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**CENTRAL UNIVERSITY OF SOUTH BIHAR**

[Established Under the Central Universities Act, 2009 of Parliament and renamed by Central Universities (Amendment) Act, 2014]

(NAAC Accredited 'A' Grade University)



**PROSPECTUS 2018**

| S. No. | Description                                  | Important Dates |
|--------|--|-----------------|
| 1.     | Commencement of Online Registration          | 19.02.2018      |
| 2.     | Closing Date of Online Registration          | 26.03.2018      |
| 3.     | Date of Admit Card Upload                    | 13.04.2018      |
| 4.     | Examination Date                             | 28 & 29.04.2018 |
| 5.     | Answer Key Upload                            | 30.04.2018      |
| 6.     | Grievances, if any upto                      | 04.05.2018      |
| 7.     | Corrected Answer Key upload after grievances | 09.05.2018      |
| 8.     | Result Declaration                           | 25.05.2018      |



**Admission Cell/Help desk**  
**Email : [admission@cub.ac.in](mailto:admission@cub.ac.in)**  
**Contact No. : 09472979367**  
**University website : [www.cusb.ac.in](http://www.cusb.ac.in)**  
**CUCET website : [www.cucetexam.in](http://www.cucetexam.in)**

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|---|--|--|
| <b>Sh. Om Prakash</b><br>PS to Controller of Examinations<br>Mob.- 9801819595 | <b>Sh. Dheerendra Singh</b><br>Section Officer (Examination)<br>Mob.- 9430906504 | <b>Sh. Amit Kumar</b><br>Section Officer (Academics)<br>Mob.- 7739404812 |
|---|--|--|

**For any information of specific programme contact the following concerned:**

| Department        | Name                  | Contact No. | Department                | Name                     | Contact No. |
|-------------------|-----------------------|-------------|---------------------------|--------------------------|-------------|
| Bioinformatics    | Dr. Asheesh Shanker   | 9414478655  | Development Studies       | Dr. Samapika Mahapatra   | 9414642472  |
| Biotechnology     | Dr. Rakesh Kumar      | 9709474061  | Sociological Studies      | Dr. Sanat Kumar Sharma   | 8986344399  |
| Life Science      | Dr. Gautam Kumar      | 9811510207  | Political Studies         | Dr. Shyama Nand Singh    | 9352002053  |
| Environmental Sc. | Dr. Ram Kumar         | 8235426744  | Economic Studies & Policy | Prof. Sankar Kr. Bhaumik | 9831643354  |
| Physics           | Dr. Akhilananda Kumar | 9470455576  | Mass. Communication       | Dr. Atish Prashar        | 9810490789  |
| Chemistry         | Dr. Girish Chandra    | 8797674092  | History                   | Dr. Sudhanshu Kumar Jha  | 8544272170  |

|                  |                        |            |                  |                      |            |
|------------------|------------------------|------------|------------------|----------------------|------------|
| Mathematics      | Dr. H. K. Nigam        | 8794828597 | English          | Dr. Prabhat K. Singh | 9450871331 |
| Computer Science | Dr. Prabhat Ranjan     | 8809448862 | Hindi            | Dr. R. K. Pathak     | 9801091682 |
| Statistics       | Prof. Arun Kumar Sinha | 9431877507 | Education        | Dr. Rekha Agrawal    | 9027169336 |
| Psychology       | Dr. Tej Bahadur Singh  | 9454948402 | Law & Governance | Dr. S. P. Srivastava | 9818826085 |

## CONTENTS

Page No.

Vice-Chancellor's Message

CUB at a Glance

Salient Features of Academic Curriculum

Academic Programmes at a Glance

Facilities

Student Support

Admission policy

Regulations

Schools, Centres / Departments and Academic Programmes

Admission of Foreign Nationals in Various Programmes

Fee Structure

## CENTRAL UNIVERSITY OF SOUTH BIHAR AT A GLANCE

The Central University of South Bihar (CUSB) is one among the sixteen newly established Central Universities by the Government of India under the Central Universities Act, 2009 (section 25 of 2009). The currently located two campuses of the University : Patna Campus at Birla Institute of Technology, PO: B. V. College, Patna, 800014, and Gaya Campus at Vinova Nagar, Chandauti (A. N. Magadh Medical College), Ward No. 29, Gaya 823001 are soon to shift to the permanent campus which is fast coming up on Gaya-Panchanpur Road, about 15 kms. west of Gaya Jn. 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 / Centres. At present a total of 04 Undergraduate, 18 Postgraduate and 12 M.Phil-Ph.D programmes are being offered by 18 Departments / Centres established under the approved 14 Schools. From academic year 2016-17 Ph.D. programmes in all Centres/Departments were introduced in accordance with the UGC (Minimum Standard and

Procedure for Award of M.Phil/Ph.D Degree) Regulations, 2016 and from the academic session 2017-18, two-year M.Ed. and one-year LLM programmes were also started. School of Management has been established and the University is launching Master of Commerce and Master of Business Administration programme in this year. The University is also launching Post Graduate programmes in History, Social Work, Physics and Chemistry.

With its world class faculty, high teacher-student ratio, baskets full of elective courses in different programmes, 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**

- 1. 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 has introduced summer Internship for various programmes keeping in view the important role of practice based learning. It provides opportunities to students to gain experience in their field.
- 2. 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/Centre 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 vertical integration of knowledge and holistic development.

3. **Evaluation System:** Continuous Internal Evaluation (CIE) 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. There are Mid-semester and End-semester evaluations, and to ensure transparency and accountability, appropriate mechanisms have been devised.
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 transport system in its 300 acre campus on Gaya-Panchanpur Road, Gaya.
5. **Faculty Members:** The University has a strength of over 100 faculty members that include highly qualified eminent personalities and former Vice-Chancellors of universities 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. **E-Governance and Decentralized System:** The University has been evolving decentralized, dynamic and transparent governance and need-based capacity-building system. It is moving towards e-governance and continuous training of the personnel to make the University system 'user-friendly'. Professional development of educational administrators is a necessary component for the capacity building of the University administration.
7. **Planning and Development:** The Planning and Development Board with appropriate powers and functions is instituted as per the guidelines of the UGC. It is responsible for development of the infrastructural facilities.
8. **Admission and National Character:** UGC guidelines are followed in the admission process and the admission test is conducted on an all India basis.
9. **Central Universities Common Entrance Test (CUCET) 2018:** Admission to the programmes are made through a national level entrance test that is organised jointly by ten Central Universities together. CUCET is conducted throughout India at different centres for admission to the various programmes offered.

- 10. Ph.D. Programme:** From academic session 2016 --17 the University has introduced direct Ph.D. programme in all the departments/Centres.
- 11. Scholarships:** All research scholars get UGC scholarship. Besides, the University has several types of scholarship schemes of its own.
- 12. 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.
- 13. Feedback Evaluation:** The University teaching system is constantly evolving with feedback from students.
- 14. 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.
- 15. Quality Management:** The Internal Quality Assurance Cell (IQAC) is established to ensure progressive improvement in efficiency of the University functioning.
- 16. NAAC Ranking :** The University was awarded 'A' Grade ranking in 2016 by NAAC.

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## ACADEMIC PROGRAMMES AT A GLANCE

| S.N. | Programme   | Intake | Eligibility  |
|------|---|--------|--|
| 1    | Four-Year Integrated BA.BEd                         | 50     | 10+2 or equivalent examination passed in any stream from any recognized Board/ University with at least 50% marks for General / OBC and 45% marks for SC / ST candidate.   |
| 2    | Four-Year Integrated BSc.BEd                        | 50     | 10+2 or equivalent examination passed in Science stream from any recognized Board/ University with at least 50% marks for General /OBC and 45% marks for SC / ST candidate.  |
| 3    | Five-Year Integrated BA.LLB (Hons.) **              | 60     | 10+2 or equivalent examination passed in any stream from any recognized Board/ University with at least 45% marks for General /OBC and 40% marks for SC / ST candidate.  |
| 4    | M.A. in Development Studies                         | 35     | Bachelor's Degree in any discipline with a minimum of 50% marks for General / OBC candidates and 45% marks for SC/ST candidates from any recognized University.  |
| 5    | M.A. in Communication & Media Studies               | 35     | Bachelor's Degree in any discipline from a recognized University with a minimum of 55% marks for General / OBC candidates and 50% marks for SC/ST candidates.  |
| 6    | M.A. in Psychology                                  | 35     | Bachelor's Degree with Psychology/ Human Sciences/ Social Sciences/ Life Sciences/Medical Science/ Engineering with a minimum of 50% marks from any recognized University for General / OBC candidates and 45% marks for SC/ST candidates. |
| 7    | M.A. in English                                     | 35     | Bachelor's Degree from any recognized University in any discipline having English as a compulsory subject (Hons./General) with a minimum of 50% marks for General / OBC candidates and 45% marks for SC/ST category candidates.            |
| 8    | M.A. in Hindi                                       | 35     | Bachelor's Degree in any discipline from any recognized University with a minimum of 50% marks for General / OBC candidates and 45% marks for SC/ST candidates.  |
| 9    | M.A. in Political Science & International Relations | 35     | Bachelor's Degree in any discipline from any recognized University with a minimum of 50% marks for General / OBC candidates and 45% marks for SC/ST candidates.  |
| 10   | M.A. in Sociology                                   | 35     | Bachelor's Degree in any subject from any recognized University with a minimum of 50% marks for General/ OBC candidates and 45% marks for SC/ST candidates.  |
| 11   | M.A. in Social Work                                 | 35     | Bachelor's Degree in any subject from any recognized University with a minimum of 50% marks for General / OBC candidates and 45% marks for SC/ST candidates.   |

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|----|--------------------------------|----|---|
| 12 | M.A. in Economics              | 35 | Bachelor's Degree from a recognized university having Economics/ Commerce/ Statistics/ Mathematics as a subject (Hons./General) with a minimum of 45% marks for General / OBC candidates and 40% marks for SC/ST candidates.  |
| 13 | M.Com.*                        | 35 | Bachelor's Degree in Commerce from any recognized University with a minimum of 50% marks for General / OBC candidates and 45% marks for SC/ST candidates.   |
| 14 | MBA*                           | 60 | Bachelor's Degree from any recognized University of minimum 3 Years duration with a minimum of 50% marks for General / OBC candidates and 45% marks for SC/ST candidates.   |
| 15 | M.Sc. in Biotechnology         | 35 | 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. 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 candidates and 50% marks for SC/ST candidates from any recognized University. |
| 16 | M.Sc. in Bioinformatics        | 35 | Bachelor's degree in Biological Sciences/ Agricultural Science/ Pharmaceutical Science/Veterinary Science/ Medical Science/Mathematics/Physics/Chemistry/ Computer Science/Information Technology with 55% marks for General/OBC candidates and 50% marks for SC/ST candidates from any recognized University.  |
| 17 | M.Sc. in Life Science          | 35 | Bachelor's degree in any branch of Biological Sciences (Botany/ Zoology/ Microbiology/ Biochemistry/ Bioscience/ Biotechnology/ Environmental Science/ Agricultural Science/ Biomedical) with a minimum of 55 % marks for General/OBC candidates and 50% marks for SC/ST candidates.  |
| 18 | M.Sc. in Environmental Science | 35 | 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 with a minimum of 55 % marks for General/OBC candidates and 50% marks for SC/ST candidates from any recognized University.  |
| 19 | M.Sc. in Computer Science      | 35 | Bachelor's Degree from any recognized University in Science (CS/IT/Electronics with Mathematics) / BCA with a minimum of 55% marks for General /OBC candidates and 50% marks for SC/ST candidates and having Mathematics as a subject at 10+2 level.  |

|    |                         |     |   |
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| 20 | M.Sc. in Mathematics    | 35  | Bachelor's Degree from any recognized 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 candidates and 50% marks for SC/ ST candidates.   |
| 21 | M.Sc. in Statistics     | 35  | Bachelor's (New UGC) Hons. Degree from any recognized University with Statistics/Bachelor's Degree with Statistics/ Mathematics /Computer Science but must have studied both Mathematics and Statistics as subjects for at least 2 years with a minimum of 50 % marks for General / OBC candidates and 45% marks for SC/ST candidates in the qualifying degree. |
| 22 | M.Tech Computer Science | 18# | B.E./B.Tech./B.Sc. Engineering (CS/IT/ Electronics / Electronics and Communications) or M.Sc. (CS/IT/ Electronics) or MCA or equivalent from any recognized University with 60% marks for General/OBC candidates and 55% marks for SC/ST candidates with a valid GATE score.  |
| 23 | LLM                     | 20  | 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/ Colleges duly recognized by the UGC.   |
| 24 | M.Sc. in Physics        | 35  | B.Sc. with Physics Hons. with a minimum of 55 % marks for General / OBC candidates and 50% marks for SC/ST candidates from any recognized University.   |
| 25 | M.Sc. in Chemistry      | 35  | B.Sc. degree or its equivalent with Chemistry as one of the main subjects from a recognized University with minimum of 55% of marks or equivalent grade in aggregate for General /OBC and 50% or equivalent grade for SC/ST candidates  |
| 26 | M.A. in History         | 35  | Bachelor's Degree in any discipline from a recognized University with minimum of 50% marks for General / OBC candidates and 45% marks for SC/ ST candidates.  |
| 27 | M.Ed.                   | 50  | B.Ed. Or Four Year Integrated B.A B.Ed/B.Sc. B.Ed. Degree from any recognized University/institution with atleast 50% marks or equivalent grade for General/OBC category and 45% marks for SC/ST candidates.  |

| <b>S.N.</b> | <b>Programme</b>                 | <b>Available Seat</b> | <b>Eligibility</b>  |
|-------------|----------------------------------|-----------------------|---|
| 28          | Ph.D in Bio-Informatics @        | 13                    | <p>Master's Degree from any recognized 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.</p> <p>Candidates having Master's Degree in any of the above disciplines with specialization in Bio-Informatics or having Master's Degree in Bio-Informatics will be given preference.</p> |
| 29          | Ph.D in Biotechnology @          | 2                     | <p>Master's Degree from any recognized 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.</p>  |
| 30          | Ph.D in Life Science @           | 2                     | <p>Master's Degree from any recognized University in any branch of Biological Sciences (Botany/ Zoology/ Microbiology/ Biochemistry/ Biosciences/ Biotechnology/ Environmental Science/ Biomedical/ Bioinformatics/ 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.</p>  |
| 31          | Ph.D. in Environmental Science @ | 6                     | <p>M.Sc. in Chemistry/Physics/Biological Science/ Life Science/ Zoology /Botany/Geology/Marine Biology/Oceanography /Agricultural Science/ Environmental Science/ Ecology/ Natural Resource Management/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.</p>   |

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| 32 | Ph.D in Education @                      | 10 | Postgraduate Degree in School Subject and M.Ed., with 55% marks 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.   |
| 33 | Ph.D in Psychology @                     | 3  | 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.  |
| 34 | Ph.D in Clinical Psychology @            | 2  | Master's Degree in Psychology and M.Phil in Clinical Psychology from an Institute/University recognized 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. |
| 35 | Ph.D. in English @                       | 5  | M.A in English (Literature / Linguistics) from any 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.   |
| 36 | Ph.D. in Hindi @                         | 5  | M.A. in Hindi from any 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.   |
| 37 | Ph.D. in Communication & Media Studies @ | 4  | 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 recognized 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.                                     |
| 38 | Ph.D. in Mathematics @                   | 9  | Master's Degree in Mathematics from any 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.  |
| 39 | Ph.D. in Statistics @                    | 2  | Master's Degree in Statistics from any 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.  |

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|----|--|----|---|
| 40 | Ph.D. in Computer Science @                            | 4  | M.Tech/M.Phil. in the area of Computer Science or Equivalent with a minimum of 55 % in aggregate or its equivalent Grade B in UGC 7 point scale from any recognized 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 Development Studies @                         | 4  | Master's Degree in any Social Science discipline from any 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 Economics @                                   | 5  | 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 recognized 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. |
| 43 | Ph.D. in Political Science & International Relations @ | 10 | Master's Degree in any discipline with 55% in aggregate or its equivalent Grade B in UGC 7 point scale from any recognized 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.   |
| 44 | Ph.D. in Sociology @                                   | 13 | Master's Degree in any discipline with 55% in aggregate or its equivalent Grade B in UGC 7 point scale from any recognized 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.   |
| 45 | Ph.D. in Law @   | 8  | LLM from any recognized University with 55% in aggregate or its equivalent Grade B in UGC 7 point scale from any recognized 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.  |

\* These courses will be launched in the Academic Session 2018-19 subject to approval of the University Grants Commission (UGC).

