office In-Charge shall function as conduit between the Chief Warden and other authorities. On the matter of discipline and security, the Chief Warden shall be accountable to Office of the Chief Proctor.

1.6.2 Hostel Students Committee (HSC): Provisions & Functions

- (i) For the proper integration of the students' life, each hostel will have a Hostel Students Committee consisting of a President, a Vice-President and six members. Three of the HSC members and Vice-President will be directly elected by the General Body of the Hostel concerned and rest of them including the President will be nominated by Chief Warden in consultation with other wardens on the basis of willingness and capacity of such members to undertake the responsibility. For nomination, Wardens under chairpersonship of the Chief Warden may conduct an interview/interactive session. The General Body shall consist of all inmates admitted for the concerned Academic Year. The election/ nomination of the Committees will be held and declared in August each year and in exceptional circumstances the election/nomination may be postponed to September by the Chief Warden in consultation with the DSW. The Chief Warden shall function as Chief Election Officer (CEO) for conduction of the elections and he/she shall be assisted by other wardens and hostel staff. If required, he/she may take assistance from any other staff member(s). An inmate may contest for one post only for HSC/Hostel Mess Committee (HMC). No Re-nomination/re-election on the same post in future shall be permitted.
- (ii) Any vacancy in the HSC will be filled in by cooption by the Chief Warden in consultation with the President, if exists, and the members of the Committee.
- (iii) **Rules regarding the conduct of elections for the HSC**
 - (a) Candidates shall have to submit nominations in the prescribed proforma.
 - (b) A candidate may file more than one nomination for the same post.
 - (c) A bona fide resident from the hostel shall be eligible for the post of President, Vice-President and other posts of the HSC.

The terminal students and those students/researchers who have been granted extension will not be eligible to contest hostel level elections if the tenure of studentship falls short of the normal duration of the hostel/mess committee.
 - (d) For the post of member of HSC / Hostel Mess Committee (HMC), the proposer, the seconder and the proposed candidate must be an inmate of the hostel; and his/her, proposer's & seconder's name must be in the electoral rolls of the Hostel notified by the Chief Warden one week prior to the election/nomination.

Note: A student shall contest only for one post, i.e., either for HSC or HMC.
 - (e) When filing up the nomination form, care must be taken to ensure that the name of the proposer, seconder and the proposed candidate correspond to the name given in the electoral rolls exactly. Addition or deletion or any other change from the original will render the nomination invalid.
 - (f) Candidates contesting for the post of member of HSC or HMC or President shall abide by the rules, regulations and instructions issued by the Chief Election Officer (CEO), i.e. Chief Warden.
 - (g) All decisions of the Chief Warden of the Hostel in all matters pertaining to elections shall be final and binding.
 - (h) Candidates must make themselves accessible and available in the CEO office as and when required.
 - (i) A proposer or seconder can propose and/or second one candidate only.
 - (j) The voting shall be done according to single non-transferable vote.
 - (k) No postal-ballot papers shall be allowed.



- (l) The inmates shall bring their valid Identity Cards at the time of casting their votes and show the same to the election official, when demanded.
- (m) All concerned shall abide by the rules and regulations framed by the competent authority for assuring smooth elections in the hostel

(iv) **Functions & Procedures**

- (a) The Hostel Students Committee shall actively participate in (or collaborate with) the Chief Warden & Wardens in the routine functioning and organising of all activities of the hostel to ensure smooth running of the hostel activities.
- (b) The Committee shall normally meet twice a month to discuss and mutually settle hostel affairs. The President shall put on the Notice Board the minutes of the meetings after approval from the Chief Warden.
- (c) The Committee shall ensure that peace and order is observed at all times by the inmates of the hostel.
- (d) The President and members of the Hostel Students Committee shall normally hold office for one year or until next general election takes place, whichever falls earlier.
- (e) The HSC and its members shall be subject to all rules/norms as inmates of the hostel and shall be responsible for any violation of hostel rules etc.
- (f) General Body Meeting (GBM) may be called, as and when necessary, by the Hostel President with due permission of the Chief Warden by giving at least 24 hours advance notice. The GBM may also be requisitioned on the written request of the members (inmate students) concerned provided such a request is signed by at least 50% of the members of the hostel concerned and notice to this effect be given to the Hostel President at least 48 hours in advance. Information about holding GBM must be communicated to the Chief Warden in writing at least 24 hours in advance. The Chief Warden may monitor the GBM, if he/she wishes to do so.
- (g) Procedure for No Confidence/Removal of any members or **President** of the **HSC**: The no confidence motion as per practice may be brought about by a simple majority of the membership (Hostel General Body) by signifying in writing to the Hostel President of their intention to move such a motion against any members/President and calling upon the President to call a meeting of the GBM within a reasonable time but positively within 48 hrs. Such a motion then be tested by 2/3rd majority of the members of the General Body of the hostel concerned present and voting. Provided, however, the President or the members against whom no confidence motion is being moved, shall not have the right to vote. Provided further, that where such a motion is being moved against the President or if the President is not in position or the post is vacant, the GBM may elect its chairperson to conduct the business of the General Body Meeting. Such a chairperson has to be approved by the Chief Warden and will continue to function in place if the President is removed, till new President's election is held, as the case may be. The President shall not chair a GBM that has been called for his/her removal.
- (h) If no confidence motion/removal of any members/President is passed by the GBM, this will be minutised by the Committee members/President/elected chairperson as the case may be, and submitted to the Chief Warden, who will decide further course of action in consultation with other Wardens of the Hostel concerned. The decision of Chief Warden shall be final and binding.

1.6.3 Hostel Mess Committee (HMC): Provisions & Functions

- (i) To assist the one of the Wardens who has been assigned to look after mess functioning, each hostel shall have a Mess Committee consisting of:
 - (a) The Warden shall be *ex-officio* Chairperson of the Mess Committee;
 - (b) Six members (preferably three vegetarians and three non-vegetarians), three of them elected directly by the General Body of Hostel inmates and rest of them nominated by the Warden holding mess portfolio on the basis of their interest in running such affairs;
 - (c) The members shall hold office for one year from the date of election or till next election, whichever falls earlier;
 - (d) Any vacancy may be filled by the Warden holding mess portfolio by cooption.



- (ii) **Functions of the HMC:** The HMC shall function in accordance with the rules laid down hereinafter. In general, the Committee will:
- (a) Supervise the working of the mess;
 - (b) Ensure compliance with the Mess Rules;
 - (e) Suggest improvements in the quality of food served in the mess within the stipulated framework;
 - (g) Arrange special dinners or other functions in the mess and fix the financial limits of expenditure to be incurred on such occasions.

Notes:

1. Members of the HMC may be removed in the same manner as laid down for the removal of the HSC.
2. The HSC/HMC are also responsible for any violations of rules, since the members of the Hostel/ Mess Committees are firstly the inmates of the hostel.

1.7 OTHER FUNCTIONARIES IN THE HOSTEL (STAFF), THEIR RESPONSIBILITIES AND DUTIES

1.7.1 The Office In-charge-cum-Hostel Assistant

1.7.1.1 Main Responsibilities:

- (a) Supervising the staff under his or her control, including the sanitation staff through the Caretaker/Attendant/Sanitary Guide.
- (b) Checking and verifying the attendance of the staff under his control and custody of the attendance register.
- (c) Forward Casual Leave Application to the staff under his or her control in accordance with the University rules.
- (d) Keeping liaison with all Wardens in the Hostel.
- (e) Assisting the Chief Warden/UHA/Admission Cell in admission process at hostel level.
- (f) Maintaining list of inmates along with their guardians' permanent address and such other information as may be necessary.
- (g) Maintaining a close supervision over room vacancy and immediate transmission of vacancy position to the Chief Warden.
- (h) Checking the cash book and daily cash scroll with reference to relevant records, vouchers, etc.
- (i) Physical verification of cash balance at the end of the month and of cash coupons.
- (j) Custody of receipt books and cheque books.
- (k) Check and verify and attest all bills, and including all bills related to the wages, overtime of contract staff in the hostel.
- (l) Supervisory check on all ledgers, registers and stock registers maintained in his or her office and 'no dues' certificate.
- (m) Attending to the observations of internal audit.
- (n) Checking the correctness of the pages of receipt books, cheque books, cash coupons and cash books and to maintain proper records for these.
- (o) Initiating write-off of fittings, furniture and equipment needing replacement.
- (p) Preparing bank reconciliation statements as frequently as may be normally necessary.
- (q) Maintenance of casual/compensatory leave account of staff and forwarding of applications for regular leave.
- (r) Custody of imprest and maintenance of imprest accounts.
- (s) Keeping all application forms for various purposes in sufficient quantity.
- (t) Any other work assigned by the Chief Warden/Senior officers of UHA/DSW.

1.7.1.2 Other Responsibilities:

- (a) Custody of cash.
- (b) Maintaining cash book and its daily closing.
- (c) Collecting cash/cheque and issuing receipt.
- (d) Paying bills after due scrutiny and on the authority of Chief Warden.
- (e) Remitting cash to bank and maintaining bank receipts.
- (f) Safe custody of receipt books which are used and in current use lying in his possession.
- (g) Preparing and maintaining daily cash scroll.