\*\* No. of intake may increase depending on UGC approval.

# 50% of the seats are to be filled through CCMT.

@ 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 may be considered for direct admission to the Ph. D. Programme without appearing in the CUCET 2018 Entrance Test. However, such candidates have to apply for the programme on CUCET portal and pay the requisite fees.

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## **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 25,000 books to support academic curricula, teaching and research in various science and social science subjects. 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 103 quality print journals and magazines of renowned publishers from across the world and more than 8,000 online journals. 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 Springer, Taylor & Francis, Annual Reviews, Project Muse, Wiley-Blackwell, Oxford University Press, Cambridge University Press and Science Direct's 10 subject collections from Elsevier Inc. The library also subscribes to various e-journals packages i.e. IEEE (ASPP+ POP) from IEEE and ACM, Digital Library Package from ACM, USA for Computer Science. Besides, the library also subscribes to many online databases, Manupatra - (full text database for Law), MathSciNet—a bibliographic database for Mathematical Sciences, JSTOR - full-text database mainly for Social Sciences, India stat – a statistical database for Development Studies, and JCCC – a general purpose bibliographic database.

### **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. 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.

**Central Computing Facility (CCF):**

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/centres, 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 multimedia projector, desktop computer with Internet access.

**Resources:**

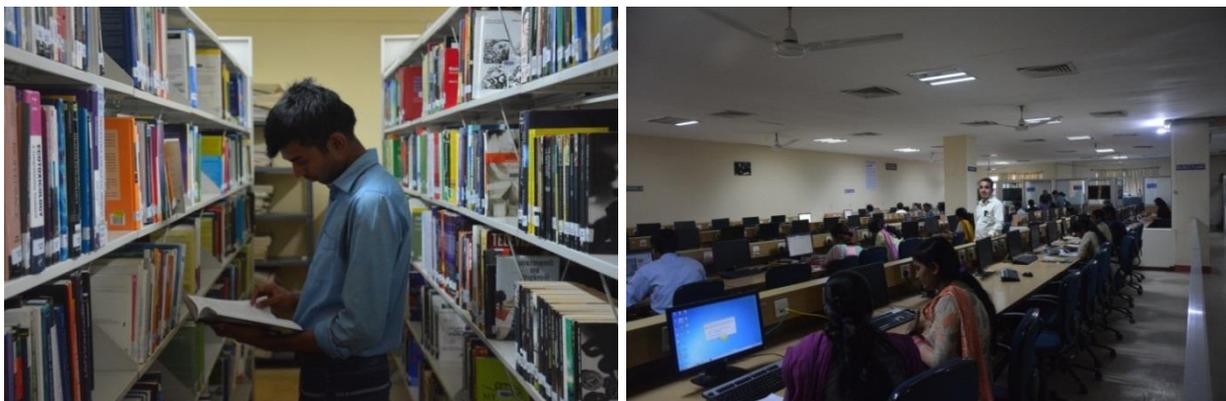
At present, there are over 500 high performance computers in the University. All computers are equipped with latest operating system and application software to cater to the academic needs. Computers are protected by firewall and reliable antivirus software against computer virus, malware and unauthorized 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.

**E-Learning Tool (A-View):**

Under the NME-ICT scheme, A-VIEW Classroom has been providing opportunity to connect several universities together and create a virtual world for students. It also acts as a Knowledge Café where students can discuss the lecture after the live class.

**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](http://www.cub.ac.in) or [www.cusb.ac.in](http://www.cusb.ac.in). The University has a powerful e-mail system with group mail IDs of students and faculty members.

**Accommodation:**

Separate hostels for boys and girls are maintained. Limited hostel and limited mess facilities for students are available at present. A booklet containing Rules and Regulations regarding discipline and conduct in the University hostel and mess is given to the students at the time of admission.

**Transport Facility:**

Presently the University provides transport facility to all students to commute from hostels to the university departments/centres daily. Once academic activities commence from the permanent campus, University may consider providing transport facilities from the campus to Gaya city as per actual cost.

**Health Centre:**

The University health centre provides treatment on a nominal fee for general ailments under the supervision of resident doctors. Regular visit of doctors is scheduled.

**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 in other hospitals within the limit of Rs. 50,000.

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## **STUDENT SUPPORT**

### **Scholarship 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 @ Rs. 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

#### **GATE Scholarship:**

The University offers scholarship to its GATE qualified students admitted in M.Tech. Programme. GATE qualified students are provided AICTE scholarship (subject to extension of approval from AICTE for 2018-19 batch) as per guidelines of AICTE.

#### **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. Students are also provided with an experience certificate. Details in this regard may be obtained from the Academic section.

#### **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 fare by the shortest route. For routes not connected by railways, travel assistance equal to the actual bus fare may be provided.

**Sports:**

The University Sports Committee is coordinated by sports committee chairperson 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.

**Cultural Activities:**

CUSB has been organizing several cultural events throughout the year where the students actively participate and perform.

**Grievance Redressal Cell:**

The University has a well-developed mechanism to redress the grievances of the students about academic and non-academic matters.

**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 Proctorial Board of the University ensures and maintains discipline on the campus and ensure 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 Panchanpur 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 liaisoning 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.

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## **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 is prepared from CUCET-2018. The admission is given based on the merit list and following the reservation policy.
5. The fee structure for different programmes is devised by the Academic Council.
6. In the event of a student withdrawing admission, the issue of refund of tuition fee, etc. to the student is decided in the light of the UGC & MHRD circular 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 University is co-educational and open to candidates from all over India. For all courses, 15 % seats are reserved for Scheduled Caste (SC), 7.5 % for Schedule Tribes (ST), 27 % for non-creamy layer OBC candidates. Besides, candidates belonging to differently abled category, (i.e., visually handicapped, hearing impaired and orthopedically handicapped category), Kashmiri migrants, and wards of Defence Personnel are also entitled to supernumerary reservation of 1% each, i.e. in total 3%, as per UGC/Government of India guidelines.

### **General Information for Admission / Entrance Test**

1. Students shall be admitted to 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 applicant fulfilling the eligibility conditions. It is the applicant's responsibility to ensure that s/he fulfils the eligibility criteria for a particular programme as mentioned in CUSB Prospectus.
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 minimum eligibility marks in the qualifying examination and they may be allowed to seek admission only on production of their final year mark sheet on or before the last date of admission.
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-2018 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 appropriate 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 30<sup>th</sup> September, 2018 failing which the admission of the student shall be liable to be cancelled.**

## NOTES:

1. The Prospectus 2018-19 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 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 Fees: - The finally selected candidates shall be required to pay fee as per *Annexure 'A'* (enclosed at the end of this Prospectus). In case, any student fails to deposit fees 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 30<sup>th</sup> September, 2018.**
5. In case, a student leaves in the middle of the programme his/her fee shall be refunded as applicable under the rules.
6. Refund of caution money (if due) 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 caution money shall be refunded as per rules.
7. 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.
8. Students are advised to regularly pay attention to the Notice Boards, displayed at different places pertaining to academic matters.
9. 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.
10. 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.

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# REGULATIONS

## Regulations for Teaching and Evaluation (Undergraduate/Postgraduate Programme)

1. The undergraduate and postgraduate programmes shall have 2 semesters each year. Some programmes may have winter / summer session. The total number of semesters in each of the programmes is as mentioned separately.  
It may not be always possible to rigidly define teaching hours, required for each credit. Generally, one credit is defined as 10 teaching hours.  
The medium of instruction is English for all the Programmes, except Indian Languages.  
The change of programme after taking admission into one is permitted only once within 10 (ten) working days of the beginning of the session, but subject to (a) fulfilment of the minimum eligibility criterion of the desired programme; and, (b) availability of seats. The class attendance in the previous programme shall not be carried forward in the new programme, if admitted.
2. If a student repeats any semester, s/he shall not be counted in the total number of seats (as allotted by UATEC) to the programme in the particular academic year and are supernumerary seats. The aforesaid student needs to follow the syllabus that is in force in the regular semester, and be abided by the regulations laid down for that particular period of time, if any. The aforesaid student needs to repeat all of the courses in the semester with the current batch, with the prior permission of the Chairperson, UATEC, by applying through proper channel.
3. A Programme of study may require certain academic backgrounds to pursue the programme effectively. In such cases, some course(s) without credit may be designed as foundation course to meet the purpose as part of the syllabus.
4. A student shall be liable to disciplinary action if s/he is found involved in any unfair means (as listed by the University) adopted during any of the examinations conducted by the University.
5. Any exceptional case such as that of a student who has otherwise fulfilled required attendance and continuous evaluation and not covered under these regulations may be referred to the Chair, UATEC for appropriate decision.

### **Class Attendance:**

6. A student is required to attend, in aggregate, at least 75% of the total number of classes held in the programme, in the specific semester, and at least 60% in each of the courses in the programme in order to be eligible to appear in the End-semester examination.

7. Waiving of attendance-deficit up to a maximum of 10% is permissible in the following situations, on a case-to-case basis, by the Chair of the Academic Council.
  - (a) Representing CUSB in any inter-collegiate, inter- University, local, national or international events;
  - (b) Participating in or organizing an activity of CUSB with prior permission of the Competent Authority; and,
  - (c) Students requesting for condoning of 10% deficit from the required attendance on medical grounds shall submit the certificate of the Registered Medical Practitioner under whom s/he was treated for the said illness. In case of hospitalization, a discharge summary needs to be submitted. Extra / compensatory classes in respective course(s) need to be arranged by the Department / Centre [such classes are required to be concluded at least a week before the examination is scheduled to begin].
8. A student, however, shall not be allowed to appear at end- semester examination, if not covered under Sections 6 and 7. Such students shall be permitted to repeat the semester in the subsequent academic year on payment of full semester fees. However in 1<sup>st</sup> semester minimum 40% attendance shall be mandatory to repeat the semester. A student who does not put in at least 40% of attendance in 1<sup>st</sup> semester shall not be promoted to 2<sup>nd</sup> semester and s/he shall have to reappear in the entrance test and qualify to take fresh admission.

**Evaluation:**

9. There shall be continuous internal evaluation of the students' learning and performance by the instructor(s). Considering the nature of the course, the instructor(s) shall decide the mode of internal evaluation, which may include assignments, class tests, take-home tests, term paper(s), presentations, case studies, the Court Room Exercises (CRE), among others, besides Mid-semester, and End- semester examinations.
10. Evaluation pattern adopted for each course / paper of theory- intensive as well as practical-intensive programmes shall generally have point distribution as: Out of the total 100 points, Continuous evaluation shall be of 35 points, Mid- semester examination 15 points, and End-semester examination 50 points.
11. End-semester theory question paper shall include long and short questions (in terms of length of answers) and/or a limited number of objective-type questions, covering the entire syllabus. Further, the duration of the Mid-semester and End-

semester examinations shall be of one hour and two-and-a-half hour, respectively. The pattern of question paper / evaluation shall be announced to the students of the respective courses at the beginning of each semester.

12. Each course instructor(s) shall design the examination / evaluation system (Mid and End-semester examinations and continuous assessment) for the course s/he offers with the approval of the Department / Centre Committee (DC / CC). The DC / CC shall appoint one faculty member for moderation of question papers of Mid-semester and End- semester examinations, respectively. And, the same has to be put on record at the Office of the Controller of Examinations, before the examination begins.
13. Generally, each course shall be taught by one instructor / faculty, who shall maintain all the records related to attendance, teaching and evaluation in a systematic manner. In case, the faculty is assisted in teaching by other instructor(s) / faculty, the faculty (in-charge of the course) shall be responsible for coordinating teaching and evaluation, including award of final grade. Monthly records of attendance of students in each of the courses have to be submitted by the Head / Coordinator of the programme to the Office of the Controller of Examinations at least 15 days before the end semester examinations.
14. The DC / CC, constituted by the Chair, Academic Council, shall organize teaching of courses and propose four (4) names of External Members and one Member of DC / CC for the Board of Examiners (BoE) for the End-semester examination. The BoE shall be approved by the Chair, Academic Council. The BoE shall review, in particular, the quality of the questions, whether these cover the syllabus, and the level of markings (under-marking / over-marking) in the answer scripts. The BoE will ensure fairness of evaluation by going through the evaluated scripts / assignments, reports of internal / continuous assessment, etc. The BoE shall also conduct viva-voce /practical, if necessary, as required by the nature of the course. The evaluation / grades approved by the BoE shall be considered as final. The External Member(s) of BoE shall submit a Confidential Report to the Controller of Examinations.
15. The Board of Examiners shall consist of two External and one Internal Members, at least two of whom (one internal and one external) must be present to conduct the evaluation and finalize the assessment and submit it to the Controller of Examinations for declaration of the results.

16. A student of the programme may appeal to the Chair of the DC / CC regarding marking / Grade and attendance. The Chair of the DC / CC may, if necessary, call the meeting of the DC / CC and address the grievance. If the student is still aggrieved, s/he may appeal to the Board of Examiners (BoE) through the Controller of Examinations (COE). The decision of the BoE has to be accepted as final.

**Grading:**

17. There shall be 10-point Scale Grade System starting with 4 (except education programmes) and ending at 10. There shall be additional Grade ‘F’ with Grade Point ‘zero’. A student obtained Grade ‘F’ in a course shall have to reappear in the examination of the said course. The following Grading System shall be used:

| Grade | Grade Point | BA.B.Ed. / B.Sc.B.Ed. | BA.LLB.      | M.A.         | M.Sc. / M.Tech. | M.Ed         | LLM          |
|-------|-------------|-----------------------|--------------|--------------|-----------------|--------------|--------------|
| A+    | 10          | 90 and above          | 85 and above | 85 and above | 90 and above    | 90 and above | 90 and above |
| A     | 9           | 80 to <90             | 75 to <85    | 80 to <85    | 85 to <90       | 80 to <90    | 85 to <90    |
| A-    | 8           | 70 to <80             | 65 to <75    | 70 to <80    | 75 to <85       | 70 to <80    | 75 to <85    |
| B+    | 7           | 60 to < 70            | 60 to <65    | 60 to < 70   | 65 to <75       | 60 to <70    | 65 to <75    |
| B     | 6           | 50 to <60             | 55 to < 60   | 55 to <60    | 60 to < 65      | 50 to < 60   | 60 to < 65   |
| B-    | 5           | 40 to < 50            | 50 to < 55   | 50 to < 55   | 55 to < 60      | 40 to < 50   | 55 to < 60   |
| C     | 4           | -                     | 45 to < 50   | 40 to < 50   | 45 to < 55      | -            | 50 to < 55   |
| F     | 0           | <40                   | <45          | < 40         | <45             | < 40         | < 50         |

18. There shall be a Semester Grade Points Average (SGPA) calculated for each semester on the basis of grades obtained in that semester. The SGPA for the j-th semester is calculated as:

$$SGPAx_j = \frac{\sum_{i=1}^n (m_i c_i)}{\sum_{i=1}^n (c_i)}$$

where, n is the number of courses in the j<sup>th</sup> semester, m<sub>i</sub> denotes the numerical value of the grade obtained in the i<sup>th</sup> course of the semester, c<sub>i</sub> denotes the number of credit for the i<sup>th</sup> course of the semester. For example, consider the numerical grade and credit of a student given in the following Table:

| Course          | I | II | III | IV | V | VI | VII |
|-----------------|---|----|-----|----|---|----|-----|
| Credit          | 2 | 2  | 4   | 2  | 2 | 2  | 2   |
| Numerical Grade | 7 | 8  | 5   | 7  | 6 | 8  | 8   |

The SGPA for the  $j^{\text{th}}$  semester is calculated as:  $\frac{7 \times 2 + 8 \times 2 + 5 \times 4 + 7 \times 2 + 6 \times 2 + 8 \times 2 + 8 \times 2}{2 + 2 + 4 + 2 + 2 + 2 + 2} = \frac{108}{16} = 6.75$

The Cumulative Grade Point Average (CGPA) for  $k$  semesters is given as:

$$CGPA = \frac{\sum_{j=1}^k (GPA_j \times C_j)}{\sum_{j=1}^k C_j}$$

Where  $C_j$  is the total number of credits in the  $j^{\text{th}}$  Semester.

### Calculation of CGPA:

Consider the SGPA's obtain by a student in four semester along with total credit in each semester is given as follows:

| Semester     | First | Second | Third | Fourth |
|--------------|-------|--------|-------|--------|
| GPA          | 6.75  | 6.00   | 8.12  | 7.62   |
| Total Credit | 16    | 20     | 18    | 16     |

$$CGPA = \frac{(6.75 \times 16) + (6.00 \times 20) + (8.12 \times 18) + (7.62 \times 16)}{16 + 20 + 18 + 16} = \frac{108 + 120 + 146.16 + 121.92}{70}$$

$$CGPA = \frac{496.06}{70} = 7.08$$

19. The Grade sheet of the students will show the Grades obtained in all the courses offered in each semester, grades/categories without numerical value (if applicable), the SGPA and the promotion status.
20. To be eligible for the award of Master's Degree in Social Sciences and Languages, a student must secure a minimum final Cumulative Grade Point Average (CGPA) of 4.0. For M.Sc./BA.LLB, it is 4.5 and for M.Tech / B.Sc.B.Ed / B.A.B.Ed. / M.Ed. Degree, the minimum final CGPA must be 5.0.
21. To find percent equivalent to CGPA the following formula may be used: Percent = CGPA X 10.
22. Grades shown in the award sheet of a student without any numerical value are NA (Not Appeared) and SP (Satisfactory Performance) for course(s) extending beyond a semester such as project work.

### Promotion to next semester:

23. A Student shall be declared as 'Passed' and promoted to the next semester when s/he earns 'C' Grade ['B-' in the case of B.A.B.Ed / B.Sc.B.Ed / M.Ed.] or above in the last concluded semester examination, maintaining the spirit and pattern of semester system and covering the mandatory components, such as continuous evaluation, mid-term and end-term examinations in all the courses for which s/he was registered in the said semester.

24. A Student shall be deemed as 'Failed' in a semester when s/he gets below 'C' Grade ['B-' in the case of B.A.B.Ed / B.Sc.B.Ed / M.Ed.] in 50% or more of the courses offered in the semester, or does not appear in the examination to meet the requirements as per Sec. 10 above. Such students will be advised by the Board to repeat the semester on payment of semester fees. The student shall be allowed only once to repeat the semester. If s/he fails again, s/he requires withdrawing from the programme.
25. If a student fails to appear, or fails as such, in the End-semester examination only in 1 out of 4, or 2 out of 5 / 6 courses, 3 out of 7 / 8 courses, 4 out of 9 / 10 courses s/he will also be provisionally promoted to the next semester subject to the condition that s/he would appear for examination(s) in such course(s) one time only as and when the same is/are being held next time.
26. The re-examination of the backlog course(s) of each semester shall be conducted within 3 weeks of commencement of the following semester. And, the (provisional) results shall be announced within one week (subject to the ratification by the BOE when it meets next).
27. The backlog course(s) re-examination shall comprise of 50 points for each paper. The points scored by the candidate in the Continuous Evaluation for 35 points, besides the Mid-semester examination for 15 points, shall be carried forward.
28. If a student so desires may apply to the Controller of Examinations through the concerned HOD (or, I/C) along with the fee of ` 100/- only (in the form of a nationalized bank demand draft drawn in favour of "Central University of South Bihar", or in cash) for each course in which s/he wants to reappear.
29. A student who fails to qualify for promotion to the next semester even after re-examination (even in one paper) shall stand demoted to the previous semester and has to continue in the same during the next academic session, followed by successive semesters. Semester Fee paid by such students on his/her provisional promotion will be adjusted with the semester fee required to be paid on account of repeating the previous semester.
30. The Registration of a student for a Programme shall remain valid, provided s/he accomplishes the attendance requirement, for a period as per the following Chart:

| <b>Programme</b>      | <b>Maximum Period</b> |
|-----------------------|-----------------------|
| 2-year P.G. Programme | 4 Years               |
| 3-year U.G. Programme | 5 Years               |
| 4-year U.G. Programme | 6 Years               |
| 5-year U.G. Programme | 7 Years               |

#### **Course Evaluation by the Students**

31. The University shall design a questionnaire covering various aspects of the courses for evaluation by the students, which shall be mandatorily filled up by the students at the end of 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.

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## 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.

### I. Department of Mathematics

The Department of Mathematics (DMTH) was started with the objective of producing trained manpower for undertaking research and teaching in Mathematics and allied branches of basic and applied sciences. The Department is committed to impart high quality education in Mathematics and currently offers a Master's Programme, a Ph.D. Programme and a 4-year Integrated B.Sc.-B.Ed. degree Programme with Mathematics as one of the courses. The Department also supports other departments by offering core and advanced courses in Mathematics. The department has a computer laboratory and all necessary computation facility needed for Mathematics.

- 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                                      | Credit    |
|-------------|---|-----------|
| MTH 901     | Research Methodology                              | 4         |
| MTH 902     | Tools and Techniques of Research                  | 4         |
| MTH 903     | Preparation and Presentation of Research Proposal | 4         |
|             | <b>Total Credits:</b>                             | <b>12</b> |

### 2. M.Sc. 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. Mathematics (76 Credits)

(likely to be modified as per CBCS)

| Course Code           | Course Title                                       | Credit    |
|-----------------------|--|-----------|
| <b>Semester – I</b>   |  |           |
| MTH 501               | Real Analysis-I*                                   | 4         |
| MTH 502               | Linear Algebra*                                    | 4         |
| MTH 503               | Discrete Mathematics*                              | 4         |
| MTH 504               | Ordinary Differential                              | 4         |
| MTH 505               | Equations Programming in C and Applications        | 4         |
|                       | <b>Total</b>                                       | <b>20</b> |
| <b>Semester – II</b>  |  |           |
| MTH 551               | Complex Analysis                                   | 4         |
| MTH 552               | Real Analysis-II                                   | 4         |
| MTH 553               | Algebra-I  | 4         |
| MTH 554               | Topology   | 4         |
| MTH 555               | Measure and Integration                            | 4         |
|                       | <b>Total</b>                                       | <b>20</b> |
| <b>Semester – III</b> |  |           |
| MTH 601               | Functional Analysis                                | 4         |
| MTH 602               | Algebra-II   | 4         |
| MTH 603               | Partial Differential Equation and Fourier Analysis | 4         |
| MTH 604               | Numerical Analysis                                 | 4         |
| MTH ***               | Elective Course                                    | 4         |
|                       | <b>Total</b>                                       | <b>20</b> |
| <b>Semester – IV</b>  |  |           |
| MTH ***               | Elective I   | 4         |
| MTH ***               | Elective II  | 4         |
| MTH ***               | Elective III                                       | 4         |
| MTH ***               | Elective IV  | 4         |
|                       | <b>Total</b>                                       | <b>16</b> |

| Elective Basket |  |   |
|-----------------|--|---|
| MTH 651         | Differential Geometry                                  | 4 |
| MTH 652         | Group Theory   | 4 |
| MTH 653         | Graph Theory*  | 4 |
| MTH 654         | Operations Research*                                   | 4 |
| MTH 655         | Calculus of Variations and Integral Equations          | 4 |
| MTH 656         | Harmonic Analysis I                                    | 4 |
| MTH 657         | Algebraic Topology                                     | 4 |
| MTH 658         | Differential Topology                                  | 4 |
| MTH 659         | Commutative Algebra                                    | 4 |
| MTH660          | Fluid Mechanics  | 4 |
| MTH 661         | Algebraic Number Theory                                | 4 |
| MTH 662         | Ring Theory  | 4 |
| MTH 663         | Lie Algebras   | 4 |
| MTH 664         | Operator Theory  | 4 |
| MTH 665         | Cryptography*  | 4 |
| MTH 666         | Homological Algebra                                    | 4 |
| MTH 667         | Representation Theory of Finite Groups                 | 4 |
| MTH 668         | Differential Manifolds                                 | 4 |
| MTH 669         | Theory of Computation*                                 | 4 |
| MTH 670         | Probability and Distribution Theory*                   | 4 |
| MTH 671         | Mechanics  | 4 |
| MTH 672         | Number Theory*   | 4 |
| MTH 673         | Number Theory and Cryptography*                        | 4 |
| MTH 674         | Introduction to Finite                                 | 4 |
| MTH 675         | Fields and Coding theory<br>Probability and Statistics |   |

**Note:** \* Open courses for Computer Science and Statistics Departments.

## II. 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 tutorials and the continuous evaluation system is followed to assess the progress of the students. There is a well-equipped computer laboratory with high speed Internet connection and the softwares that include Minitab, SPSS, R, MATLAB 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.

**1. Ph.D in Statistics** – Department of Statistics is currently offering Ph.D. in Statistics.

**List of Courses in Ph.D. Statistics**

| Course Code           | Course Title                                      | Credit    |
|-----------------------|---|-----------|
| STS 901               | Research Methodology                              | 4         |
| STS 902               | Tools and Techniques of Research                  | 4         |
| STS 903               | Preparation and Presentation of Research Proposal | 4         |
| <b>Total Credits:</b> |   | <b>12</b> |

**2. 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, 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.

The present era is referred to as the quantification age where large data sets are available in almost all areas of interest and these are analyzed to draw information to arrive at a decision. This kind of work could be performed only by those who are well-trained in statistical methods and analytical skills. In business area too, business analytics stress on developing new insights and understanding of business performance based on data and statistical methods. In fact, this makes extensive use of data, statistical and quantitative analysis, explanatory and predictive modeling to develop decision making. Keeping in view of these scenarios, new core papers entitled as ‘Business Analytics-I (predictive modeling)’ and ‘Business Analytics-II (Data Mining)’ have been added. These could also address to ‘Big Data’ related issues.

**List of Courses for M.Sc. Statistics (80 Credits)**

(likely to be modified as per CBCS)

| Course Code          | Course Title  | Credit    |
|----------------------|---|-----------|
| <b>Semester - I</b>  |   |           |
| STS-501              | Real Analysis and Linear Algebra                    | 4         |
| STS-502**            | Distribution Theory and Nonparametric Statistics    | 4         |
| STS-503              | Operations Research                                 | 4         |
| STS-504              | Statistical Computing                               | 4         |
| STS-505*             | Lab-I   | 4         |
| <b>Total Credits</b> |   | <b>20</b> |
| <b>Semester - II</b> |   |           |
| STS-551              | Survey Sampling and National Development Statistics | 4         |
| STS-                 | Linear Models and Regression analysis               | 4         |

|                        |   |           |
|------------------------|---|-----------|
| 552**                  |   |           |
| STS-553                | Measure Theory and Probability            | 4         |
| STS-554                | Statistical Inference                     | 4         |
| STS-555*               | Lab – II                                  | 4         |
| <b>Total Credits</b>   |   | <b>20</b> |
| <b>Semester - III</b>  |   |           |
| STS-601                | Multivariate Analysis                     | 4         |
| STS-602                | Stochastic Processes                      | 4         |
| STS-603                | Bayesian Inference                        | 4         |
| STS-604**              | Business Analytics-I                      | 4         |
| STS-605*               | Lab-III                                   | 4         |
| <b>Total Credits</b>   |   | <b>20</b> |
| <b>Semester - IV</b>   |   |           |
| STS-651                | Design of Experiments                     | 3         |
| STS-652**              | Business Analytics-II                     | 4         |
| STS-653-659            | Elective Paper-I                          | 3         |
| STS-653-659            | Elective Paper-II                         | 3         |
| STS-660*               | Lab-IV                                    | 3         |
| STS-661                | Project                                   | 4         |
| <b>Total Credits</b>   |   | <b>20</b> |
| <b>Elective Basket</b> |   |           |
| STS-653                | Categorical and Directional Data Analysis | 3         |
| STS-654                | Econometrics                              | 3         |

### III. Department of Computer Science

The Department of Computer Science (DCS) is currently offering Ph.D. and two Master degree Programmes namely M.Sc. (Computer Science) & M.Tech. (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. Ph.D in Computer Science** – Department of Computer Science is currently offering Ph.D. in Computer Science.

#### List of Courses in PhD. 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         |
| <b>Total Credits:</b> |   | <b>12</b> |

## 2. M.Sc. 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.

### M.Sc. Computer Science course structure (72 Credits)

(likely to be modified as per CBCS)

| Course Code          | Course Title                                 | Credit           |
|----------------------|--|------------------|
| <b>Semester - I</b>  |  | <b>Credits</b>   |
| CSC501               | Operating Systems                            | 4                |
| CSC502               | Data Structure & Algorithms (Using C)        | 4                |
| CSC503               | Discrete Mathematics                         | 4                |
| CSC504               | Programing Lab (based on CSC501)             | 3                |
| Foundation Course    | Communication Skill                          | Pass/Fail        |
| <b>Total Credits</b> |  | <b>15</b>        |
| <b>Semester - II</b> |  |                  |
| CSC551               | Database Management Systems                  | 4                |
| CSC552               | DBMS Lab                                     | 3                |
| CSC553               | Theory of Computation                        | 4                |
| CSC554               | Software Engineering                         | 4                |
| CSC555-560           | Elective-1 (From Basket -1)                  | 4                |
| <b>Total Credits</b> |  | <b>19</b>        |
| -                    | <b>Summer Training (Industry/University)</b> | <b>Pass/Fail</b> |
| <b>Semester -III</b> |  |                  |
| CSC601               | Computer Networks                            | 4                |
| CSC602               | Design & Analysis of Algorithms              | 4                |
| CSC603               | Minor Project                                | 2                |
| CSC604-624           | Elective -2 (From Basket -2)                 | 4                |
| CSC604-624           | Elective- 3 (From Basket -2)                 | 4                |
| <b>Total Credits</b> |  | <b>18</b>        |
| <b>Semester - IV</b> |  |                  |
| CSC651               | Project in Industry/Institute                | <b>20</b>        |
| <b>Total Credits</b> |  | <b>20</b>        |

### Elective Basket- 1

| Course Code | Courses                                | Credits |
|-------------|--|---------|
| CSC555      | Object-Oriented Programing Methodology | 4       |
| CSC556      | Web Technology and Web Programming     | 4       |
| CSC557      | Data Mining                            | 4       |
| CSC558      | Modeling & Simulation                  | 4       |
| CSC559      | Distributed Computing                  | 4       |
| CSC560      | Image Processing                       | 4       |

### Elective Basket -2

| Course Code | Courses                               | Credits |
|-------------|---------------------------------------|---------|
| CSC604      | Pattern Recognition                   | 4       |
| CSC605      | Wireless networks                     | 4       |
| CSC606      | Compiler Design                       | 4       |
| CSC607      | Applied Stochastic Process            | 4       |
| CSC608      | Cryptography & Network Security       | 4       |
| CSC609      | New Paradigm in Computing             | 4       |
| CSC610      | Computational Biology                 | 4       |
| CSC611      | Soft Computing                        | 4       |
| CSC612      | Financial Data Analysis and Computing | 4       |
| CSC613      | Information Retrieval                 | 4       |
| CSC614      | Natural language Processing           | 4       |
| CSC615      | Computational Geometry                | 4       |
| CSC616      | Mobile Computing                      | 4       |
| CSC617      | Software Project Managements          | 4       |
| CSC618      | Statistical Methods                   | 4       |
| CSC619      | Artificial Intelligence               | 4       |
| CSC620      | Operations Research                   | 4       |
| CSC621      | Computer Graphics and Multimedia      | 4       |
| CSC622      | Research Methodology                  | 4       |
| CSC623      | Computer Organization                 | 4       |
| CSC624      | Big Data                              | 4       |

### 3. M.Tech. in Computer Science

The department offers a two-year full-time program M.Tech. in Computer Science that is recognized by AICTE since 2012. The programme is planned to meet the need of industry as well as research and academics. The M.Tech. programme lets a student do a number of specialized courses, as well as lets them explore their research and development skills through dissertation work. Course design of M.Tech. in Computer Science balances core courses, electives and a dissertation, catering to both CS and non-CS background students.