- (h) Maintaining temporary advance register and keeping watch over adjustment of such advances.
- (i) Custody of paid vouchers, used receipt and coupon books and counterfoils of cheques.
- (j) Maintaining all ledgers.
- (k) Maintaining various registers like stock registers of cash coupons, register of deposits, and register of contracts.
- (l) Issuing 'no dues' certificate under signature of Chief Warden.
- (m) Preparing list of defaulters and submitting it to the Chief Warden.
- (n) Typing work as may be assigned by the Chief Warden/Warden.
- (o) Maintain room inventories in respect of each room.
- (p) Verifying hostel furniture, fittings, etc., periodically and also when inmate vacates room including on transfer within or outside the hostel and issuing a clearance certificate with reference to the items issued to the student and to charge damages if furniture/fittings are missing or broken, as per direction of the concerned Wardenkeeping in view the depreciation value.
- (q) Maintaining stock registers of furniture/ non-consumable/consumable stores history sheet register, as may be necessary.
- (r) Any other work assigned by the Hostel Administration /Senior officer of UHA.

1.7.2 Hostel Attendant

1.7.2.1 Responsibilities:

- (a) Preparing and maintaining the master list of hostel rooms indicating the student's name, programme of study, centre/school along with **latest photographs**, local and permanent address/Contact No. etc.
- (b) Assisting the Chief Warden in allotting rooms.
- (c) Handing over possession of hostel rooms to allottees and obtaining from them acknowledgement of furniture and fittings, in the prescribed Form.
- (d) Maintaining individual inmate's files along with student's activities data in the prescribed proforma on the file.
- (e) Identifying room vacancy on due dates and to bring it to the notice of Chief Warden.
- (f) Reporting and pursuing complaints relating to civil/electrical works, repairs/replacements of furniture, fittings, water cooler, **water purifiers** etc. and preparing a list of outstanding complaints with a view to ensuring that hostel life is smooth and neat and clean. The Chief Warden or her/his authorized person will closely monitor the progress made for resolving the complaint made by the inmates from time to time.
- (g) Hostel Attendant has to inspect the hostel regularly on daily basis thoroughly and record any defects etc. in the Attendant's Register, which will be inspected by the Chief Warden **every** week. The Hostel Attendant is required to report immediately in writing to Chief Warden installation/ use of unauthorized equipments/appliances by inmates e.g. air-conditioners, room coolers, refrigerators, gas cylinder/hotplate and cooking arrangement etc.
- (h) Indenting and stocking of electric bulbs and tubes and maintaining their stock register.
- (i) Double locking inmates' rooms and their reopening as and when ordered by the competent authority.
- (j) Assisting the Chief Warden in eviction proceedings and preparing list of personal belongings of evicted students and keeping them in stock.
- (k) Preparing bills for newspapers and magazines and maintaining bill register.
- (l) Assisting Warden concerned in disposal of old newspapers, magazines, etc.
- (m) Receipt and despatch of all office correspondence.
- (n) The Attendant will be responsible for the keys of hostel rooms when lying vacant or double locked.
- (o) The Attendant shall immediately report in writing to the Chief Warden presence of unauthorised guests/ persons, if found living in hostel rooms/premises.
- (p) Any other work assigned by Chief Warden (Warden, Admn.)/ Office In-charge.
- (q) The Attendant shall directly responsible to the Chief Warden including for forwarding of the attendant's leave application.
- (r) The Attendant performs the responsibilities assigned to Office In-Charge- Hostel Assistant if latter is not deployed/on leave.



1.7.3 Mess Manager/Supervisor (Arranged by the Mess Service Provider)

1.7.3.1 Responsibilities:

- (a) Supervising cooks, helpers and daily wage staff.
- (b) Timely Execution of any arrangement (like issuing mess coupons) which is in place for facilitating mess facility to the inmates.
- (c) Supervising the kitchen room and dining hall.
- (d) Keeping watch over the quality and the hygienic preparation of food with reference to the menu.
- (e) Any other instruction given by the concerned Warden.

1.7.4 Cook/s (Arranged by the Service provider)

1.7.4.1 Responsibilities:

- (a) Timely preparation of food under the guidance of the Mess Manager.
- (b) Ensuring cleanliness of the food and the kitchen, upkeep of kitchen equipment.
- (c) Helping Mess Manager in receipt and issue of stores.
- (d) Any other work assigned by the Mess Manager/Warden.

1.7.5 Helper/s (Mess) (Arranged by the Service Provider)

1.7.5.1 Responsibilities:

- (a) Helping the cook in preparing food, cutting vegetables, cleaning rice, pulses, preparing *roties*. etc.
- (b) Serving food to diners.
- (c) Arranging of clean drinking water on the dining table.
- (d) Cleaning kitchen, dining tables, crockeries, utensils, etc.
- (e) Any other duty assigned by Mess Manager/thr Warden.

1.7.6 Security Guard (Deployed by Security Officer as per direction of the Chief Proctor):

1.7.6.1 Responsibilities:

- (a) Watch and ward.
- (b) Ensure that no property belonging to the hostel/University is removed by unauthorised person.
- (c) Safe custody of keys of entry points and office rooms in the hostel.
- (d) Check the entry of unauthorised persons and non-Hostellers.
- (e) To remove stray cattle/dogs, etc. from the hostel and its surroundings.
- (f) Patrol of buildings and other installations.
- (g) Report cases of theft, sabotage or fire, etc. to hostel authorities and security officer at once.
- (h) Any other duty assigned by the Security Officer.

1.7.8 Safaiwala

1.7.8.1 Responsibilities:

- (a) To keep common area of hostel, roads, lavatories, etc neat and clean.
- (b) To make economical use of cleaning material.
- (c) To bring to the notice of the hostel authorities of the place (not allotted to him/her) where insanitary conditions are noticed by him/her.
- (d) To deposit garbage, etc, at the appropriate place.
- (f) To perform other duties as may be assigned by the Attendant/Hostel Authorities /Sanitary Guide/Inspector.

**PART-II:
RESIDENCY RELATED MATTERS
CHAPTER 2**

HOSTEL ACCOMMODATION & ALLOTMENT: NORMS, PROCEDURE AND ADMINISTRATION

2.1 ELIGIBILITY FOR ALLOTMENT AND ACCOMODATION

- 2.1.1 Statutorily, hostel accommodation is available to only those students who have been admitted to a full time programme of the CUSB, only during working semester. Students who accept employment or join any course outside CUSB will lose their entitlement to hostel accommodation. The students concerned shall be responsible to immediately inform the hostel administration in this regard. Concealment of any information or failure to inform about joining a programme outside CUSB or undertaking employment and salary shall lead to disciplinary action, including eviction from Hostel. Receiving UGC or any other fellowship will not be treated as employment.



- 2.1.2 Students shall generally have no right to occupy hostel accommodation if a notice for vacation has been issued by the Competent Authority.
- 2.1.3 Hostel accommodation is available to students for a maximum span of stay as per the normal duration of the programme. For instance, a student enrolled in a P.G. programme shall be entitled for staying in the hostel for only two years.
- 2.1.4 If the status of any student changes during the period of stay in the hostel, he/she is required to inform the hostel management immediately and should vacate the hostel, if the hostel management finds that he/she is not eligible for hostel accommodation.
- 2.1.5 The students are entitled for accommodation in the hostel only if they are full time registered students. Accommodation shall not be provided to any student whose registration is cancelled. Any student who is removed from the rolls of University will automatically cease to be a member / occupant of the hostel.
- 2.1.6 Anyone belonging to Gaya city and following Blocks shall be treated and termed as local and generally not be given hostel. However, they may be considered, on the basis of distance from the campus, for allotment against vacant seats after all the allotments have been done. **The name of such Blocks are:** (i) Tekari (ii) Konch (iii) Belaganj (iv) Paraiya (v) Manpur & (vi) Gaya City Block (Chandauti) (vii) Bodhgaya (viii) Guraru.
- 2.1.7 Students coming from outside local areas shall have preference over the local students who will be considered only after all the outside applicants have been allotted hostel accommodation. Casual students including any students enrolled for one or more semesters under CBCS scheme from other institutions/Universities shall be considered for accommodation only when seats are available. The Local and Casual Students shall be considered under P-3 category as mentioned below under 2.2.3. However, casual students from abroad may be given priority, as may be decided by the DSW/ Competent Authority on merits of each case.
- 2.1.8 Allotment shall be made as per select merit lists supplied by the CoE/appropriate authority and on the basis of their application for hostel allotment to be submitted in the concerned Hostel Office.
- 2.1.9 Students belonging to SC/ST categories shall be given reservation in hostel seats as per quota fixed from time to time by the University. Presently it is 15 percent for Scheduled Caste (SCs); 7.5 percent for Scheduled Tribes (STs). All *DIVYANG* students having benchmark disability, shall be given hostel allotment, irrespective of their merit /priority category.
- 2.1.10 Some rooms may be reserved for non-resident foreign nationals (i.e., those foreign nationals not residing in India) joining the various full-time programmes of study of the University, so as to provide accommodation at the earliest.
- 2.1.11 No student is eligible for admission to the hostel room unless he or she deposits the currently applicable hostel dues with the University.
- 2.1.12 Receipts in respect of payment of hostel dues must be preserved and produced by the student when required.
- 2.1.13 General Provisions:**
- (i) Ph.D. Research Scholars (If hostels are available for them) will be provided hostel facility for the normal period as defined by the University Ph.D. Ordinance with effect from the date of registration or till submission of thesis, whichever is earlier. It may be extended for one year in two instalments of 6 months each on recommendation of the DRC. However no extension/permission to stay in the hostel will be given after the submission of the Thesis.
 - (ii) The period of allotment, though renewable every year after submission of documentary evidence, shall not exceed the normal period of the course to which a student has been admitted. A student pursuing another Degree course after competing an earlier one, will be required to vacate his room in the hostel and seek fresh accommodation.
 - (iii) Students who have joined only Diploma/Certificate or Part-time Courses shall generally not be entitled for accommodation in any Hostel of the University.
 - (iv) Students who have been convicted, expelled, rusticated, or are under suspension from the University or at any other place for Indiscipline during the course of their studentship, shall not be considered for allotment of seats in the Hostel.
 - (v) Unauthorised occupants shall be expelled from the Hostel by the Chief Warden. It is also the responsibility of the inmates to see that no unauthorised guest stays in his room. Any non compliance is likely to be subjected to severe disciplinary action as per the rules of the University.