The department trains the M.Tech. Students to grow into highly sought-after trained personnel for industry jobs as well as motivate them to take up research as a career in Computer Science. Workshop and expert lectures are conducted to enhance the research skills as well as soft skills of the students.

**List of Courses in M.Tech. in Computer Science (72 Credits)**  
(likely to be modified as per CBCS)

| Course Code           | Course Title   | Credit    |
|-----------------------|--|-----------|
| <b>Semester - I</b>   |  |           |
| CSC701                | Research Methodology                                 | 4         |
| CSC702                | Advanced Data Structure & Algorithms                 | 4         |
| CSC703                | Advanced Software Engineering                        | 4         |
| CSC704                | Advanced Programming Lab (based on CSC702)           | 2         |
| CSC705-711            | Elective-1 (From Basket -1)                          | 4         |
| <b>Total Credits</b>  |  | <b>18</b> |
| <b>Semester - II</b>  |  |           |
| CSC751                | Modeling & Simulation                                | 4         |
| CSC752                | Distributed System                                   | 4         |
| CSC753                | Seminar  | 2         |
| CSC754-770            | Elective-2 (From Basket -2)                          | 4         |
| CSC754-770            | Elective-3 (From Basket -2)                          | 4         |
| <b>Total Credits</b>  |  | <b>18</b> |
| <b>Semester - III</b> |  |           |
| CSC801                | Dissertation (Continued in 4 <sup>th</sup> Semester) | 18        |
| <b>Total Credits</b>  |  | <b>18</b> |
| <b>Semester - IV</b>  |  |           |
| CSC802                | Dissertation   | <b>18</b> |
| <b>Total Credits</b>  |  | <b>18</b> |

**Electives Basket for M.Tech (Computer Science)**

**Elective Basket -1**

| Course Code | Courses                           | Credits |
|-------------|-----------------------------------|---------|
| CSC705      | Speech Processing and Recognition | 4       |
| CSC706      | Natural Language Processing       | 4       |
| CSC707      | Compiler Design                   | 4       |
| CSC708      | Big Data                          | 4       |
| CSC709      | Artificial Intelligence           | 4       |
| CSC710      | Machine Learning                  | 4       |
| CSC711      | Advanced Computer Networks        | 4       |

**Elective Basket -2**

| <b>Course Code</b> | <b>Courses</b>                      | <b>Credits</b> |
|--------------------|-------------------------------------|----------------|
| CSC754             | Internet Technologies               | 4              |
| CSC755             | Mobile Network Systems              | 4              |
| CSC756             | Wireless Sensor Networks            | 4              |
| CSC757             | Next Generation Network             | 4              |
| CSC758             | Cryptography & Network Security     | 4              |
| CSC759             | Data Mining                         | 4              |
| CSC760             | Information Retrieval               | 4              |
| CSC761             | Nature Inspired Computing Methods   | 4              |
| CSC762             | Software Testing                    | 4              |
| CSC763             | Software Project Management         | 4              |
| CSC764             | Operational Research                | 4              |
| CSC765             | Signal Processing                   | 4              |
| CSC766             | Digital Image Processing            | 4              |
| CSC767             | Advanced Computer Architecture      | 4              |
| CSC768             | Complexity and Computability Theory | 4              |
| CSC769             | Statistical Methods                 | 4              |
| CSC770             | Mathematical Logic                  | 4              |

**Laboratory Facilities & Resources**

Department of Computer Science is having well equipped spacious, air-conditioned lab with high end computers and required software including servers to provide computing facilities to the students. The department has a dedicated network printer for providing printing and scanning facility as well. The department has Tablets and Android mobile phones for development of android based applications.

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## SCHOOL OF PHYSICAL & CHEMICAL SCIENCES

### I. 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. It will launch M.Sc. Degree Program in Physics from the academic session 2018-19 with intake of 35 students. 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, and (v) offer necessary soft skills to students to build their professional career.

#### 1. M.Sc. in Physics

##### List of Courses in M.Sc. in Physics (100 Credits)

(Likely to be modified as per CBCS)

| Paper Code  | Course Title                           | Credit             |          |          |
|---|--|--------------------|----------|----------|
| <b>Core</b>   |  | <b>Semester I</b>  |          |          |
|   |  | <b>L</b>           | <b>T</b> | <b>P</b> |
| PHYC 601  | Classical Mechanics                    | 4                  | 0        | 0        |
| PHYC 602  | Classical Electrodynamics              | 4                  | 0        | 0        |
| PHYC 603  | Physics Core Lab. – I                  | 0                  | 0        | 2        |
| <i>Core credits</i>   |  | <b>10</b>          |          |          |
| <b>Electives: Will be offered in Semester I to all M.Sc. students by Department of Physics(DoP)</b> |  |                    |          |          |
| PHYE 601  | Mathematical Physics – I               | 4                  | 0        | 0        |
| PHYE 602  | Computational Physics – I              | 0                  | 0        | 2        |
| PHYE 603  | Electricity & Magnetism                | 4                  | 0        | 0        |
| PHYE 604  | Introductory Modern Physics-I          | 4                  | 0        | 0        |
| PHYE 605  | Physics Elective Lab. – I              | 0                  | 0        | 2        |
| <i>Elective Credits</i>   |  | <b>16</b>          |          |          |
| <b>Minimum Total Credits of Semester I</b>  |  | <b>26</b>          |          |          |
| <b>Core</b>   |  | <b>Semester II</b> |          |          |
|   |  | <b>L</b>           | <b>T</b> | <b>P</b> |
| PHYC 651  | Quantum Mechanics – I                  | 4                  | 0        | 0        |
| PHYC 652  | Solid State Physics – I                | 4                  | 0        | 0        |
| PHYC 653  | Thermodynamics & Statistical Mechanics | 4                  | 0        | 0        |
| PHYC 654  | Physics Core Lab. – II                 | 0                  | 0        | 2        |
| <i>Core Credits</i>   |  | <b>14</b>          |          |          |
| <b>Electives: Will be offered in Semester II to all M.Sc. students by DoP.</b>                      |  |                    |          |          |
| <b>Pre-require: Computational Physics-I for Computational Physics-II.</b>                           |  |                    |          |          |
| PHYE 651  | Mathematical Physics – II              | 4                  | 0        | 0        |

|  |   |           |          |          |
|--|---|-----------|----------|----------|
| PHYE 652   | Computational Physics – II                            | 0         | 0        | 2        |
| PHYE 653   | Introductory Modern Physics-II                        | 4         | 0        | 0        |
| PHYE 654   | Physics Elective Lab. – II                            | 0         | 0        | 2        |
| <b>Elective Credits</b>  |   | <b>12</b> |          |          |
| <b>Minimum Total Credits of Semester II</b>  |   | <b>26</b> |          |          |
| <b>Core</b>  | <b>Semester III</b>                                   | <b>L</b>  | <b>T</b> | <b>P</b> |
| PHYC 701   | Quantum Mechanics – II                                | 4         | 0        | 0        |
| PHYC 702   | Solid State Physics – II                              | 4         | 0        | 0        |
| PHYC 703   | Atomic & Molecular Physics                            | 4         | 0        | 0        |
| PHYC 704   | Physics Core Lab. – III                               | 0         | 0        | 3        |
| <b>Core Credits</b>  |   | <b>15</b> |          |          |
| <b>Project</b><br>PHYC 706   | <b>Project: Part – I</b>                              | <b>02</b> |          |          |
| <b>Electives:</b> Will be offered in Semester III to all M.Sc. students by DoP                         |   |           |          |          |
| <b>Pre-requisite: Computational Physics-II for Computational Physics-III.</b>                          |   |           |          |          |
| PHYE 701   | Mathematical Physics – III                            | 4         | 0        | 0        |
| PHYE 702   | Computational Physics – III                           | 0         | 0        | 3        |
| PHYE 703   | Electronics – I                                       | 4         | 0        | 0        |
| PHYE 704   | Physics Elective Lab. – III                           | 0         | 0        | 3        |
| <b>Elective Credits</b>  |   | <b>14</b> |          |          |
| <b>Minimum Total Credits of Semester III</b>   |   | <b>31</b> |          |          |
| <b>Core</b>  | <b>Semester IV</b>                                    | <b>L</b>  | <b>T</b> | <b>P</b> |
| PHYC 751   | Nuclear & Particle Physics                            | 3         | 0        | 0        |
| PHYC 752   | Advanced Optics                                       | 3         | 0        | 0        |
| PHYC 753   | Physics Core Lab. – IV                                | 0         | 0        | 3        |
| <b>Core Credits</b>  |   | <b>09</b> |          |          |
| <b>Project</b><br>PHYC 754   | <b>Project: Part – II - Continuation of Part – I.</b> | <b>02</b> |          |          |
| <b>Electives Groups:</b> The following groups of 6 credits each will be offered in Semester IV by DoP. |   |           |          |          |
| <b>Group-A: For all M.Sc. students.</b>  |   | <b>L</b>  | <b>T</b> | <b>P</b> |
| Pre-requisite: Computational Physics – III.  |   |           |          |          |
| PHYE 751   | Mathematical Physics – IV                             | 3         | 0        | 0        |
| PHYE 752   | Computational Physics – IV                            | 0         | 0        | 3        |
| <b>Group – B: For all M.Sc. students.</b>  |   | <b>L</b>  | <b>T</b> | <b>P</b> |
| PHYE 753   | Nanosciene  | 3         | 0        | 0        |
| PHYE 754   | Nanoscience Lab.                                      | 0         | 0        | 3        |
| <b>Group – C: For all M.Sc. students.</b>  |   |           |          |          |
| PHYE 755   | Experimental Techniques                               | 3         | 0        | 0        |
| PHYE 756   | Experimental Techniques Lab.                          | 0         | 0        | 3        |
| <b>Group – D: For all M.Sc. students.</b>  |   |           |          |          |
| PHYE 757   | Waves, Oscillation, & Optics                          | 3         | 0        | 0        |
| PHYE 758   | Waves, Oscillation, & Optics Lab.                     | 0         | 0        | 3        |
| <b>Group – E: For all M.Sc. students.</b>  |   |           |          |          |
| PHYE 759   | General Properties of Matter                          | 3         | 0        | 0        |
| PHYE 760   | General Properties of Matter Lab.                     | 0         | 0        | 3        |
| <b>Group - F: For all M.Sc. Students</b>   |   | <b>L</b>  | <b>T</b> | <b>P</b> |
| PHYE 761   | Monte Carlo Simulations (MCS)                         | 3         | 0        | 0        |
| PHYE 762   | MCS Lab.  | 0         | 0        | 3        |
| <b>Group – G: Only For M.Sc. Physics IV<sup>th</sup> Semester Students</b>                             |   | <b>L</b>  | <b>T</b> | <b>P</b> |
| PHYE 763   | Advanced Statistical Mechanics                        | 3         | 0        | 0        |

|   |   |            |          |          |
|---|---|------------|----------|----------|
| PHYE 764                                    | Computational Statistical Mechanics   | 0          | 0        | 3        |
|   | <b>Group – H: Only For M.Sc. Physics IV<sup>th</sup> Semester Students</b>                                | <b>L</b>   | <b>T</b> | <b>P</b> |
| PHYE 765                                    | Field Theory  | 5          | 0        | 0        |
| PHYE 766                                    | Plasma Physics  | 1          | 0        | 0        |
|   | <b>Group – I: For all M.Sc. students.</b><br>Pre-requisite: Electronics – I & Physics Elective Lab. – III |            |          |          |
| PHYE 767                                    | Electronics – II  | 3          | 0        | 0        |
| PHYE 768                                    | Electronics – II Lab.   | 0          | 0        | 3        |
| <b>Elective Credits of each group</b>       |   | <b>06</b>  |          |          |
| <b>Minimum Total Credits of Semester IV</b> |   | <b>17</b>  |          |          |
| <b>Minimum TOTAL CREDITS</b>                |   | <b>100</b> |          |          |

### Elective Basket

The following additional electives of 3 credits each will be offered in every semester by DoP to students of all Master Degree Programmes with the condition that a student cannot take the same elective paper more than once:

| Paper Code | Additional Electives                | Credits |
|------------|-------------------------------------|---------|
| PHYE 656   | Reading Course                      | 3       |
| PHYE 657   | Science & History                   | 3       |
| PHYE 658   | Science & Yoga                      | 3       |
| PHYE 659   | Science & Society                   | 3       |
| PHYE 660   | Science & Politics                  | 3       |
| PHYE 661   | Science & Religion                  | 3       |
| PHYE 662   | Science & Ethics                    | 3       |
| PHYE 663   | Science & Philosophy                | 3       |
| PHYE 664   | Science & Entrepreneurship          | 3       |
| PHYE 665   | Science & Project Management        | 3       |
| PHYE 666   | Science & Ancient Indian Scriptures | 3       |
| PHYE 667   | Science Communication               | 3       |
| PHYE 668   | Physics Education Research          | 3       |
| # PHYE 669 | Physics Teaching                    | 3       |

*NOTE:* Student(s) must take approval from the Graduate Advisor of Physics/Head of the Department of Physics for Additional Electives & Self-study/Skill-based Courses (Non-credit courses).

## II. 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 is being started from this new academic session in 2018-19. The department envisages scaling greater heights with the launch of post-graduate programmes and producing globally competent chemists who can solve the pressing problems of the nation.

### **1. 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. Alongwith 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 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 (80 Credits)**

(likely to be modified as per CBCS)

| Course Code  | Title of the Paper   | Theory/ Practical (Hrs/Week) | Total Marks | Credits   |
|--|--|------------------------------|-------------|-----------|
| <b>Semester - I</b><br>(common to students of all branches)  |  |                              |             |           |
| CHY-501  | Inorganic Chemistry I  | 4                            | 100         | 4         |
| CHY-502  | Organic Chemistry I  | 4                            | 100         | 4         |
| CHY-503  | Physical Chemistry I   | 4                            | 100         | 4         |
| CHY-504  | Inorganic Chemistry and Organic Chemistry Lab                              | 8                            | 100         | 4         |
| CHY-505  | Physical Chemistry and Computational Chemistry Lab                         | 8                            | 100         | 4         |
|  |  | <b>Total</b>                 | <b>500</b>  | <b>20</b> |
| <b>Semester - II</b><br>(common to students of all branches) |  |                              |             |           |
| CHY-551  | Inorganic Chemistry -II  | 4                            | 100         | 4         |
| CHY-552  | Organic Chemistry -II  | 4                            | 100         | 4         |
| CHY-553  | Physical Chemistry -II   | 4                            | 100         | 4         |
| CHY-554  | Inorganic Chemistry and Organic Chemistry Lab                              | 8                            | 100         | 4         |
| CHY-555  | Physical Chemistry and Simple Instrumental techniques in Organic Chemistry | 8                            | 100         | 4         |
|  |  | <b>Total</b>                 | <b>500</b>  | <b>20</b> |

|   |  |              |            |           |
|---|--|--------------|------------|-----------|
| <b>Semester III</b><br>(common to students of all branches) |  |              |            |           |
| CHY-601   | Advanced Inorganic Chemistry and Organic Chemistry | 4            | 100        | 4         |
| CHY-602   | Advanced Physical Chemistry and Spectroscopy       | 4            | 100        | 4         |
| CHY-603   | Inorganic Chemistry and Organic Chemistry Lab      | 8            | 100        | 4         |
| CHY-604   | Physical Chemistry Lab                             | 8            | 100        | 4         |
| CHY-E#  | Elective #   | 4            | 100        | 4         |
|   |  | <b>Total</b> | <b>500</b> | <b>20</b> |

# **ELECTIVES- One elective to be opted from the list given below**

| Code No. | Title of the Paper                                | Teaching/<br>contact<br>Hrs/week | Total<br>Marks | Credits |
|----------|---|----------------------------------|----------------|---------|
| CHY-605  | Supramolecular Chemistry                          | 4                                | 100            | 4       |
| CHY-606  | Application of Chemistry in Medical Science       | 4                                | 100            | 4       |
| CHY-607  | Chemistry of Materials                            | 4                                | 100            | 4       |
| CHY-608  | Molecules of Life                                 | 4                                | 100            | 4       |
| CHY-609  | Solid State and Structural Chemistry              | 4                                | 100            | 4       |
| CHY-610  | Chemistry of Natural Products                     | 4                                | 100            | 4       |
| CHY-611  | Green Energy System                               | 4                                | 100            | 4       |
| CHY-612  | Green Chemistry                                   | 4                                | 100            | 4       |
| CHY-613  | Catalysis   | 4                                | 100            | 4       |
| CHY-614  | Laser in Chemistry                                | 4                                | 100            | 4       |
| CHY-615  | Fundamentals and Application of Nano Chemistry    | 4                                | 100            | 4       |
| CHY-616  | Advanced Photochemistry and Radiation Chemistry   | 4                                | 100            | 4       |
| CHY-617  | Nucleoside, Advances in Nucleic Acid and Proteins | 4                                | 100            | 4       |
| CHY-618  | Crystal Engineering                               | 4                                | 100            | 4       |
| CHY-619  | Medicine and Agrochemicals                        | 4                                | 100            | 4       |

|              |  |
|--------------|--|
| <b>Note:</b> | <i>Out of 15 elective papers listed above, only few selected ones will be floated in a particular academic session and at least 5 students must opt for a particular elective paper to run that paper.</i> |
|--------------|--|

**Semester - IV  
Inorganic Chemistry Specialisation**

| Code No. | Title of the paper                                  | Teaching/<br>Contact<br>hrs/week | Total Marks | Credits   |
|----------|---|----------------------------------|-------------|-----------|
| CHY-651  | Inorganic Specialisation - <b>I</b>                 | 4                                | 100         | 4         |
| CHY-652  | Inorganic Specialisation - <b>II</b>                | 4                                | 100         | 4         |
| CHY-653  | Inorganic Specialisation - <b>III</b>               | 4                                | 100         | 4         |
| CHY-654  | Literature Survey, Seminar<br>Presentation and Viva | --                               | 100         | 2         |
| CHY-655  | Project Work  |                                  | 100         | 6         |
|          |   | <b>Total</b>                     | <b>500</b>  | <b>20</b> |

### Organic Chemistry Specialisation

| Code No. | Title of the Paper                               | Teaching/<br>contact<br>hrs/week | Total Marks | Credits   |
|----------|--|----------------------------------|-------------|-----------|
| CHY-656  | Organic Chemistry Specialisation –I              | 4                                | 100         | 4         |
| CHY-657  | Organic Chemistry Specialisation -II             | 4                                | 100         | 4         |
| CHY-658  | Organic Chemistry Specialisation -III            | 4                                | 100         | 4         |
| CHY-654  | Literature Survey, Seminar Presentation and Viva |                                  | 100         | 2         |
| CHY-655  | Project Work                                     | -                                | 100         | 6         |
|          |  | <b>Total</b>                     | <b>500</b>  | <b>20</b> |

### Physical Chemistry Specialisation

| Code No. | Title of the Paper                               | Teaching/cont<br>act hrs/week | Total Marks | Credits   |
|----------|--|-------------------------------|-------------|-----------|
| CHY-659  | Physical Chemistry Specialisation –I             | 4                             | 100         | 4         |
| CHY-660  | Physical Chemistry Specialisation –II            | 4                             | 100         | 4         |
| CHY-661  | Physical Chemistry Specialisation –III           | 4                             | 100         | 4         |
| CHY-654  | Literature Survey, Seminar Presentation and Viva |                               | 100         | 2         |
| CHY-655  | Project Work                                     |                               | 100         | 6         |
|          |  | <b>Total</b>                  | <b>500</b>  | <b>20</b> |

#### Salient features of the programme

- Nano Chemistry, Green Chemistry and Medicinal Chemistry, agrochemistry have been incorporated in the curriculum to develop a thorough understanding of these emerging fields and their relevance in daily life of mankind.
- Computational Chemistry, theory and labs, have also been made part of the curriculum to make the students proficient in theoretical modeling and simulations.
- Besides imparting in-depth knowledge, hands-on training will also be given to students on sophisticated instruments which are a prerequisite for being employable in industries and succeed in cutting edge research.
- For proper utilization of summer break period, students will be encouraged to take up a summer activity. This activity may include research internship in academic/ research institutions or industrial lab. It may also include activities related to science communication such as writing a popular science article in a magazine or writing a review article in a scientific journal. It also includes activities such as science film making etc. The summer project should be done at the end of 2<sup>nd</sup> Semester during the summer break period.
- Students from both PCB and PCM streams can join this degree programme. Provision of basic mathematics and basic biology course has been kept in the curriculum. The students having mathematics background may opt for the basic biology course while the students having biology background may opt for basic mathematics course in the first semester. We believe that knowledge of both mathematics and biology is necessary to understand the nuances of chemistry.

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## **SCHOOL OF EARTH, BIOLOGICAL AND ENVIRONMENTAL SCIENCES**

### **I. The Centre for Biological Sciences (CBS):**

The Centre for Biological Sciences (CBS) is currently offering three different Master's level Programmes - M. Sc. Life Science, M. Sc. Biotechnology and M. Sc. Bioinformatics. 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. Each of these three 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 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 students' knowledge and capabilities and they have diverse options to choose for their future studies and research. Vaccine, various drugs, high yielding and stress tolerant varieties of crops and easily available clinical tests are few examples of impact of life sciences on the society. This Programme promises to enable the students for innovative solutions to fundamental challenges related to medicine, food, agriculture and environment.

**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 21<sup>st</sup> 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 Biotechnology Programme are mainly related to recent and emerging trends in Biology but the students are also taught Biostatistics which enables them to analyse their data, draw meaningful conclusions and publish in reputed journals. The Programme equally gives emphasis on integrated approaches in 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.

The post-genomic era has seen Biology grow from a 'soft' discipline to a 'hard' one. This has initiated a scientific revolution driven by Genomics and Bioinformatics. Bioinformatics is a rapidly growing field of study that centres around at the interface of Biology and Information Technology. The **Bioinformatics** programme consists of a good amalgamation of courses like Biology, Computer Science, Statistics, Mathematics and Physics. The students are 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 Bioinformatics tools.

Centre for Biological Sciences is equipped with state-of-the-art technology and equipment that provide a stimulating environment for teaching and research.

## **A. Biotechnology Programmes**

### **1. Ph.D. in Biotechnology**

The Centre for Biological Sciences (Biotechnology) is currently offering PhD with diverse field of specializations including Neurobiology, Cancer Biology, Plant Biotechnology, Bioremediation, Infection Biology, Stem cell Biology, Immunology.

The syllabus is 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.

Biotechnology programmes 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.

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

**Thrust Areas of Research:**

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

**List of Courses in PhD. Biotechnology**

| Course Code | Course Title                                      | Credit    |
|-------------|---|-----------|
| BTN 901     | Research Methodology                              | 4         |
| BTN 902     | Tools and Techniques of Research                  | 4         |
| BTN 903     | Preparation and Presentation of Research Proposal | 4         |
|             | <b>Total Credits:</b>                             | <b>12</b> |

**2. MSc Biotechnology**

The two year (four semesters) Post-Graduate Programme has interdisciplinary approach with participation of faculties/researchers across the University. 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 in cutting-edge research.

Currently, departmental research is mainly focussed in the areas of Cancer Biology, Autoimmune Diseases, Fungal Diseases, Lung Physiology, Neuroethology, Immunology, Genetic Engineering, Stem Cell Therapy, Proteomics, Molecular Biology, Signal Transduction, Interferon (IFNs) Transcription Factors, Neuroimaging, Electrophysiology, 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.



### **Salient Feature of the Programme for International Students -**

- 1) At CUSB, we have internationally acclaimed group of faculty members with several years of research experience in reputed labs across the world.
- 2) Biotechnology program has well equipped laboratory.
- 3) The faculty members have many national and international research collaborations.
- 4) We have research funding from various funding agencies.
- 5) Foreign students will have better benefit/cost ratio compared to universities at their country.

### **List of Courses in M.Sc. Biotechnology (80 Credits)**

(Likely to be modified as per CBCS)

| <b>Course Code</b>   | <b>Course Title</b>                                  | <b>Credit</b> |
|----------------------|--|---------------|
| <b>Semester I</b>    |  |               |
| BTN 501              | Cell Biology & Genetics                              | 3             |
| BTN 502              | Biomolecules & Biochemistry                          | 3             |
| BTN 503              | Instrumentation: Tools & Techniques in Biotechnology | 3             |
| BTN 504              | Bioinformatics                                       | 2             |
| BTN 505              | Lab 1 (BTN 501 + BTN 502)                            | 3             |
| BTN 506              | Lab 2 (BTN503 + BTN 504)                             | 4             |
| <b>Total Credits</b> |  | <b>18</b>     |
| <b>Semester II</b>   |  |               |
| BTN 551              | Molecular Biology & Genomics                         | 3             |
| BTN 552              | Basic Enzymology & Enzyme Technology                 | 3             |
| BTN 553              | Biology of Immune System                             | 4             |
| BTN 554              | Microbiology   | 4             |
| BTN 555              | Biostatistics  | 2             |
| BTN 556              | Lab 3 (BTN 551 + BTN 554)                            | 3             |
| BTN 557              | Lab 4 (BTN 552 + BTN 553)                            | 3             |
| <b>Total Credits</b> |  | <b>22</b>     |

|                      |   |           |
|----------------------|---|-----------|
| BTN 558              | Summer training   | 2         |
| <b>Semester III</b>  |   |           |
| BTN 601              | Recombinant DNA Technology  | 3         |
| BTN 602              | Bioprocess Engineering  | 4         |
| BTN 603              | Animal Biotechnology  | 3         |
| BTN 604              | Plant Biotechnology   | 3         |
| BTN 605              | Bioethics, Biosafety and Intellectual Property Rights (IPR)           | 3         |
| BTN 606              | Lab 5 (BTN 601 + BTN 602)   | 3         |
| BTN 607              | Lab 6 (BTN 603 + BTN 604)   | 3         |
| <b>Total Credits</b> |   | <b>22</b> |
| <b>Semester IV</b>   |   |           |
| BTN 651              | Project Dissertation, Presentation and Comprehensive <i>Viva-voce</i> | 12        |
| BTN 652 -<br>657     | Elective 1  | 2         |
| BTN 652 -<br>657     | Elective 2  | 2         |
| <b>Total Credits</b> |   | <b>16</b> |

#### **Electives Basket**

| <b>Course Code</b> | <b>Name of Paper</b>        |
|--------------------|-----------------------------|
| BTN 652            | Environmental Biotechnology |
| BTN 653@           | Cancer Biology              |
| BTN 654@           | Neurobiology                |
| BTN 655@           | Medical Biotechnology       |
| BTN 656@           | Protein Biochemistry        |
| BTN 657            | Metabolic Engineering       |

@ Open course for School of Earth, Biological and Environmental Sciences.

#### **Laboratory Facilities and Resources**

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.

## B. Bioinformatics Programmes

### 1. Ph.D. in Bioinformatics

The Centre for Biological Sciences (Bioinformatics) is currently offering PhD with diverse field of specializations including Molecular Modelling and Simulation, Computer Added Drug Designing (CADD), Functional Genomics, Biological Database and Server development. The programme train 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 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 Bioinformatics tools.

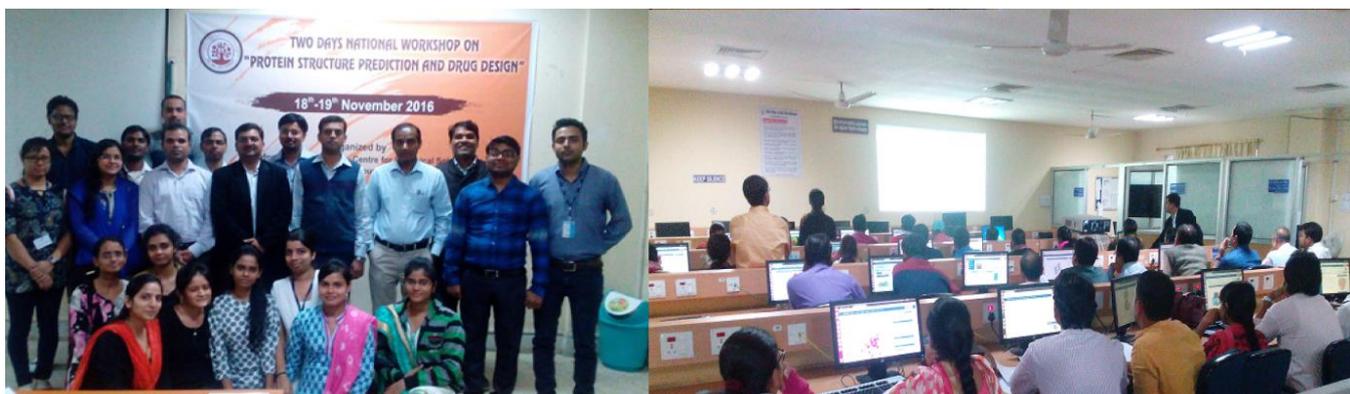
**Thrust Areas of Research:** Protein modelling and Simulation, Computer Added Drug Designing (CADD), Data mining, Evolutionary analysis, Biological Database and Server development, Transcriptome and proteome analysis, System Biology, X-ray cryatallography and structure biology, Free energy perturbation,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

#### List of Courses in Ph.D. Bioinformatics

| Course Code | Course Title                                      | Credit    |
|-------------|---|-----------|
| BIS 901     | Research Methodology                              | 4         |
| BIS 902     | Tools and Techniques of Research                  | 4         |
| BIS 903     | Preparation and Presentation of Research Proposal | 4         |
|             | <b>Total Credits:</b>                             | <b>12</b> |

### 2. M.Sc. Bioinformatics

The two year (four semesters) Post Graduate Programme gears the students towards research not only providing them with basic understanding of the subject but also inculcates in them the thirst for applied research in areas like Molecular Modelling, Simulation and Computer added drug designing, System Biology and Functional Genomics. Analytical techniques, management and analysis of Biological databases are also taught since there has been a paradigm shift in theoretical biology from reductionist approach of Molecular Biology to an integrative approach of treating the cell as a system.