- (vi) Defaulters in payment of fees shall be liable for cancellation of their allotment in the Hostel.
- (vii) It shall be necessary for the boarders of the hostel to fulfil the requirements of attendance in the classes as laid down in the regulations. Boarders are liable to lose their hostel seats if they do not fulfil the attendance requirements.
- (viii) Students shall not take it as a right to be allocated the same room in the next academic session. In the beginning of each academic session, fresh allotment of accommodation may be made.
- (ix) Category of persons holding the following status shall not be entitled for accommodation in the hostel:
 - (a) Research Associates (not registered for Ph. D.)
 - (b) Teacher Fellows
 - (c) Post-Doctoral Fellows
 - (d) Un-registered Research Fellows working in Research Projects.
- (x) However, the University may try to provide for separate residential facility for persons in the above categories. Those who are provided accommodation will be allowed to stay for a maximum period of two years. The schedule of rent and electricity charges etc. will be announced separately.

2.2 ALLOTMENT: PRIORITIES AND NORMS

2.2.1 First Priority (P-1)

Students admitted to the full-time Programmes who are not belonging to the categories as stated above under 2.1.6/2.1.13 (iv) or/and are not a Casual Student or/and are not availing extension, excepting those who are admitted to a Programme at a level at which the student already has a degree or has pursued studies in CUSB at the same level with hostel accommodation.

*Note::List of documents to be furnished along with application form (Self-attested documents should be submitted at the time of hostel allotment).

- i. For Residence Address authentication any of the following documents showing the permanent address of the applicant as mentioned in the Hostel Application Form shall be considered: (a) Aadhar Card (b) Voter ID (c) Valid Passport (d) Domicile Certificate issued by the Competent Authority (e) Any other valid document.
- ii. Caste Certificate or any other Certificate on the basis of which specific allotment is requested by the student.

2.2.2 Second Priority (P-2)

Outstation students who are admitted to a programme at a level at which the student already has a degree or has pursued studies in CUSB (at the same level) with hostel accommodation.

2.2.3 Third Priority (P-3)

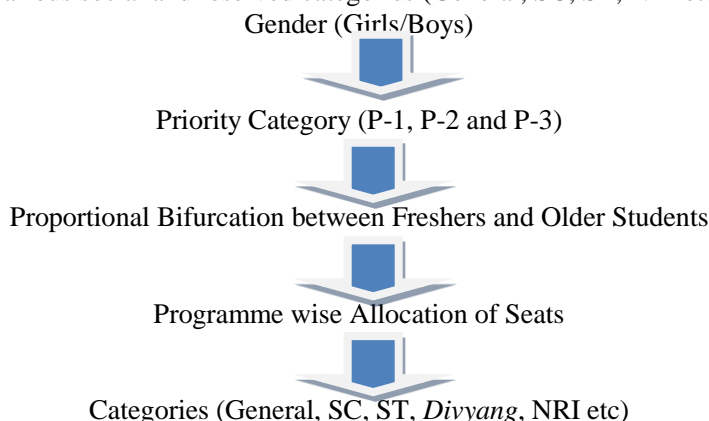
Any hostel inmate who wishes to take hostel accommodation for more than the period any programme in normal circumstances completed (e.g. MA programme Vth Semester) excluding a Research Scholar; a casual student and then the local students (located between in that order).

2.2.4 Norms

- (i) No out of turn allotment on medical grounds shall be entertained.
- (ii) SC/ST students from lower priority category (i.e. P-2 & P-3) shall be considered after clearing allotment to higher priority category (P-1) for all the departments/programmes. However, the *Divyang* category students having the benchmark category from lower priority categories shall be considered regardless of their category.
- (iii) For allotment, each priority category (P-1, P-2, P-3) under each gender category shall further be categorized as per the flow chart shown below. For Existing old students and



fresh admitted students will be proportionately distributed for allotment as per number of students applied for hostel accommodation. Further, the Programme wise allocation shall also be done on the basis of number of students applied for hostel accommodation in each Programme (e.g., MA in Political Science). Each programme shall further be categorized into various social and reserved categories (General, SC, ST, NRI etc.).



- (iv) For fresh students, allotment in the hostel will be made in accordance with the marks obtained in the Entrance Examination in the respective Programme of study. For students other than Freshers, however, the SGPA/Marks obtained in the semester preceding the semester in which application for hostel allotment is submitted shall be the base of merit.

2.3 PROCEDURES FOR ALLOTMENT

- 2.3.1** A student seeking admission into a hostel shall apply in writing at the beginning of each year in the prescribed form (**Form UHF-1**) to any authorized officer/office of the CUSB as notified along with documentary evidence of registration for a programme of study of the University and other necessary documents.
- 2.3.2** Fresh application shall be required for re-admission into the hostel every year at the beginning of each Academic Year.
- 2.3.4** Allotment of hostel shall be made by the Chief Warden or by any other authorized authority. No student shall be entitled to go to a particular hostel or room as a matter of right.
- 2.3.5** The students are expected to take possession of the allotted room soon after allotment of hostels after depositing the prescribed dues within the stipulated date.
- 2.3.6** The allotment of rooms shall be made by the concerned Chief Warden or his authorised person.
- 2.3.7** To assist the Chief Warden in the allotment of rooms, the Office of the hostel shall prepare and maintain a master list/card of all the rooms in a hostel. When a room/seat is allotted, the hostel office shall:
- (i) Ensure that the concerned student has deposited the hostel dues;
 - (ii) Fill in the name in the list of the students Register of Inmates against the room allotted;
 - (iii) Obtain an acknowledgment from the student in prescribed format listing the furniture and fixtures handed over;
 - (iv) Hand over the key of the room to the student;
 - (v) Inform the Mess Warden/Mess Manager of the new hostler whose name shall be added to the Diet Register; and
 - (vi) Prepare and maintain personal/individual file of the student in Personal/Individual Student's File **with full and updated information.**

Note: When the student leaves the room or hostel, the 'No Dues Certificate' shall be given only after receiving back all above items/amount for damages, if any.

2.3.8 Personal/Individual Student's File:

- (i) The Hostel Office shall maintain individual file for each inmate and record the application and other related documents for admission into the hostel and all other papers containing events connected with the residency, e.g., levy of fines, disciplinary action, eviction, etc.
- (ii) The files shall be kept in a steel cabinet in the safe custody of the Hostel Office who shall be solely responsible for their misplacement, loss, damage, etc. The Office In-charge shall also maintain a permanent record in a register showing room-wise occupancy of the inmates from year to year with dates. Separate pages in the register shall be set apart for each hostel room. Entries in the register shall be attested by the concerned Chief Warden.
- (iii) Any change of address / telephone number of the parent / local guardian, at any point of time, has to be at once intimated to the hostel office in writing.



- 2.3.9 The Hostel Management shall generally provide minimum furniture and fittings for each room, viz bed, study table, chair and cupboard. At the time of allotment, students should fill up the **UHF 2**, i.e, **Room Allotment Slip** provided in the annexure and make sure that all the furniture and fixtures are in proper order. If any discrepancy is found, it should be immediately brought to the notice of the hostel management.
- 2.3.10 Rooms once allotted to the student for an academic year shall not be changed except in special circumstances with permission of the Chief Warden.
- 2.3.11 Before vacating the rooms, the students should fill up the form **UHF 3**, i.e, Room Vacating Slip in triplicate (Hostel Copy, University Copy and Inmate's Copy). The installations including the fan should be handed over intact and in proper working condition, in addition to the furniture and fixtures.