### List of Courses in M.Sc. Bioinformatics (80 Credits)

(Likely to be modified as per CBCS)

| Course Code  | Course Title                                 | Credit |
|--|--|--------|
| <b>Semester I</b>  |  |        |
| BIS 501  | Cell and Molecular Biology                   | 4      |
| BIS 502  | Biochemistry and Immunology                  | 4      |
| BIS 503  | Mathematics and Statistics                   | 4      |
| BIS 504  | Introduction to Bioinformatics               | 2      |
| BIS 505  | Introduction to Linux and C Programming      | 2      |
| BIS 506  | Lab - Linux and C Programming                | 2      |
| BIS 507  | Lab - Statistics with R                      | 2      |
| BIS 508  | Lab – Wet laboratory I                       | 2      |
| Total Credit   |  | 22     |
| <b>Semester II</b>   |  |        |
| BIS 551  | Algorithms in Bioinformatics                 | 4      |
| BIS 552  | Biomolecular Modelling and Simulations       | 4      |
| BIS 553  | Genetics and Genomics                        | 4      |
| BIS 554  | Programming with Perl                        | 2      |
| BIS 555  | Lab - Algorithms in Bioinformatics           | 2      |
| BIS 556  | Lab - Biomolecular Modelling and Simulations | 2      |
| BIS 557  | Lab - Programming with Perl                  | 2      |
| BIS 558  | Lab - Wet laboratory II                      | 2      |
| Total Credit   |  | 22     |
| <p><i>Students have to complete 45-60 days summer training at the end of semester II. 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.</i></p> |  |        |
| <b>Semester III</b>  |  |        |
| BIS 601  | Chemoinformatics and Drug Design             | 4      |

|  |  |    |
|--|--|----|
| BIS 602  | Transcriptomics and Proteomics         | 4  |
| BIS 603  | Evolution and Systems Biology          | 4  |
| BIS 604  | DBMS and Web Technology                | 2  |
| BIS 605  | Lab - Chemoinformatics and Drug Design | 2  |
| BIS 606  | Lab - Transcriptomics and Proteomics   | 2  |
| BIS 607  | Lab - DBMS and Web Technology          | 2  |
| BIS 608  | Elective                               | 2  |
|  | <b>Total Credit</b>                    | 22 |
| <i>Student must present work done during summer training within one month of the commencement of semester III.</i> |  |    |
|  | <b>Semester IV</b>                     |    |
| BIS 651  | Summer Training                        | 2  |
| BIS 652  | Dissertation (Internal/External)       | 12 |
|  | <b>Total Credit</b>                    | 14 |

| <b>List of Electives</b> | <b>Credits</b> |
|--------------------------|----------------|
| Programming with Python  | 2              |
| Complex Systems          | 2              |
| Big Data Analytics       | 2              |
| Programming with Java    | 2              |
| Health Informatics       | 2              |

*Students may opt elective courses of same credit from related programmes. Similarly students from other programmes may opt courses of same credit in Bioinformatics.*

### **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 connected with high band-width Internet connection powered by 1 Gbps NKN backbone. We also have HP and Dell work station equipped with Intel Xeon processor with 32 Gb RAM for high performance computing.

## **C. Life Science Programmes**

### **1. Ph.D. in Life Science**

The Centre for Biological Sciences (Life Science) is currently offering PhD with diverse field of specializations including Protein Hormones and Secretory Pathways, Malaria Biology,

Physiology and Molecular Biology of Plant, Genetic Engineering and System Biology of Crop Plant, Microbial Physiology and Biochemistry, Proteomics, Protein Structural Biology.

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.

Life Science programme 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 programme creates environment for analytical and creative thinking as well as develop students to think and work independently and in a team. The students are well trained for both wet and dry lab techniques enabling them to better suit for different research laboratories and industries. Impact is given for both basic as well as applied research.

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

**Thrust Areas of Research:**

- Physiology and Molecular Biology of Plant;
- Genetic Engineering and System Biology of Crop Plant
- Microbial Physiology and Biochemistry
- Proteomics
- Protein Structural Biology
- Protein Hormones and Secretory Pathways
- Malaria Biology

**List of Courses in PhD. Life Science**

| <b>Course Code</b> | <b>Course Title</b>                               | <b>Credit</b> |
|--------------------|---|---------------|
| LSC 901            | Research Methodology                              | 4             |
| LSC 902            | Tools and Techniques of Research                  | 4             |
| LSC 903            | Preparation and Presentation of Research Proposal | 4             |
|                    | <b>Total Credits:</b>                             | <b>12</b>     |

## 2. MSc Life Science

The two years (four semesters) Post-Graduate Programme 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 are also assigned for summer internship to utilize vacations and provide students laboratory exposure.



### Salient Features of the Programme of International Students

- 1) At CUSB, we have internationally acclaimed group of faculty members with several years of research experience in reputed labs across the world.
- 2) Life Science program has well-equipped laboratory.
- 3) The faculty members have many national and international research collaborations.
- 4) We have research funding from various funding agencies.
- 5) Foreign students will have better benefit/cost ratio compared to universities at their country.

**List of Courses in M.Sc. Life Science (80 credits)**

(Likely to be modified as per CBCS)

| Course Code          | Course Title                        | Credit    |
|----------------------|-------------------------------------|-----------|
| <b>Semester -I</b>   |                                     |           |
| LSC 501              | Cell Biology                        | 4         |
| LSC 502              | Fundamentals of Biochemistry        | 4         |
| LSC 503              | Fundamentals of Genetics            | 4         |
| LSC 504              | Microbiology                        | 4         |
| LSC 505              | Bioinformatics                      | 2         |
| LSC 506 P            | Lab 1 (LSC 501 + LSC 502)           | 2         |
| LSC 507 P            | Lab 2 (LSC 503 + LSC 504)           | 2         |
| LSC 508 P            | Lab 3 (LSC 505)                     | 1         |
| <b>Total Credits</b> |                                     | <b>23</b> |
| <b>Semester -II</b>  |                                     |           |
| LSC 551              | Biology of Immune System            | 4         |
| LSC 552              | Population and Community Ecology    | 4         |
| LSC 553              | Metabolism                          | 3         |
| LSC 554              | Molecular Biology                   | 3         |
| LSC 555              | Biostatistics                       | 2         |
| LSC 556              | Molecular Enzymology                | 2         |
| LSC 557 P            | Lab 4 (LSC 551 + LSC 552 + LSC 553) | 2         |
| LSC 558 P            | Lab 5 (LSC 554 + LSC 555 + LSC 556) | 2         |
| <b>Total Credits</b> |                                     | <b>22</b> |
| <b>Summer Break</b>  |                                     |           |
| LSC 559              | Summer Internship                   | 1         |
| <b>Semester -III</b> |                                     |           |
| LSC 601              | Developmental Biology               | 4         |
| LSC 602              | Physiology of Plant System          | 4         |
| LSC 603              | Physiology of Animal System         | 4         |
| LSC 604              | Recombinant DNA Technology          | 3         |
| LSC 605 P            | Lab 6 (LSC 601 + LSC 602)           | 2         |
| LSC 606 P            | Lab 7 (LSC 603 + LSC 604)           | 3         |
| <b>Total Credits</b> |                                     | <b>20</b> |
| <b>Semester IV</b>   |                                     |           |
| LSC 651 P            | Dissertation                        | 10        |
| LSC 652-655          | Elective 1                          | 2         |
| LSC 652-655          | Elective 2                          | 2         |
| <b>Total Credits</b> |                                     | <b>14</b> |

| <b>List of Electives</b> |                           |         |
|--------------------------|---------------------------|---------|
| Course Code              | Name of Courses           | Credits |
| LSC 652                  | Biochemistry of proteins  | 2       |
| LSC 653                  | Plant Genetic Engineering | 2       |
| LSC 654                  | Structural Biology        | 2       |
| LSC 655                  | Stress Biology            | 2       |

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.

## Facilities & Resources

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, Real time PCR, 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 of plants, parasite biology, physiology/endocrinology etc.

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 connected with high band-width of 1 Gbps Internet Connection.

## II. Centre for Environmental Sciences

The Centre 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.

### 1. Ph.D in Environmental Science

**List of Courses in Ph.D. Environmental Science** - Centre for Environmental Sciences is currently offering Ph.D. in Environmental Science.

| Course Code | Course Title                                      | Credit    |
|-------------|---|-----------|
| EVS 901     | Research Methodology                              | 4         |
| EVS 902     | Tools and Techniques of Research                  | 4         |
| EVS 903     | Preparation and Presentation of Research Proposal | 4         |
|             | <b>Total Credits:</b>                             | <b>12</b> |

### 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 (72 Credits)

(likely to be modified as per CBCS)

| Course Code          | Course Title   | Credit |
|----------------------|--|--------|
| <b>Semester -I</b>   |  |        |
| ESC 501              | Basic Biology  | -      |
| ESC 502              | Basic Mathematics  | -      |
| ESC 503              | Introduction to Ecology and Environmental Sciences                                 | 3      |
| ESC 504              | Social and Developmental perspectives  | 2      |
| ESC 505              | Environmental Chemistry  | 3      |
| ESC 506              | Environmental Geosciences  | 3      |
| ESC 507              | Environmental Biology  | 3      |
| ESC 508              | Practical- I   | 2      |
| <b>Total Credit</b>  |  | 16     |
| <b>Semester –II</b>  |  |        |
| ESC 551              | Statistical Methods and Computer Applications                                      | 3      |
| ESC 552              | Atmospheric Sciences and Climate Change  | 3      |
| ESC 553              | Natural Resources and their Management   | 3      |
| ESC 554              | Energy and Environment   | 3      |
| ESC 555              | Environmental Policies, Laws and Ethics  | 3      |
| ESC 556              | Practical- II  | 3      |
| <b>Total Credit</b>  |  | 18     |
| <b>Summer</b>        |  |        |
| ESC 601              | Summer Internship (The points of ESC601 will be added to 3 <sup>rd</sup> semester) | 2      |
| <b>Semester –III</b> |  |        |
| ESC 602              | Analytical Methods   | 3      |
| ESC 603              | Environmental Impact Assessment  | 3      |
| ESC 604              | Water Pollution: Causes, Consequences and Control                                  | 3      |
| ESC 605              | Air Pollution: Causes, Consequences and Control                                    | 3      |
| ESC 606              | Remote Sensing and GIS   | 3      |
| ESC 607              | Research: Methodology and Proposal   | 2      |
| ESC ***              | Elective - I   | 3      |
| <b>Total Credit</b>  |  | 20     |
| <b>Semester – IV</b> |  |        |
| ESC ***              | Select any electives course (s) from the given list                                | 6      |
| ESC 699              | Dissertation   | 10     |
| <b>Total credit</b>  |  | 16     |

### Elective Basket#

| Course Code | Course Title                            | Credits |
|-------------|---|---------|
| ESC 608     | Environmental Economics                 | 2       |
| ESC 609     | Industrial Environment Management       | 2       |
| ESC 610     | Environmental Education                 | 2       |
| ESC 611     | Environmental Modeling                  | 2       |
| ESC 612     | Disaster Management                     | 2       |
| ESC 613     | Bio-geo chemical cycles                 | 2       |
| ESC 614     | Solid Waste Management                  | 2       |
| ESC 652     | Environmental Biotechnology             | 3       |
| ESC 653     | Soil Science                            | 3       |
| ESC 654     | Hydrology and Water Resources           | 3       |
| ESC 655     | River and Wetland Ecosystems            | 3       |
| ESC 656     | Biodiversity and Conservation Biology   | 3       |
| ESC 657     | Eco-toxicology and Environmental Health | 3       |
| ESC 658     | Restoration Ecology                     | 3       |

\*\*\* Courses from elective basket may be offered in 3<sup>rd</sup> as well as 4<sup>th</sup> semester

#### Laboratory : Facility & Resources

The Centre 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.

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## SCHOOL OF SOCIAL SCIENCES & POLICY

### I. Centre for Development Studies

The Centre for Development Studies was the first academic unit of this university since its very inception and hence offers a special thrust to its intellectual terrain. Its interdisciplinary nature makes it all the more exciting and versatile in a knowledge society like that of ours. Furthermore, in 21st century India, Development Studies has emerged as a discipline incorporating gamut of changes in different frontiers like social-economic, political, cultural and human development as such. There are only a few institutions in India that train competent manpower required by national and international agencies engaged in the developmental sector. The demand for development professionals has been increasing with the expansion of the frontier of development interventions in the social sector. The Centre of Development Studies attempts to make unique contributions by training the budding agents for development and change, alongside preparing students who may opt for higher studies and look forward to a career in teaching profession.

- 1. Ph.D in Development Studies** - Centre for Development Studies is currently offering Ph.D. in Development Studies.

#### List of Courses in PhD. Development Studies

| 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         |
|             | <b>Total Credits:</b>                             | <b>12</b> |

### 2. M. A. Development Studies

The Centre offers a two-year Master's Programme in Development Studies. It aims to disseminate and advance knowledge by providing instructional and research facilities; to take appropriate measures for promoting innovations in teaching-learning process and interdisciplinary 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 along with their intellectual, academic and cultural development.

## List of Courses in M. A. Development Studies (76 Credits)

(likely to be modified as per CBCS)

| Course Code          | Course Title   | Credits           | List of skills with no of credits mentioned |                          |                      |
|----------------------|--|-------------------|---|--------------------------|----------------------|
|                      |  |                   | Development Theory(28)                      | Development Practice(29) | Development Research |
| <b>Semester – I</b>  |  |                   |   |                          |                      |
| DVS 501              | Anthropology/ Sociology and Development              | 04                | ✓   |                          |                      |
| DVS 502              | State, Governance and Development                    | 04                | ✓   |                          |                      |
| DVS 503              | Development Economics: Theory, History & Experience  | 04                |   |                          |                      |
|                      |  |                   | ✓   |                          |                      |
| DVS 504              | The Practice of History in understanding Development | 03                | ✓   |                          |                      |
| DVS 505              | Qualitative Methods in Research                      | 02                |   |                          | ✓                    |
| DVS 506              | Quantitative Methods in Research                     | 03                |   |                          | ✓                    |
|                      | <b>Total</b>   | <b>20</b>         | <b>Credit 15 Credits</b>                    | <b>00 Credits</b>        | <b>05 Credits</b>    |
| <b>Semester - II</b> |  |                   |   |                          |                      |
| DVS 551              | Post-Colonial Perspectives of Development            | 03                | ✓   |                          |                      |
| DVS 552              | Human Development                                    | 03                | ✓   |                          |                      |
| DVS 553              | Foundation of Human Rights                           | 02                | ✓   |                          |                      |
| DVS 554              | Law and Development                                  | 03                | ✓   |                          |                      |
| DVS 555              | Culture and Development                              | 02                | ✓   |                          |                      |
| DVS 556              | Research Methodology                                 | 02                |   |                          | ✓                    |
| DVS 557              | Thesis Proposal and Literature Survey                | 02                |   |                          | ✓                    |
| DVS 558              | Comprehensive Viva Voce-I                            | 01                |   |                          | ✓                    |
|                      | <b>Total</b>   | <b>18 Credits</b> |   |                          |                      |

| <b>Summer Internship</b> |              |                   |                   |                   |                   |  |
|--------------------------|--------------|-------------------|-------------------|-------------------|-------------------|--|
| DVS 559                  | Internship   | 02                |                   |                   |                   |  |
|                          | <b>Total</b> | <b>02 Credits</b> | <b>13 Credits</b> | <b>00 Credits</b> | <b>07 Credits</b> |  |

| Semester-III |   |           |                |                   |                   |
|--------------|---|-----------|----------------|-------------------|-------------------|
| DVS 601      | Principles and Practices of Public Policy   | 03        |                | ✓                 |                   |
| DVS 602      | Political Economy of India's Development    | 02        |                | ✓                 |                   |
| DVS 603      | Agrarian Change and Development             | 02        |                | ✓                 |                   |
| DVS 604      | Gender and Development                      | 02        |                | ✓                 |                   |
| DVS 605      | Demography and Development                  | 02        |                | ✓                 |                   |
| DVS 606      | Public Health                               | 02        |                | ✓                 |                   |
| DVS 607      | Thesis Based Field work & Data Analysis     | 02        |                |                   | ✓                 |
| DVS ***      | Two Elective Courses                        | 04        |                | ✓                 |                   |
|              | <b>Total</b>                                | <b>19</b> | <b>Credits</b> | <b>00 Credits</b> | <b>17 Credits</b> |
|              |   |           |                |                   | <b>02 Credits</b> |
| Semester-IV  |   |           |                |                   |                   |
| DVS 651      | International Political Economy             | 02        |                | ✓                 |                   |
| DVS 652      | Industrialization, Globalisation and Labour | 02        |                | ✓                 |                   |
| DVS 653      | Environment and Development                 | 02        |                | ✓                 |                   |
| DVS 654      | Development Communication                   | 02        |                | ✓                 |                   |
| DVS 655      | Strategies for Social Intervention          | 02        |                |                   | ✓                 |
| DVS 656      | Thesis Writing and Seminar                  | 04        |                |                   | ✓                 |
| DVS 657      | Comprehensive Viva Voce-II                  | 01        |                |                   | ✓                 |
| DVS ***      | Two Elective Courses                        | 04        |                | ✓                 |                   |
|              | <b>Total</b>                                | <b>19</b> | <b>Credits</b> | <b>00 Credits</b> | <b>12 Credits</b> |
|              |   |           |                |                   | <b>07 Credits</b> |

## II. Centre for Economic Studies and Policies (CESP)

The Centre for Economic Studies and Policies (CESP) looks at academic engagement with a difference. While the major focus is on teaching of basic principles of economics, the Centre's search is for new epistemology, both in theory and practice. It keeps on improving its course curriculum 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 Centre 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 Centre 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.