2. 4. CODE OF CONDUCT:

2. 4.1 All inmates are required to maintain standards of behaviour expected from students of a prestigious Central University and follow the prescribed code of conduct. They are expected to behave courteously and fairly with all both inside and outside the campus.
2. 4.2 All inmates are requested to carry their valid Identity Card issued to them by the University/Hostel and show it whenever asked for.
2. 4.3 All the inmates must make entries in the In-Out Register kept at the gate of the hostel as per norms decided by the hostel administration.
2. 4.4 The rooms, common areas and surroundings should be kept clean and hygienic. Inmates must keep their bed covered with bedspread (bedsheet). Notices pasted on the notice board shall not be scribbled/torn.
2. 4.5 If any student wishes to be away from the hostel during the weekend, holidays or any other period of time (owing to some genuine reason), he/she, or his / her parents, or local guardian shall have to fill up **UHF 4**, i.e Leave Approval Form, and have to take prior permission from the Chief Warden/Warden. The form must be submitted to the Chief Warden/Warden in advance.
2. 4.6 Rooms are allotted to each student at his / her personal responsibility. He / she should see to the upkeep of his / her room, hostel and its environment. Students should bring to the notice of the Maintenance-Office-In-Charge/Warden all routine maintenance works (Civil, Carpentry, and Electrical or any other) and or damage / breakage if any, to be carried out in their rooms. Any such request can be submitted to the Hostel Attendant.
2. 4.7 Students should co-operate in carrying out maintenance work and vacate their rooms completely when the Hostel Management requires the rooms for this purpose. On such occasions, the management will try to provide alternate accommodation.
- 2.4.8 Allotment of a hostel room/seat shall not confer on the allottee (student) any right to tenancy or subletting and the University shall have every right to have the accommodation vacated/evicted in the event of breach of rules by the allottee.
- 2.4.9 The inmates should be back in their respective hostels by the time set by the Competent Authority. Students who are found outside their respective hostel premises after the stipulated time and involving in any violence or otherwise disturbing the peace on campus and privacy of CUSB community may be evicted from hostel forthwith apart from any other disciplinary action by the University.
- 2.4.10 A resident who wishes to stay out late or to remain absent overnight shall inform the Warden concerned in the prescribed form and take prior approval for same before leaving the hostel.
- 2.4.11 The inmates shall make payment of all hostel dues as per prescribed intervals failing which their hostel allotment is liable to be cancelled.
2. 4.12 Ragging of students admitted to the University is totally banned. Any violation of this by the student(s) shall be dealt with very severely and the offender shall be liable to punishment. For details, kindly go through the Anti-Ragging policy, regulations and notices
- 2.4.13 Ragging which is a **CRIMINAL & NON-BAILABLE** offence is defined in legal parlance as, "display of noisy, disorderly conduct doing any acts which causes or is likely to cause physical or psychological harm or raise apprehension or fear, shame or embarrassment to a student in any academic Institution and includes:-teasing, abusing, playing of practical jokes on or causing hurt to such student, or asking the student to do any act or perform something which such student shall not in the ordinary course be willing to do"

Note: Excerpts from the Directions of Hon'ble Supreme Court of India in respect of curbing ragging in Educational Institutions:

The Head of the institution (Vice Chancellor/Registrar/Administration etc.) needs to take immediate action on receipt of the recommendation of the Disciplinary Committee. He can also take action *suo motto* if the circumstances so demand. Freshers should be encouraged to report incidents of ragging. Those who do not do so even when being witness or victims should also be punished suitably.



When the person committing or betting the crime of ragging are not identified collective punishment could be resorted to as a possible deterrent measure, as it would ensure community pressure on the potential ragger not to indulge in ragging.

- 2.4.14 Entering the hostel premises intoxicated, possessing any drug or drug related substance, littering inside the University premises alcohol / drug smoking, chewing tobacco, Betal (*Pan*) or *Gutkha* or any other drug related substance is strictly prohibited and shall invite strict disciplinary action as decided as per rules of CUSB.
- 2.4.15 Employing unauthorised persons for personal work such as washing clothes, etc., is not permitted. Mess staff should not be asked to enter the hostel premises on any account. Any sort of threat caused by inmates to mess workers may lead to expulsion from the hostel.
- 2.4.16 Inmates should not participate in any anti-national, anti-social or undesirable activity in or outside the campus. The visit of non-hostel inmate(s) is restricted to the visitor room/reception and/ or mess, with prior permission of the concerned Warden.
- 2.4.17 Paying hostel fees does not entitle students to infringe the rules and indulge themselves in violent activities to express their views. Violating the law & order can lead to strict disciplinary action against them as decided by the Competent Authority.
- 2.4.18 The inmates must not indulge in any act of intimidation or violence and drunken or riotous behavior.
- 2.4.19 Use of narcotics, consumption of alcoholic beverages and gambling in the hostel are prohibited.
- 2.4.20 The inmates shall not hold any political function (other than related to students activities) within the premises of the hostel, except with the prior written permission of the competent authority.
- 2.4.21 The hostel administration reserves the right to take disciplinary action, including eviction from the hostel, for violation of any of the rules.
- 2.4.22 The Warden, the Coordinator of Hostels, Chief Proctor or any other competent authority of the University reserves the right to inspect the hostel rooms at any time.
- 2.4.23 Pets are not allowed within the Hostel.
- 2.4.24 The University reserves the right to close any or all hostels *suo motto*.
- 2.4.25 Students/Inmates shall not hold any meetings within the hostel premises unless with the prior written permission of the Chief Warden of the Hostel concerned and such permission should normally be obtained at least 48 hours in advance of the meeting.

2.5 GUESTS & VISITORS

- 2.5.1 Male visitors including male students or guests shall not be allowed in girls/women hostels. Similarly, female visitors (including girl students) shall not be allowed in the Boys' Hostels.
- 2.5.2 Entertaining unauthorized guests shall lead to serve punishment as per the set norms.
- 2.5.3 No person of the opposite gender either student or guest shall be permitted to stay overnight in any part of the hostel.
- 2.5.4 No day-scholar is allowed to enter the hostel without prior permission of the Chief Warden.
- 2.5.5 All visitors to the hostel including the parents and guardians shall have to make necessary entries in the visitor's book available at the hostel entrance with the security guard.
- 2.5.6 The visit of male students to the female hostel and vice-versa is strictly prohibited. Any violation in the said guidelines may lead to expulsion from the hostel.
- 2.5.7 No Non-resident visitor shall be permitted to stay in the visiting room of the hostel after the time notified by the competent authority of the University.
- 2.5.8 For a visitor to stay in a hostel room in the absence of the inmate is strictly prohibited. Violators shall be treated as trespassers and shall be liable to be dealt with in accordance with law on the subject.
- 2.5.9 Any inmate found hosting / harbouring an offender/unauthorized person shall be also liable to the same punishment as per norms or as decided by the disciplinary committee/Office of the Chief Proctor
- 2.5.10 The hostel administration reserves the right to deny entry into the hostel to any visitor if, in its opinion, the visit including any student, is likely to disturb peace and order in the hostel.

2.7 USE OF APPLIANCES, PROPERTIES & BELONGINGS:

- 2.7.1 The use of electrical appliances such as immersion heaters, electric stove/heaters/electric iron etc. is forbidden in any of the rooms allotted for residence. Private cooking in the hostel/student's room including in pantry is strictly forbidden. Such appliances, if found will be confiscated and a fine will also be imposed.
- 2.7.2 Use of audio systems which may cause inconvenience to other occupants is not allowed. The use of personal TV, VCR/VCD player is prohibited.
- 2.7.3 Replacing fused bulb/tube lights of a room will be responsibility of the inmates.
- 2.7.4 When the students go out of their rooms they should switch off all the electrical/electronic appliances (as allowed by the hostel management), and keep their rooms locked (at all times). Violation will attract suitable penalty and punishment as decided by authorities.



- 2.7.5 The University's bandwidth (internet) / amenities if provided, should strictly be utilized for educational and / or knowledge sharing purpose. The students should not download songs / movies, screen pirated / unauthorized / unlicensed movies in their computers or display on TV in the common room. Nor should they play music, indulge in chatting and/or exchange of any other non-relevant data. Any violation will be dealt with severely. Penalty for the same will be decided by authorities.
- 2.7.6 Residents should not hire objectionable CDs or magazines from outside.
- 2.7.7 Lights should be generally switched off by the midnight. Study lamps can be used for self-study henceforth.
- 2.7.8 The inmates must not remove any property from the dining hall, common rooms, or the visitor's rooms or any other room of the hostels.
- 2.7.9 The inmates must not tamper with the electrical fixtures in their rooms in the hostel premises or use any unauthorised electrical appliance/gadget. Any violation shall amount to breach of hostel rules and all unauthorized appliances/gadgets shall be confiscated and disciplinary action against the resident shall be taken.
- 2.7.10 The inmates will be given furniture in their rooms according to the prescribed norms. Demand for additional furniture will not be entertained.
- 2.7.11 Every inmate is responsible for the care of the hostel property he uses. Inmates found responsible for any damage or loss of the hostel property shall be charged there for, individually or collectively, as the case may be, and they will also be liable to disciplinary action. The decision of the Chief Warden/Coordinator of Hostels will be final in this regard.
- 2.7.12 The inmates should take care of their personal belongings and use their own locks in the cupboards allotted to them. Inmates will be solely responsible for the safety of their belongings. The University shall not be responsible for any loss or damage of the personal belongings of the inmates.
- 2.7.13 No inmate is permitted to take away his belongings from the hostel premises without a proper 'gate pass' issued by the Chief Warden.
- 2.7.14 The inmate of a room shall be responsible for any damage to the property in the room during her / his occupancy of that room and will be required to get it repaired. She/he shall be required to hand over the furniture & other materials in good working condition while vacating the hostel.
- 2.7.15 The inmate should not remove / change any fittings from any other room to his / her room.
- 2.7.16 The inmates shall be responsible for replacing non-functional bulbs/tube lights inside the room.
- 2.7.17 Cleaning and maintaining hygiene of a room is responsibility of the inmates residing in the room. **The Safaiwala will only clean the common places. Compelling the Safaiwala to clean inside the room shall lead to disciplinary action/fine.**
- 2.7.18 **Articles permitted/Prohibited in the Room**
- (i) Every inmate shall generally be provided the following articles for his use in the hostel:
 - (a) Bed (one)
 - (b) Study Table (one)
 - (c) Study Chair (one)
 - (d) Cupboard (For keeping personnel belongings)
 - (ii) Hostellers will not be allowed to keep motor-bike or car in the hostel. However, they may keep bicycle in the hostel.
 - (iii) Inmates desirous of keeping costly items other than those provided by the university, e.g., laptop and camera etc., may do so at their own risk.
 - (iv) Inmates shall not be permitted to keep even licensed fire arms, knives and other contraband material etc. in the hostel room under any circumstances what so-ever. The breach of this regulation will lead to the expulsion of the inmate from the hostel without any enquiry.

2.8 COLLECTIVE RESPONSIBILITIES

- 2.8.1 General damage to the hostel property will be the collective responsibility of all the inmates, if the students who caused the damage could not be identified.
- 2.8.2 Inmates should not indulge in practices/activities which may endanger their own personal safety as well as of others.
- 2.8.3 Any case of theft should be reported promptly to the Chief Warden/Warden.
- 2.8.4 Inmates should report to the Chief Warden/Warden/Office in case they notice any unwanted or undesirable activity going on in the hostel.
- 2.8.5 Inmates are required to park their cycles only in the space provided for them in an orderly manner. No cycles should be parked at any other place.



- 2.8.6 Inmates are required to be conscious of the environment which they live in by keeping it clean, healthy and presentable. Students should not throw and / or litter indiscriminately and should not use non-bio-degradable items, such as polythene bags etc.
- 2.8.7 The jurisdiction of CUSB is confined to the campus *only*. If students create law and order problems outside the campus, they are themselves answerable to the police/civil administration and face action accordingly.
- 2.8.8 The students are advised not to go out in large groups which are difficult to control. This is so because if they get involved in unpleasant situations, they are not the only one to be affected. In fact, they end up creating a bad impression of the University and parents.
- 2.8.9 Students should not paste objectionable handbills or make objectionable articles or pictures in the rooms allotted to them or at any other place in hostel.
- 2.8.10 Students should be properly dressed while moving in and out of the hostel. Also students residing in the hostel are not supposed to pass through the common corridors and come in mess without being properly dressed.

2.9 PROCEDURE FOR VACATION OF HOSTEL ROOMS

- 2.9.1 All terminal students must surrender their rooms to the concerned warden by the date as notified by the DSW after the end of every semester/year. Provided, however, the DSW may grant extension to such students in very exceptional cases.
- 2.9.2 Those students who discontinue their studies in the middle of a semester should submit an application for vacating the hostel in the prescribed form to the Chief Warden concerned at least four days in advance of the date of leaving the hostel. Permission for vacating the hostel will be accorded by the Chief Warden concerned after the clearance of hostel and mess dues etc., by the student concerned is submitted. Hostel security refund may be made as per procedure.
- 2.9.3 Before vacating the hostel, each inmate must hand over to the Attendant the complete charge of his or her room with all furniture and fixtures intact, and clear all hostel and mess dues. The inmates while vacating or on being evicted from the hostel rooms will have to pay total cost of article(s) found either missing or damaged, allotted in his/her name as may be decided by the Warden or any other competent authority of the Hostel concerned or University.
- 2.9.4 Failure to vacate the hostel room by the due date will render the inmate liable to disciplinary action or fine or both and eviction procedure shall be initiated against the student.
- 2.9.5 The University reserves the right to close any or all hostels *suo motto* at any time without assigning any reason and the inmates of the hostel in that condition shall have to vacate the concerned hostels as per the University notification.

2.10 PROCEDURE FOR EVICTION:

- 2.10.1 An inmate may be evicted from the hostel for any breach of discipline, norms of hostel or mess rules or if not conforming to academic requirements as stipulated in the Academic Ordinances of the University or otherwise notified by the University.
- 2.10.2 The Eviction process will be initiated by the Chief Warden in consultation with the Coordinator of Hostels or the DSW in case the post of Coordinator of Hostels is vacant.
- 2.10.3 Before eviction, the inmate concerned will be served with an Eviction Notice by the Chief Warden so that the inmate is informed of the proposed action and could take care of his/ her personal belongings kept in the room, and vacates the room on or before the date fixed for eviction.
- 2.10.4 If the inmate does not vacate by the date specified in the "Eviction Notice", the lock of the room/cupboard will be broken open in the presence of:
 - (i) The Chief Warden or his/her representative;
 - (ii) Warden;
 - (iii) The Chief Proctor or his/her representative, where necessary.

For this purpose, the Chief Warden will inform the above members preferably well in advance.

- 2.10.5 Where the second/third room-mate is affected by eviction of the defaulting inmate, the second room-mate/third room-mate will be accommodated by the Chief Warden in other room(s) as may be possible.



- 2.10.6 If, on breaking open the lock, any personal belongings of the defaulting inmate are found in the room, these shall be listed over the signature of all those present at the time of eviction and kept safe for a period of one month. The hostel administration will not bear any responsibility whatsoever for any loss or damage of such personal belongings.
- 2.10.7 If any furniture articles/fixtures allotted to the student are found missing or damaged, the cost of article or damages to articles shall be recovered from the inmate as may be decided by the Warden or any other competent authority of the of the Hostel concerned or University.

2.11 HOSTEL FEES:

- 2.11.1 Hostel Fees per semester should be paid on time as per the notice of the Hostel Management/University in this regard.
- 2.11.2 No hostel fees will be refunded irrespective of the fact whether a student has been placed in the industry or gone on training in the beginning or during the semesters.
- 2.11.3 Students should clear their hostel and other dues well in time.

2.12 GRIEVANCE REDRESSAL MECHANISM:

- 2.12.1 Hostels in the University exist to provide conditions of congenial living to the students, within the constraints of resources and personnel. Routine matters pertaining to the provision of facilities for the day-to-day running of the hostel, therefore, should be attended to by the existing hostel authorities. Redressal of grievances through the proposed special mechanism should be viewed as the last resort.
- 2.12.2 The inmates in normal situation make entry in complaint register. Subsequently, if unaddressed, he/she can approach related Hostel Warden directly or through any of the officers/staff associated with hostel management, for guidance and grievance redressal. Representations to higher officers must be forwarded through proper channel; otherwise it will be taken as an act of indiscipline.
- 2.12.3 Any grievance from an inmate student or students in the first instance ordinarily be referred to the concerned Warden in writing, with a copy to the Chief Warden, who will, depending upon the nature of the grievance, ensure that it is processed by him/her as speedily as possible and preferably within one fortnight from the date of receipt with an intimation to the Chief Warden.
- 2.12.4 In case the inmate or inmates are not satisfied with action taken by the Warden the student/students, as the case may be, are free to bring the grievance in writing to the notice of the Coordinator of Hostels/DSW.
- 2.12.5 The complaint will be made to the Office-In-Charge for transmission it to the Coordinator of Hostels/DSW who will ensure that the grievance is looked into by him as speedily as possible depending upon its nature and preferably within a fortnight from the date the complaint was made. In case the DSW so desires the complaint may be forwarded to the Hostel Grievance Redressal Committee (HGRC).
- 2.12.6 There shall be a Hostel Grievance Redressal Committee (HGRC) which shall be constituted by the Vice-Chancellor for three years and shall consist of the following members:
- (1) A senior Professor: Chairperson
 - (2) DSW or her/his representative: Member
 - (3) Chief Proctor or her/his representative: Member
 - (4) Two teachers having adequate experience in hostel management: Members
- Note: The Chairperson of HGRC may invite any other person(s) as invited member, if she/he desires so.
- 2.12.7 The HGRC shall ensure that the grievances referred to it are processed as speedily as possible.
- 2.12.8 The report of the HGRC shall be sent to the DSW for further necessary action.
- 2.12.9 The Committee shall formulate its own procedure.