### **1. Ph.D. Programme 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. Economics**

| <b>Course Code</b> | <b>Course Title</b>                               | <b>Credit</b> |
|--------------------|---|---------------|
| ECO 901            | Research Methodology                              | 4             |
| ECO 902            | Tools and Techniques of Research                  | 4             |
| ECO 903            | Preparation and Presentation of Research Proposal | 4             |
|                    | <b>Total Credits:</b>                             | <b>12</b>     |

### **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 carrier in the corporate/government sectors.

### List of Courses in M.A. Economics (74 Credits)

(likely to be modified as per CBCS)

| <b>Course Structure</b> |  |                |
|-------------------------|--|----------------|
| <i>Course Code</i>      | <i>Course Title</i>                      | <i>Credits</i> |
| <b>Semester I</b>       |  |                |
| ECO 501                 | Microeconomics I                         | 4              |
| ECO 502                 | Macroeconomics I                         | 4              |
| ECO 503                 | Mathematical Methods for Economics       | 4              |
| ECO 504                 | Introductory Statistics and Econometrics | 4              |
|                         | <b>Total Credits</b>                     | <b>16</b>      |
| <b>Semester II</b>      |  |                |
| ECO 551                 | Microeconomics II                        | 4              |
| ECO 552                 | Macroeconomics II                        | 4              |
| ECO 553                 | Development Economics                    | 4              |
| ECO 554                 | International Economics                  | 4              |
| ECO 555                 | Econometrics with Software Applications  | 4              |
|                         | <b>Total Credits</b>                     | <b>20</b>      |
| <b>Semester III</b>     |  |                |
| ECO 601                 | History of Economic Ideas                | 4              |
| ECO 602                 | Public Finance                           | 4              |
| ECO 603                 | Indian Economic Development              | 4              |
| ECO*                    | Elective I                               | 4              |
| ECO*                    | Elective II                              | 4              |
|                         | <b>Total Credits</b>                     | <b>20</b>      |
| <b>Semester IV</b>      |  |                |
| ECO 651                 | Environmental Economics                  | 4              |
| ECO*                    | Elective III                             | 4              |
| ECO*                    | Elective IV                              | 4              |
| ECO 691                 | Group Project                            | 4              |
| ECO 692                 | Comprehensive Economics                  | 2              |
|                         | <b>Total Credits</b>                     | <b>18</b>      |

*[\*Courses to be offered as elective papers are announced before commencement of the semester. The students will choose two elective papers in 3<sup>rd</sup> semester from a single group, and they will be free to choose two elective papers in 4<sup>th</sup> semester from any group.]*

#### Elective Courses\* [4 credits each]

##### Group I: Financial Economics

ECO 604: Money and Banking  
 ECO 605: Economics of Financial Markets  
 ECO 606: Corporate Finance  
 ECO 656: International Finance  
 ECO 657: Financial Econometrics

##### Group II: Development Economics

ECO 652: Agricultural Economics  
 ECO 653: Industrial Economics  
 ECO 654: Human Development  
 ECO 655: Public Economics  
 ECO 607: Population and Development  
 ECO 608: Law and Economics

|   |
|---|
| ECO 609: Economics of Education and Health<br>ECO 613: Political Economy of Development   |
| <b>Group III: Quantitative Economics</b>  |
| ECO 610: Optimisation in Economic Theory<br>ECO 611: Game Theory with Application to Economics<br>ECO 612: Time Series Analysis<br>ECO 658: Advanced Topics in Applied Econometrics<br>ECO 659: Application of Simulation Techniques in Economics |

### III. Centre for Political Studies

The Centre for Political Studies (CPS) is one of the Centres 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 centre continuously endeavours to blend its teaching engagement with empirical research. CPS 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 centre 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 Centre provides an opportunity to combine both theory and practice. The Centre 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 post-graduate programme, the centre 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 Center has taken the initiatives to provide good, ethical, knowledgeable, and employable citizens to the society.

- 1. Ph.D in Political Science & International Relations** - Centre for 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                  | 4         |
| PSC 903     | Preparation and Presentation of Research Proposal | 4         |
|             | <b>Total Credits:</b>                             | <b>12</b> |

## 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 (80 Credits) (Likely to be modified as per CBCS)

| Course Code           | Course Title                         | Credits   |
|-----------------------|--------------------------------------|-----------|
| <b>Semester - I</b>   |                                      |           |
| PSC 501               | Introduction to Politics             | 4         |
| PSC 502               | Contemporary Political Theory        | 4         |
| PSC 503               | Indian Administration                | 4         |
| PSC 504               | Politics in India                    | 4         |
| PSC 505               | Theories of International Relations  | 4         |
| <b>Total Credits</b>  |                                      | <b>20</b> |
| <b>Semester - II</b>  |                                      |           |
| PSC 551               | Western Political Thought            | 4         |
| PSC 552               | Theories of Comparative Politics     | 4         |
| PSC 553               | Administrative Theories              | 4         |
| PSC 554               | Issues in International Relations    | 4         |
| PSC 555               | State Politics in India              | 4         |
| <b>Total Credits</b>  |                                      | <b>20</b> |
| <b>Semester - III</b> |                                      |           |
| PSC 601               | India's Foreign Policy               | 4         |
| PSC 602               | International Organizations          | 4         |
| PSC 603               | Indian Political Thought             | 4         |
| PSC 604               | Marxism after Marx                   | 4         |
| PSC ***               | Elective Basket                      | 4         |
| <b>Total Credits</b>  |                                      | <b>20</b> |
| <b>Semester - IV</b>  |                                      |           |
| PSC 651               | International Political Economy      | 4         |
| PSC 652               | Public Policy in India               | 4         |
| PSC 653               | International Law                    | 4         |
| PSC 654               | Introduction to Research Methodology | 4         |
| PSC 555               | Elective Basket                      | 4         |
| <b>Total Credits</b>  |                                      | <b>20</b> |

| Elective Basket for Optional Courses |        |  |    |        |  |
|--------------------------------------|--------|--|----|--------|--|
| SN                                   | Code   | Semester III   | SN | Code   | Semester IV                                  |
|                                      | PSC605 | Ideas and Institutions in Ancient Indian Political Thought | 1  | PSC655 | Multiculturalism                             |
|                                      | PSC606 | Development Administration                                 | 2  | PSC656 | Local Government in India                    |
|                                      | PSC607 | Peace and Conflict Resolution                              | 3  | PSC657 | International Peace and Security             |
|                                      | PSC608 | Democracy and Human Rights in India                        | 4  | PSC658 | SAARC: Patterns of Conflict and Co-operation |
|                                      | PSC609 | Globalization  | 5  | PSC659 | Government & Politics in Africa              |
|                                      | PSC610 | Democracy, Resistance & Liberation                         | 6  | PSC660 | State and Politics in Japan                  |
|                                      | PSC611 | Geo-Politics and Geo-Economics in International Relation   |    |        |  |

**Notes:**

- A Student has to opt one paper each in 3<sup>rd</sup> and 4<sup>th</sup> Semesters from the elective basket/ list of optional papers available for the Semesters.
- To encourage CBCS at the University level all the courses are open to all students of post-Graduate programs being offered by other centers/departments
- The number of optional courses offered by the Centre during a particular semester shall be decided by the Centre Committee depending upon the availability of expertise and number of students.
- The M.A. Program shall be governed by the “Regulations for Teaching and Evaluation” 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.

**Salient Features of the Programme**

The Post Graduate Programme of the Centre has been crafted with a view to cater to the needs of students of India as well as foreign nationals. 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. The Centre 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. Hence the programmes are both job-oriented as well as tech-intensive to meet the global imperatives.

#### **IV. Centre for 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 Centre 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 Centre 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 Centre 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 Centre 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 Centre 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 Centre 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 Centre 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.

**1. Ph. D. in Sociology**

The Center 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 PhD. Sociology**

| <b>Course Code</b> | <b>Course Title</b>                               | <b>Credit</b> |
|--------------------|---|---------------|
| SOC 901            | Research Methodology                              | 4             |
| SOC 902            | Tools and Techniques of Research                  | 4             |
| SOC 903            | Preparation and Presentation of Research Proposal | 4             |
|                    | <b>Total Credits:</b>                             | <b>12</b>     |

**2. M.A. in Sociology**

The teaching and research at the Centre 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 Centre 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. Sociology (80 Credits)

(likely to be modified as per CBCS)

| Course Code           | Paper No.         | Courses Title   | Credits   |
|-----------------------|-------------------|---|-----------|
| <b>Semester – I</b>   |                   |   |           |
| SOC 501               | Paper I           | Classical Sociological Thinkers   | 4         |
| SOC 502               | Paper II          | Methodology of Social Research  | 4         |
| SOC 503               | Paper III         | Social Stratification and Mobility  | 4         |
| SOC 504               | Paper IV          | Kinship, Family and Marriage  | 4         |
| SOC 505               | Paper V           | Field Exposure  | 4         |
|                       |                   | <b>Total Credit</b>   | <b>20</b> |
| <b>Semester – II</b>  |                   |   |           |
| SOC 551               | Paper VI          | Sociological Theories – I   | 4         |
| SOC 552               | Paper VII         | Methods and Techniques of Social Research                                 | 4         |
| SOC 553               | Paper VIII        | Indian Society: Structure and Processes                                   | 4         |
| SOC 554               | Paper IX          | Sociology of Urban Life   | 4         |
| SOC 555               | Paper X           | Field Work: Formulation of Research Proposal                              | 4         |
|                       |                   | <b>Total Credit</b>   | <b>20</b> |
| <b>Semester – III</b> |                   |   |           |
| SOC 601               | Paper XI          | Sociological Theories – II  | 4         |
| SOC 602               | Paper XII         | Indian Social Thinkers  | 4         |
| SOC 603               | Paper XIII        | Sociology of Modernisation and Development                                | 4         |
| SOC 604               | Paper XIV         | Perspectives on Indian Society  | 4         |
| SOC 605               | Paper XV          | Field Work: Primary Data Collection                                       | 4         |
|                       |                   | <b>Total Credit</b>   | <b>20</b> |
| <b>Semester – IV</b>  |                   |   |           |
| SOC 651               | Paper XVI         | Ethnicity, Pluralism and Nation Building                                  | 4         |
| SOC 652               | Paper XVII        | Field Work: Report Writing  | 4         |
| SOC                   | Paper XVIII to XX | Any THREE of the Elective courses from SOC 653 – SOC 672 (the list below) | <b>12</b> |
|                       |                   | <b>Total Credit</b>   | <b>20</b> |

| <b>Elective courses</b> (from SOC 653 – 672) |   |
|--|---|
| SOC 653                                      | Sociology of Health and Medicine                |
| SOC 654                                      | Sociology of Religion                           |
| SOC 655                                      | Sociology of Exclusion and Inclusion            |
| SOC 656                                      | Gender and Society                              |
| SOC 657                                      | Sociology of Tribes and Other Indigenous People |
| SOC 658                                      | Globalisation and Social Change                 |
| SOC 659                                      | Sociology of Rural Life                         |
| SOC 660                                      | Polity and Society                              |
| SOC 661                                      | Population and Society                          |
| SOC 662                                      | Sociology of Kinship                            |
| SOC 663                                      | Sociology of Environment                        |
| SOC 664                                      | Indian Diaspora                                 |
| SOC 665                                      | Perspectives in Dalit Studies                   |
| SOC 666                                      | Sociology of Youth and Ageing                   |
| SOC 667                                      | Economy and Society                             |
| SOC 668                                      | Agrarian Structure and Change in India          |
| SOC 669                                      | Sociology of Education                          |
| SOC 670                                      | Urbanization in India                           |
| SOC 671                                      | Sociology of Knowledge                          |
| SOC 672                                      | Social Movement in India                        |
| SOC 373                                      | Contemporary Indian Social Thinkers             |

### 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.

#### List of Courses in M.A. Social Work (80 Credits)

(likely to be modified as per CBCS)

| Paper No.               | Course Code | Course Title  | Credits   |
|-------------------------|-------------|---|-----------|
| <b>Semester I</b>       |             |   |           |
| Paper I                 | SOW 501     | Nature and Development of Social Work                           | 4         |
| Paper II                | SOW 502     | Social Work: Theory and Practice                                | 4         |
| Paper III               | SOW 503     | Sociology for Social Workers                                    | 4         |
| Paper IV                | SOW 504     | Research in Social Work: Quantitative Approaches                | 4         |
| Paper V                 | SOW 505     | Field Work Practicum  | 4         |
|                         |             | <b>Total Credit</b>   | <b>20</b> |
| <b>Semester II</b>      |             |   |           |
| Paper VI                | SOW 551     | Human Rights and Social Legislation                             | 4         |
| Paper VII               | SOW 552     | Ecology, Environment and Social Work                            | 4         |
| Paper VIII              | SOW 553     | Social Policy and Social Welfare Administration                 | 4         |
| Paper IX                | SOW 554     | Research in Social Work: Qualitative Approaches                 | 4         |
| Paper X                 | SOW 555     | Field Work Practicum  | 4         |
|                         |             | <b>Total Credit</b>   | <b>20</b> |
| <b>Semester III</b>     |             |   |           |
| Paper XI                | SOW 601     | Dynamics of Development   | 4         |
| Paper XII               | SOW 602     | Contemporary Social Problems                                    | 4         |
| Paper XIII              | SOW 603     | Human Rights and Social Justice                                 | 4         |
| Paper XIV               | SOW 604     | Community Organization and Social Action                        | 4         |
| Paper XV                | SOW 605     | Field work Practicum  | 4         |
|                         |             | <b>Total Credit</b>   | <b>20</b> |
| <b>Semester IV</b>      |             |   |           |
| Paper XVI               | SOW 651     | Population Dynamics and Gender Issues                           | 4         |
| Paper XVII              | SOW 652     | Field Work Practicum  | 4         |
| Paper XVIII to Paper XX | SOW ***     | <b>ELECTIVES (Any three paper from the available electives)</b> | 12        |
|                         |             | <b>Total Credit</b>   | <b>20</b> |

**ELECTIVES COURSES (Any three paper from the available electives)**

|          |  |
|----------|--|
| SOW 653: | Urban Community Development Discourse    |
| SOW 654: | Rural Community Development Discourse    |
| SOW 655: | Social Work in Health System             |
| SOW 656: | Social Work and Elderly People           |
| SOW 657: | Social Defense and Correctional Services |
| SOW 658: | Social Work and Disaster Management      |
| SOW 659: | Social Work with Family                  |
| SOW 660: | Conflict Management and Peace Building   |
| SOW 661: | Gender and Development                   |
| SOW 662: | Social Work in Occupation                |
| SOW 663: | Dissertation                             |

## **V. Centre for Historical Studies and Archaeology**

The Centre for 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 Centre to endeavour towards further exploring the erstwhile historical phenomena entailing newer and innovative approaches exploiting the ever growing interface between education and technology. The Centre endeavours 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 the centre's teaching-learning method.