2.13 PROCEDURE FOR TAKING OUT ARTICLES FROM HOSTEL

- 2.13.1 No articles shall be allowed to be taken outside including personal belongings of students unless a proper gate pass prepared by the Attendant and signed by the Chief Warden is produced to the Security Guard on duty at the hostel gate.
- 2.13.2 The gate pass will be retained by the Security Guard for record.
- 2.13.3 Any lapse will be viewed seriously and disciplinary action may be taken against the defaulter.



CHAPTER 3

MESS FACILITIES: OBJECTIVES, ORGANISATION AND GUIDLINES

3.1 OBJECTIVES OF HOSTEL MESSAGES

- (i) To ensure that students get a balanced diet at a reasonable cost;
- (ii) To foster a climate where the students with different creeds, languages and food habits sit and eat together harmoniously in a common mess.
- (iii) To cultivate amongst the students a spirit of cooperation and tolerance; and
- (iv) To develop in the students a capacity to manage the day to day affairs of the mess on a democratic basis.

3.2 ORGANISATION OF THE HOSTEL MESS

- 3.2.1 Every hostel has facility of mess or messes joining to which for inmates is compulsory. Hence, no student is allowed to stay in the hostel without being member of the mess.
- 3.2.2 The mess/messes will be run by private contractor(s) as selected by the CUSB through all India tender or any other mechanism under the supervision of the HMC, a Warden designated for the purpose and the Chief Warden
- 3.2.3 The messes have to use LPG as fuel for cooking. Maintenance, operation, refilling and security of the LPG connection will be responsibility of the contractor running the mess.
- 3.2.4 The concerned Warden will be responsible for proper administration and maintenance of discipline and accounts in the hostel mess.
- 3.2.5 Each mess will have such strength of staff as may be justified on norms laid down by the University from time to time.

3.3 ELIGIBILITY FOR JOINING THE MESS

- 3.3.1 All bonafide students of the University who have been allotted seats in the University hostels will be the members of their respective hostel Mess.
- 3.3.2 Should there be any other hostel, either permanently or temporarily, its Chief Warden will arrange for its inmates to be allowed to join the mess of another hostel.
- 3.3.3 Joining of the mess is compulsory for the inmates and they will be charged for the meals for as per the norms, whether they actually take or not.

3.4 ENROLLMENT IN THE MESS

- 3.4.1 For enrollment in the mess the Warden shall give instruction to the Service Provider, who shall complete other formalities at his/her end.

3.5 DINNING PROCESS

- 3.5.2 The Service Provider shall develop appropriate mechanism to administer and execute the dinning process as per agreement.
- 3.5.2 The Process shall be monitored by the HMC under chairpersonship of a Warden designated to look after mess issues.

3.6 MESS AND DINNING HALL: GENERAL RULES

- 3.6.1 Once a student joins the hostel, he/she shall be deemed to have become a permanent member of the mess and is liable to pay the mess charges as per decided norms. Students who absent themselves on the date of reopening of the University after any semester vacation will be deemed to have joined, unless contrary to that is informed to hostel administration in writing in advance.
- 3.6.2 Absence from joining the mess will be permitted only by the hostel management on request for valid reasons for a maximum period of 7 days only, from the date of reopening of the University. Afterwards the student will be charged as per the mess charges. Such permission should be obtained well in advance.
- 3.6.3 Students should strictly adhere to the hostel and mess timings decided by the Hostel Management/University Administration from time to time.
- 3.6.4 The quantity of food will be as per the menu.
- 3.6.5 Inmates are not permitted to cook any food on their own accord in the mess/pantry/ rooms.
- 3.6.6 Inmates on no account, whatsoever, will be permitted to take food outside the mess. Nor can they take mess utensils such as plate, spoon, tumblers, etc. to their rooms.



- 3.6.7 No food will be served in the rooms of the hostel for any student unless it is recommended by the concerned Warden on the ground that the student's medical condition requires the food to be served in the room.
- 3.6.8 If a student is ill and requires a special diet, he/she should request the warden/attendant to arrange the same at the mess, if fisible.
- 3.6.9 No inmate shall waste food. Paying mess bill does not entitle a student to waste food. Wastage of food by any of the student (s) shall invite a disciplinary action as per set norms.
- 3.6.10 Inmates shall assist in maintaining the mess and its surrounding neat and clean. No notices shall be pasted on the walls. Notices put on the notice boards should not be removed by the diners.
- 3.6.11 All students shall interact with the mess staff in the dining hall in a courteous manner. Any misbehaviour will attract disciplinary action
- 3.6.12 Students should not bring pet animals into the hostel or encourage such practice.
- 3.6.13 After eating, students shall put the cup, plates or any leftovers in the designated bins.
- 3.6.14 Any grievance raised by the students/ HMC shall be looked into and resolved by the IHAC in consultation with the concerned Warden/HMC, as case may be.
- 3.6.15 The IHAC may involve the Coordinator of Hostels/ Chief Proctor/ DSW for proper resolution of the same, as and when required.
- 3.6.16 In case, the University, on the request of the hostel-inmates, or in any special circumstance withdraws the service of the outside caterer to run the mess in hostels, then the Mess Management may be taken over by the hostel-inmates in the following way, other things being the same:
- (i) The Mess committee shall be in charge of management of the mess in a self-financed mode with payments by the hostel inmates under the guidance of the concerned Warden (as ex-officio chair of the HMC).
 - (ii) The University shall provide only the required cooking utensils to the Mess Committee, and for that the latter collectively shall remain accountable.
 - (iii) The HMC shall be in charge of managing grocery, food ingredients, cooking gas, fund management, staff payment (employed by them after getting approval from the Chief Warden), etc.
 - (iv) The Mess Committee shall operate the supervision of Intra-Hostel Administration Committee (IHAC).
- 3.6.17 All inmates should come to the dining hall properly dressed.
- 3.6.18 Self-service system will be followed in the mess. Students collect their share of food from the counter in the dining hall after following completing formalities as laid down by the Hostel Administration time to time
- 3.6.19 Impersonation i.e. eating for bonafide student is prohibited and defaulter will be dealt with as per norms.
- 3.6.20 Only one inmate may eat from one plate or *thali*, eating of more than one person from one plate or *thali* is prohibited.
- 3.6.21 The inmates are expected to behave with the Mess Manager and the mess staff with proper decorum and must not enter into any altercation with them. If they have any grievance, they may record the matters in the suggestions book/through e-mail to the concerned Warden with a copy to the Chief Warden.
- 3.6.22 Smoking or taking alcoholic drinks in the dining hall is strictly prohibited.
- 3.6.23 Students must not ask mess employees to prepare special dishes for them.
- 3.6.24 Students and others not on duty must not enter the kitchen.
- 3.6.25 Dining hours will be as fixed and revised by the concerned Warden in consultation with the HMC.
- 3.6.26 Inmates should adhere to the set timings scrupulously. No complaint will be entertained if a student fails to report within the fixed hours.
- 3.6.27 To use the dining hall for purposes unrelated to the mess requires prior permission of the Chief Warden at least 24 hours before the proposed event.
- 3.6.28 Any breach of the above rules will render the student liable to fine and/or disciplinary action including expulsion from the hostel, removal from the University etc.

3.7 GENERAL INSTRUCTIONS FOR FOOD HANDLERS/MESS WORKERS

- 3.7.1 The food handlers must scrub and wash their hands with soap and water immediately after visiting a lavatory and so often as necessary at other times before handling food.
- 3.7.2 Finger nails should be trimmed periodically and should be kept free of nail dirt.
- 3.7.3 They should cover their heads so that loose hairs do not get entry into food stuffs.



- 3.7.4 They must not cough or sneeze in the vicinity of food. They should cover their face to prevent droplets falling on food.
- 3.7.5 They should not smoke in food premises.
- 3.7.6 Licking fingers to taste food must be avoided.
- 3.7.7 Known cases suffering from Pulmonary tuberculosis, diarrhea, dysentery, typhoid fever, viral hepatitis and persons with wounds, discharging ears, boils and other skin infections should not handle food or utensils.
- 3.7.8 All mess workers shall report for medical examinations as and when required by the hostel administration.
- 3.7.9 The mess worker/mess manager will ensure that above instructions are followed by the mess workers.

3.8 HOSTEL MESS COMMITTEE (HMC)

- 3.8.1 The each hostel shall have an HMC as per Section 1.6.3

3.10 THE MESS MENU

- 3.10.1 The mess menu should be displayed in the dining hall and one copy given to the Mess Manager who will ensure its strict observance.
- 3.10.2 If due to non-supply of the required vegetables, etc. the menu decided needs a change, the Mess Manager will immediately bring it to the notice of the concerned Warden.
- 3.10.3 A student who has fallen sick may give a written requisition to the concerned Warden for supply of special diet subject to the convenience of the mess and availability of food stuff, the Warden may authorize the supply of a special diet to the student, as a special case.

CHAPTER 4

OTHER FACILITIES INCLUDING COMMON ROOM, RECREATION, MEDICAL FACILITIES & MISCELENOUS: PROVISIONS AND MANAGEMENT

4.1 COMMON ROOM AND RECREATIONAL FACILITIES

- 4.1.1 The Hostel will have one or more common room/s for the use of inmates. The common room shall provide facilities for TV and indoor games along with newspapers/magazines.
- 4.1.2 The common room will be managed by one of the Wardens designated for the purpose, who shall be assisted by the Hostel Students Committee (HSC).
- 4.1.3 The common room will be kept open normally as per the time notified the concerned authority from time to time.
- 4.1.4 The magazines or newspapers to be purchased will be decided by the HSC.
- 4.1.5 The inmates shall not be allowed to remove magazines or newspapers or any other property from the common room.
- 4.1.6 The inmates shall maintain decorum in the common room.
- 4.1.7 The common room in the girls' hostel shall be open only to female inmates and in the boys' hostel only to boyinmates except in such situations as inter-hall tournaments, to be notified by Chief Warden.
- 4.1.8 Each hostel shall be permitted to purchase magazines, for an amount within the specified limit. .
- 4.1.9 Facilities for indoor games may be provided in the Hostels.
- 4.1.10 Any recommendation relating to sports event/item should originate from the HSC.
- 4.1.11 For further sports facilities and organizing sports events, the HSC may approach the University's Sports Committee via the concerned Warden and the Chief Warden.
- 4.1.12 Sports events at inter-Hostel level may be organized with approval of Coordinator of Hostels/DSW.
- 4.1.13 The HSC under the guidance of the Warden designated to look after the **Common Room and Recreational Facilities** and will:
 - (i) Ensure the Common Room is open and facilities for indoor games are available to inmates during stipulated hours;
 - (ii) Ensure cleanliness in Common Room;
 - (iii) Ensure that all electrical fittings are in proper order;
 - (iv) Make purchases and maintain proper records of various items like powder for Carrom Board etc. in consultation with concerned Warden;
 - (v) Maintain proper records of all magazines received in Common Room and their disposal in consultation with concerned Warden;
 - (vi) Organize the annual events as decided by concerned Warden/IHAC.



4.2 PROCUREMENT OF NEWSPAPERS, MAGAZINES

4.4.1 Bills for newspapers and magazines shall be paid by the hostel administration.

4.3 ANNUAL FUNCTION: NORMS

The following norms are to be strictly observed regarding celebrations of the Annual functions in the hostels:

4.3.1 Timing:

- (i) Inside the hostel, functions shall continue upto the time fixed by the hostel administration. The music system, if permitted by the University administration, would be played at a low tone. In no case inmates and neighbours would be disturbed.
- (ii) The above timing shall be observed by all the inmates, and the HSC shall take responsibility for its adherence.

4.3.2 Outside performers/professionals

- (i) No outside performers, including non-professionals ordinarily will be allowed to participate in the Function.
- (ii) A non-student shall be treated as an outsider in this context. .
- (iii) A detailed programme of the hostel annual functions will be worked out by the Organizing Committee in consultation with the concerned Warden and the Chief Warden of the hostel and permission has to be sought from the Office of the Chief Proctor as per rules.
- (iv) For any violation of the above norms, the Organizing Committee shall be held directly responsible.

4.5 MEDICAL FACILITY

4.4.1 All inmates of the hostel are entitled to avail of the medical facility as per University rules.

4.4.2 In case of serious illness, the inmate student(s) and his/her room-mates should immediately report the same to the Chief Warden/ concerned Warden/Hostel Attendant. All inmates are required to take personal care of their health, and hostel authority shall not take any responsibility of such cases.

4.4.3 In case an inmate falls sick seriously, her/his parents/ local guardian shall be informed immediately by the inmate/roommate/inmate/attendant/Warden. Simultaneously, the Attendant/Warden may be informed. After primary management it is the responsibility of Parents/Local Guardian to provide such student with proper medical treatment.

4.4.4 A first-aid box shall be kept at the hostel under the control of a Warden/Doctor. The same must be recharged by appropriate items, as prescribed by University doctor. The attendant/any other staff shall review the availability of appropriate items and recharge accordingly, ideally latest on every alternate Friday. The concerned Warden/IHAC may develop proper mechanism to avoid any misuse of the items kept in the first-aid box.

4.6 INTERNET & TELEPHONE FACILITY FOR STUDENTS

4.6.1 The hostel inmates may be provided with telephone facility at the hostel gate/any other specified place for incoming calls only. In such case, the telephone bills will be paid by the Hostel. Proper records will be maintained for the purpose under the supervision of the Office- In-Charge. The Chief Warden will ensure that the facility is not misused.

4.6.2 The University may provide free internet facility to inmates. The same must be used for only academic purposes.

4.7 REPORTING OF COMPLAINTS

4.7.1 **Electrical:**

- (i) Any electrical complaint should be brought to the notice of the attendant/Warden/Chief Warden for its rectification.

4.7.2 **Civil:**

- (i) Attendant will report civil complaint to the Enquiry.
- (ii) Attendant will keep a check on whether the items reported have been attended to or not.

4.8 FOLLOW UP OF COMPLAINTS

4.8.1 If a complaint is not attended to within a reasonable time, the Warden or the Chief Warden may bring it to the attention of the appropriate Officer/DSW.

**CHAPTER 5:****INMATES' DISCIPLINE, TIMING, PENAL FINES & PUNISHMENTS**

Students residing in the University hostel shall abide by the rules, regulations and code of conducts. Any breach of these regulations, lack of decorum, indiscipline, improper conduct or wilful damage of university property, tangible or intangible, or of the belongings of a fellow student shall entail disciplinary action.

5.1. GENERAL GUIDELINES: INMATES' DISCIPLINE

- 5.1.1 The inmates must not be involved directly or indirectly in fighting, gambling, anti-social activities, ragging, strike, picketing, gheraos, fast, arousing, hurting of the sentiments of the other students and the public. Use of outside agency for redressal of grievance, possession or consumption of alcoholic drink, intoxicating drugs, chewing tobacco will be viewed as serious offence and may lead to disciplinary action including expulsion from the hostel/university.
- 5.1.2 Meeting or parting inside the hostel is strictly prohibited. However, in special circumstance it may be organised only with prior written permission from the Chief Warden. However, such activities should not cause any discomfort to other inmates.
- 5.1.3 Other rules, if any, notified from time to time by the hostel administration should be followed by all concerned for smooth functioning of the hostel.
- 5.1.4 All inmates must abide by the rules and regulations of the hostel as may be framed from time to time.
- 5.1.5 Violation of any rule(s) will attract strict disciplinary action.
- 5.1.6 The University attaches utmost importance to integrity, honesty and good general conduct of the students. Any violation of the above shall lead to strict disciplinary action including expulsion from the Hostel/University.
- 5.1.7 Carrying of any type of weapons-blunt, sharp edged, or firearm, on the university/hostel campus or keeping such weapons in the hostel is a serious offence and is strictly prohibited and shall lead to strict action against the inmate as decided by appropriate authority/institution.
- 5.1.8 Students must abide by the rules and timings (as chalked out by the hostel management) of the hostel and will not stay outside the hostel during night or till late hours without the permission of the hostel warden(s).
- 5.1.9 Inmate once evicted from a hostel shall not be given any University hostel accommodation in future.
- 5.1.10 Any other case of breach of rule/s or indiscipline or misconduct not specified under 5.4 be either punished as per the authority delegated under 5.3.
- 5.1.11 Chief Warden shall enter the name of the student, nature of indiscipline/misconduct, date and quantum of fine/penalty imposed in the conduct book and personal file maintained by the Hostel Office.
- 5.1.12 Any serious complaint, relating to maintenance of law and order in the hostel, which cannot be addressed by the authorities involved in the hostel administration as per jurisdiction, norms and rules, received against any hosteller shall be referred for the consideration and decision of the Office of the Chief Proctor of the University. The Chief Proctor/ Proctorial Board/Disciplinary Committee will be fully empowered to call or ask any staff members and /or wardens concerned with the matter to submit written statement. The decision of the Chief Proctor/Proctorial Board/Disciplinary Committee will be binding upon the inmate(s).

5.1.13 Rights of University Administration

- (i) The officer(s) of hostel management and any other competent authority, including any member of Proctorial Board, shall be empowered to have hostels inspected at any time to ensure the proper compliance of all the provisions of the hostel rules and policies.
- (ii) Any breach of these rules will invite an inquiry that will be conducted as per rule. If the student is found guilty, then the hostel administration will take the disciplinary action that it deems fit. Depending on the case, the University Administration shall have the right to take direct disciplinary action, amounting to even immediate expulsion from the hostel.
- (ii) The University Administration reserves the right to change these rules as required from time to time keeping the students informed through general circulars displayed on the hostel notice boards or through other means.
- (iii)

5.2 HOSTEL TIMINGS

Out timings: To be notified by the DSW from time to time.

Night attendance: To be notified by the DSW from time to time.

Study Hour: May be notified by the Chief Warden from time to time.

**5.3 APPROVING AUTHORITY: EXTENT OF FINE/PUNISHMENT**

1. Vice-Chancellor: No limit of imposing/waiving fine/punishment.
2. DSW: To impose/wave fine upto Rs. 5,000/-per inmate at a time.
3. Coordinator of Hostels: To impose/wave fine upto Rs. 2,000/- per inmate at a time after the approval of the DSW.
5. Chief Warden: To impose a fine upto Rs. 1,000/- per inmate at a time after approval of the Coordinator of Hostels.
6. Warden: To impose a fine upto Rs. 500/- per inmate at a time after the approval of the Chief Warden.

5.4 NATURE OF MISCONDUCT & INDISCIPLINE: PENAL FINES/PUNISHMENTS

Sl. N.	Nature of Offense	Fine/ Punishment (Per person, if not specified)		
		First Time	Second Time	Third Time& onwards
1	Harbouring unauthorised person(s) in his/her room/hostel	Eviction from the hostel	NA	NA
2	Misuse of energy	Warning	₹ 250	₹1000
3	Tampering with the electrical fixtures	Cost of damage/repair & Rs.250	Cost of damage/repair & ₹.500	Cost of damage/repair & ₹1000
4	Use of any unauthorised electrical appliance/gadget	Confiscation of appliance/ gadget	Confiscation of appliance/ gadget & warning	Confiscation of appliance/ gadget & eviction from the hostel
5	Damage or loss of the hostel property both tangible and intangible (perpetrator identified)	Cost of Repair (replacement) as per actual	Cost of Repair (replacement) as per actual & 25 percent of the cost of repair (replacement) as penalty	Cost of Repair (replacement) as per actual & 50 percent of the cost of repair (replacement) as penalty
6	Damage or loss of the hostel property (perpetrator not identified)	For each reported incident, cost of repair/replacement to be borne collectively by all the inmates	NA	NA
7	Any damage to the property in the room (perpetrator not identified)	For each reported incident cost of repair/replacement to be borne collectively by all the roommates & 10 per cent of the repair/replacement cost as penalty each roommate	NA	NA
8	Moving any furniture/ or movable item from its allotted/specified place from a room to outside/or any other room	Warning	₹100	₹. 500
9	Taking away any hostel property from the hostel premises without a proper 'gate pass'	Cancellation of the hostel allotment & disciplinary action as per rule	NA	NA
10	Practices/activities which may endanger their own personal safety as well as of others	₹ 1000	₹. 2000	₹. 5000
11	Parking vehicle or motor bike at unspecified place	Warning	₹250	₹500



12	Keeping vehicle or motor bike	Warning	₹ 500	₹1000
13	Throw and / or litter indiscriminately	Warning	₹ 100	₹ 200
14	Spitting/Disfiguring at any undesired place in the hostel, including any corridor, wall, window, room or veranda	₹.100	₹.200	₹ 500
15	Creating law and order problems inside or outside the campus	Eviction from Hostel & Reporting to Office of the Chief Proctor for further necessary action	NA	NA
16	Going outside campus beyond permitted time without prior permission	Warning	₹ 500	Cancellation of the hostel allotment
17	Going outside hostel but within Campus beyond permitted time without permission	Warning	₹ 250	₹ 500
18	Overnight absent from the hostel without prior permission	Warning	₹ 500	Cancellation of the hostel allotment
19	Pasting objectionable handbills or make/paste objectionable articles or pictures in the allotted room/hostel	₹ 250	₹ 500	₹ 1000
20	Manhandling/Physical assault on anyone in the Hostel premises including the mess	Eviction from Hostel & Reporting to Office of the Chief Proctor for further necessary action	NA	NA
21	Possession/ consumption/instigating of alcoholic drink, intoxicating drugs, substances, etc.	Eviction from the Hostel & Action as per the law of land & intimation to the Office of the Proctor	NA	NA
22	Smoking/possessing/instigating cigarettes/tobacco/tobacco products etc.	₹ 500	₹ 1000	₹ 2000
23	Listening to music in high pitch/making noise that disturbs anyone in the hostel or around including roommates	Warning	₹ 500	₹ 1000
24	Use of loud-speaker in the hostel, without prior permission in writing	₹ 3000	₹ 5000	₹10000
25	Inviting persons from outside the University to inaugurate functions etc. In the hostel without prior permission in writing.	Cancellation of hostel allotment	NA	NA
26	Not Signing In-Out Register as prescribed	Warning	₹ 50	₹ 200
27	Not attending night attendance/ roll call as per norms	Warning	₹ 100	₹ 200



28	Impersonation/ eating on the place of other inmate	₹ 500	₹ 1000	₹ 2000
29	Taking away mess utensils out of the dining hall	Warning	₹ 500	₹1000
30	Forcing Sweeper to clean the hostel room	₹ 100	₹ 200	₹500
31	Pressurizing mess employees to prepare special dishes	₹ 200	₹ 500	₹1000
32	Entering the kitchen without permission	Warning	₹ 200	₹500
33	Cooking any food on their own accord in the mess/pantry/ rooms	₹ 500	₹ 1000	₹ 2000
34	Not putting/keeping plates/utensils in/at designated bins/place	Warning	₹200	₹500
35	Removing/scribbling official notices	₹200	₹500	₹1000
36	Breaking any rule not specified in the list	Competent authority may exercise such power as per defined limit of Acts, Statute, Ordinance, Rules, Regulations etc. on the basis of severity of the breach/misconduct/indiscipline.		
37	A repeated offender, who is found to be involved in any act of indiscipline/ misconduct/breach of rule for <u>more than three occasions excluding warning (s)</u>, shall be evicted from the hostel and no hostel accommodation shall be provided by the University in future.			

Notes:

- (i) If in a single act more than one identified indiscipline/misconducts/behaviour are committed, the student shall be liable for penalty/fine for all such indiscipline/misconducts; but for determining the act shall be counted as a single act (e.g. owing to bursting firecracker any property gets damaged, penalty/fine shall be imposed for bursting firecracker & damaging property both).
- (ii) The above Table is only indicative, additional punishment and penalty may be imposed on the basis of severity and intent of the indiscipline/misconduct behaviours.
- (iii) In any situation that requires necessary action from Office of the Chief Proctor; firstly, intimation has to be made by the Chief Warden to the Office of the Chief Proctor as soon as possible, and thereafter, a proper report along with fact finding and recommendations has to be submitted.

5.5 VIOLATION OF THE LAW OF LAND

All the cases of indiscipline amounting to the violation of Law of the Land shall be reported to the Chief Proctor, who may after preliminary investigation, hand over the inmate concerned to police for further action.

5.6 INTERPRETATION AND SAVING CLAUSE

Any matter of discipline or any other issue not covered by this Rules and Regulations shall be dealt with by the Vice-Chancellor, whose decision shall be final.

ANNEXURES

1. UHA/Form-1: Hostel Application Form-cum-Dossier
2. UHA/Form-2: Room Allotment Slip
3. UHA/Form-3: Room Vacating Slip
4. UHA/Form-4: Leave Application Form

**UHA/Form-2: Room Allotment Slip**

I, _____ S/D of _____ admitted to _____ Programme for the Session _____ bearing Enrollment No. _____ have been allotted Room No. _____ in hostel name _____

The following items have been provided to me by the Hostel Administration:

Sl. No.	Items provided	Signature of the Student while getting the items from the Office of the Hostel	Signature of warden at while receiving the items from the student

I hereby undertake that I will be responsible for losing, damaging any of above mentioned items provided to me and follow all the norms of the hostel given to me orally as well as in writing.

Date :

Signature of the student

UHA/Form-3: Room Vacating Slip

(To be filled up at the time of student leaving the hostel)

This is to certify that Mr./Ms. _____ of _____ Programme bearing Enrollment No. _____ and staying in Room No. _____ in hostel _____ (Name of the Hostel) has submitted all the articles/equipment on (date) _____ which had been issued to me at the time of joining the hostel.

Date :

Signature of the student

Signature of Hostel Attendant (Caretaker):

Remarks:

Date: _____

Signature of Hostel Attendant (Caretaker):

Remarks:

Date: _____

- ❖ Fill this Form in three copies and handover two copies to the Office In-Charge after approval of the Chief Warden.



UHA/Form-4: Leave Application Form

To

The Chief Warden,

With due respect I (my ward) _____ would like to inform you that Mr./Ms. _____ (or Myself) from _____ Programme bearing Enrollment No. _____ and staying in Room No. _____ in hostel _____ (Name of the Hostel) permitted to avail leave from _____ to _____ .

Reasons:

Kindly approve me(his/her) leave for the same and grant me (his/her) permission.

Yours truly,

(Signature of the Inmate)

Signature of Parent (s)/Guardian/Resident)

Name _____

Name _____

Mob. No. _____

Mob. No. _____

Contact No. while on leave _____

(Signature of the Hostel Attendant)
Warden)

(Signature of Hostel Warden/Chief

Submit the dully filled form to the Guard at deployed at main gate