### **Objectives:**

- The primary objective of the Centre 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.

## **1. M.A in History**

The Centre offers Master programme in History which comprises of four semesters for the period of two years. Through a suitably structures and balanced syllabus incorporating various dimensions of historical studies, the programme emphasises 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. The students are supposed to be equipped with new approaches towards historical studies and utilize them in the comprehension of the existing challenges. To make the discipline relevant the programme visualizes a two way communication between the present and the past.

### **Features of the Teaching-learning**

- Apart from conventional chalk and talk method, the use of ICT based smart class room facility such as LCD projectors.
- Multi-disciplinary approach through option of acquiring credits in other disciplines such as Sociology, Economics, and Political Sciences.
- Adherence to the system of tutorials.
- Field trips to the places of historical and archaeological significance to get first-hand knowledge.
- Constant dialogue in the discipline through the coordination of the conferences, seminar series, invited lectures of the distinguished scholars to disseminate advanced knowledge in the discipline.
- Group discussion and individual seminars to enhance the skills of communication and the personality development of the students.

### **Aim of the Course**

The Centre offers Master programme in History which provides a basic understanding of Historical concepts, perspectives and methodology and attempts to familiarize the students with the fundamentals of Indian History, Asian History and World History. Through a suitably structured and balanced syllabus incorporating various dimensions of historical studies, the programme emphasises 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. The students are supposed to be equipped with new approaches towards historical studies and utilize them in the comprehension of the existing challenges. To make the discipline relevant the programme visualizes a two way communication between the present and the past.

The Course of M.A Programme in History carries total 72 credits. There are 4 core papers each in first and second semesters, 3 core papers in third semester and 2 core papers in fourth semester. Thus there are thirteen core papers in total. Specialization courses are presently offered in Ancient, Medieval and Modern History which are referred to as Group A, Group B and Group C respectively. Semester third offers two specialization papers from the groups selected by the student alongwith three core papers as mentioned above. Semester four offers three specialization papers from the group previously selected by the student alongwith two core papers. Each paper carries 4 credits. The group specialization will be decided by the Department as per the existing rules of the University.

## List of Courses in M.A. History (72 Credits)

(Likely to be modified as per CBCS)

| Course Code                                | Course  | Nature of Course | Credits |
|--|---|------------------|---------|
| <b>Semester 1</b>                          |   |                  |         |
| HIS 601                                    | Historiography: Concept, Methods and Evolution                              | Core             | 4       |
| HIS 602                                    | Principles, Methods and History Of Archaeology                              | Core             | 4       |
| HIS 603                                    | Art, Architecture and Heritage in India                                     | Core             | 4       |
| HIS 604                                    | Indian Nationalism and National Movement (Pre Gandhian Era)                 | Core             | 4       |
| <b>SEMESTER II</b>                         |   |                  |         |
| HIS 651                                    | Historiographical Traditions and Trends in India                            | Core             | 4       |
| HIS 652                                    | History of Ancient India Up to 800 CE                                       | Core             | 4       |
| HIS 653                                    | History of Science & Technology in India                                    | Core             | 4       |
| HIS 654                                    | Indian National Movement (1920-1947)  | Core             | 4       |
| <b>Semester III</b>                        |   |                  |         |
| HIS 751                                    | Intellectual Traditions in Ancient India                                    | Specialization   | 4       |
| HIS 752                                    | Society, Culture and Religion in India from early times to 1200 AD          | Specialization   | 4       |
| OR   |   |                  |         |
| HIS 801                                    | History of Ideas in Medieval India  | Specialization   | 4       |
| HIS 802                                    | Society, Culture and Religion in Medieval India                             | Specialization   | 4       |
| OR   |   |                  |         |
| HIS 851                                    | History of Ideas in Modern India  | Specialization   | 4       |
| HIS 852                                    | Economic Issues, Policies and Perspectives in Colonial India                | Specialization   | 4       |
| HIS 703                                    | History of Medieval India (8 <sup>th</sup> to 18 <sup>th</sup> Century AD.) | Core             | 4       |
| HIS 704                                    | History of Ecology & Environment in India                                   | Core             | 4       |
| HIS 705                                    | Contemporary World (Since 1945)   | Core             | 4       |
| <b>Semester IV (Core papers for all)</b>   |   |                  |         |
| HIS 701                                    | Concept and Methodology of Historical Research and Investigation            | Core             | 4       |
| HIS 702                                    | Selected Readings in Modern Asian History                                   | Core             | 4       |
| <b>Semester IV (Specialization Papers)</b> |   |                  |         |
| <b>(Group A Ancient India)</b>             |   |                  |         |
| HIS 753                                    | State, Law, and Governance in Ancient India                                 | Specialization   | 4       |
| HIS 754                                    | Aspects of Economic Life in Ancient India                                   | Specialization   | 4       |
| HIS 755                                    | Dissertation & Viva Voce  | Specialization   | 4       |
| <b>(Group B Medieval India)</b>            |   |                  |         |
| HIS 803                                    | State, Law, and Governance in Medieval India                                | Specialization   | 4       |
| HIS 804                                    | Aspects of Economic Life in Medieval India                                  | Specialization   | 4       |
| HIS 805                                    | Dissertation & Viva Voce  | Specialization   | 4       |
| <b>(Group C Modern India)</b>              |   |                  |         |
| HIS 853                                    | State, Governance and Law in Modern India                                   | Specialization   | 4       |
| HIS 854                                    | Specialization  |                  | 4       |
| HIS 855                                    | Dissertation & Viva Voce  | Specialization   | 4       |

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## 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.

### I. Centre for 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.

1. **Ph.D in Psychology** - Centre for Psychological Sciences is currently offering Ph.D. in Psychology.

#### List of Courses in PhD. Psychology

| Course Code | Course Title                                      | Credit    |
|-------------|---|-----------|
| PSY 901     | Research Methodology                              | 4         |
| PSY 902     | Tools and Techniques of Research                  | 4         |
| PSY 903     | Preparation and Presentation of Research Proposal | 4         |
|             | <b>Total Credits:</b>                             | <b>12</b> |

2. **Ph.D in Clinical Psychology** - Centre for Psychological Sciences is currently offering Ph.D. in Clinical Psychology.

#### List of Courses in PhD. Clinical Psychology

| Course Code | Course Title                                      | Credit    |
|-------------|---|-----------|
| PSYC 901    | Research Methodology                              | 4         |
| PSYC 902    | Tools and Techniques of Research                  | 4         |
| PSYC 903    | Preparation and Presentation of Research Proposal | 4         |
|             | <b>Total Credits:</b>                             | <b>12</b> |

### 3. M.A in Psychology

Master's programme in Psychology offers specialization in Social Psychology, Organizational Behaviour, Clinical Psychology and Counselling Psychology aiming at preparing specialized psychologists.

#### List of Courses in M.A. in Psychology (74 Credits)

(Likely to be modified as per CBCS)

| Course Code           | Course Title   | Credits   |
|-----------------------|--|-----------|
| <b>Semester - I</b>   |  |           |
| PSY501                | Cognitive Processes                                  | 4         |
| PSY502                | Affect and Motivation                                | 4         |
| PSY503                | Biological Bases of Behaviour                        | 2         |
| PSY531                | Research Method and Experimental Design              | 4         |
| PSY532                | Quantitative Data Analysis – I                       | 2         |
| PSY533                | Test Construction                                    | 2         |
| <b>Total</b>          |  | <b>18</b> |
| <b>Semester - II</b>  |  |           |
| PSY551                | Understanding Pathological Behaviour                 | 4         |
| PSY552                | Understanding Social Behaviour                       | 4         |
| PSY553                | Understanding Organizational Behaviour               | 4         |
| PSY571                | Quantitative Data Analysis – II                      | 2         |
| PSY581                | Psychology Lab                                       | 2         |
| PSY591                | Thesis/Project                                       | 2         |
| <b>Total</b>          |  | <b>18</b> |
| PSY592                | Summer Internship                                    | 2         |
| <b>Semester - III</b> |  |           |
| PSY ***               | Elective Course I (611/621/631)                      | 4         |
| PSY601                | Life Span Development                                | 4         |
| PSY602                | Self and Personality                                 | 4         |
| PSY603                | Psychological Assessment                             | 4         |
| PSY641                | Thesis/Project                                       | 2         |
| <b>Total</b>          |  | <b>18</b> |
| <b>Semester – IV</b>  |  |           |
| PSY ***               | Elective Course II                                   | 4         |
| PSY ***               | Elective Course III<br>(any 4 Credits course)        | 4         |
| PSY ***               | Elective Course IV<br>(for clinical and counselling) | 2         |
| PSY651                | Internship (for clinical and counselling)            | 2         |
| PSY661                | Qualitative Method and Analysis                      | 4         |
| PSY691                | Thesis/ Project                                      | 4         |
| PSY695                | Viva-voce  | 2         |
| <b>Total</b>          |  | <b>18</b> |

\*\*\* Courses will be taken from Elective Basket

## Elective Basket

| <b>Social Psychology</b> |                                     |   |
|--------------------------|-------------------------------------|---|
| PSY611                   | Social Cognition and Behaviour      | 4 |
| PSY651                   | Social Psychology in                | 4 |
|                          | Contemporary World                  |   |
| PSY652                   | Intergroup Relation and             | 4 |
|                          | Collective Behaviour                |   |
|                          | Organizational Behaviour            |   |
| PSY621                   | Group Dynamics in Organizations     | 4 |
| PSY661                   | Organizational Development & Change | 4 |
| PSY662                   | Human Resource Management           | 4 |
|                          | Counselling Psychology              |   |
| PSY671                   | Therapeutic Intervention            | 4 |
| PSY672*                  | Clinical Assessment                 | 2 |
| PSY673                   | Counselling Techniques Approaches   | 4 |
|                          |                                     |   |
|                          | Clinical Psychology                 |   |
| PSY631                   | Psychopathology                     | 4 |
| PSY671                   | Therapeutic Intervention            | 4 |
| PSY672*                  | Clinical Assessment                 | 2 |

Note: \* Theory classes will remain same for the course PSY 672. However, laboratory work will be as per requirements of the two specializations, i.e. Counselling and Clinical Psychology.

### 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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## **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 edifies with its Centre for Foreign Languages (English) and the Centre for Indian Languages (Hindi and Urdu). The two Centres 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.

### **I. Centre for Foreign Languages (English)**

The Centre for Foreign Languages (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 skilful 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 to meet the contemporary requirements of the challenging language tasks. The Centre 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 Centre 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.

#### **1. Ph.D. English**

The Ph.D. programme in English offers to the student 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: Australian, Canadian, African, Caribbean, Film and Literature, Feminist Studies, Cultural Studies, Postcolonial Studies, Literary Theory and Criticism, Translation Studies, and Linguistics.

### List of Courses in PhD. English

| Course Code | Course Title                                      | Credit    |
|-------------|---|-----------|
| ENG 901     | Research Methodology                              | 4         |
| ENG 902     | Tools and Techniques of Research                  | 4         |
| ENG 903     | Preparation and Presentation of Research Proposal | 4         |
|             | <b>Total Credits:</b>                             | <b>12</b> |

## 2. M.A. in English

The two-year (four semesters) postgraduate 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 16<sup>th</sup> century to 20<sup>th</sup> 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, 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 SWAYAM courses, are there in the syllabus to give a wider choice to the students.

### List of Courses in M.A. English (78 Credits)

(Likely to be modified as per CBCS)

| Course Code | Course Title   | Credit    |
|-------------|--|-----------|
|             | <b>Semester – I</b>  |           |
| ENG 501     | Foundation in Writing & Communication Skills                           | 2         |
| ENG 502     | Introduction to English Language                                       | 4         |
| ENG 503     | Geoffrey Chaucer to the Renaissance                                    | 2         |
| ENG 504     | Shakespeare and the Seventeenth-Century British Literature and Thought | 4         |
| ENG 505     | Eighteenth Century British Literature                                  | 4         |
| ENG 506     | Romantic Literature and Thought  | 4         |
|             | <b>Total Credits</b>   | <b>20</b> |
|             | <b>Semester – II</b>   |           |
| ENG 551     | Translation: Theory and Practice                                       | 4         |
| ENG 552     | Linguistics and English in India                                       | 4         |
| ENG 553     | British Literature and Thought of the Victorian Age                    | 4         |

|                        |  |                |
|------------------------|--|----------------|
| ENG 554                | Literary Criticism : The Major Texts         | 4              |
| ENG 555                | Indian Literature in English Translation     | 4              |
|                        | <b>Total Credits</b>                         | <b>20</b>      |
| <b>Semester – III</b>  |  |                |
| ENG 601                | English Language Teaching                    | 4              |
| ENG 602                | Literary Theory : The Major Texts            | 4              |
| ENG 603                | American Literature                          | 4              |
| ENG 604                | New Literatures in English                   | 4              |
| ENG 605                | Twentieth Century British Literature         | 4              |
|                        | <b>Total Credits</b>                         | <b>20</b>      |
| <b>Semester – IV</b>   |  |                |
| ENG 651                | Indian Writing in English                    | 4              |
| ENG 652                | European Literature in English Translation   | 4              |
| ENG 653                | Research Methodology and Writing Skills      | 2              |
| ENG ***                | Elective – I                                 | 4              |
| ENG ***                | Elective – II                                | 4              |
|                        | <b>Total Credits</b>                         | <b>18</b>      |
|                        | <b>Total Credits</b>                         | <b>78</b>      |
| <b>Elective Basket</b> |  |                |
| <b>Course Code</b>     | <b>Course Title</b>                          | <b>Credits</b> |
| ENG 654                | Indian Intellectual Traditions               | 4              |
| ENG 655                | Tribal and Dalit Literatures in English      | 4              |
| ENG 656                | African Literature & Caribbean Literature    | 4              |
| ENG 657                | South Asian Literature                       | 4              |
| ENG 658                | Gender and Sexuality                         | 4              |
| ENG 659                | Film and Literature                          | 4              |
| ENG 660                | Indian English Novel                         | 4              |
| ENG 661                | Material Design in ELT                       | 4              |
| ENG 662                | Poetics and Aesthetics (SWAYAM course: 3906) | 4              |

Note: The elective courses to be taught in the semester shall be decided by the Centre Committee depending on the availability of expertise and number of students.

## II. Hkkjrh; Hkk"kk dsUnz ¼fgUnh] mnZw½

^Hkkjrh; Hkk"kk dsUnz\* Hkk"kk vkSj lkfgR; ds v/;;u&v/;kiu ds lkFk fo|kfFkZ;ksa esa mPPkLrjh; 'kks/k&vfHk#fp fodflr djus ds fy, izfrc) gSA ;g Hkk"kk vkSj lkfgR; ds ek/;e ls Hkkjrh; lekt dh cgqvk;keh lkaL—frd fofokrkvksa dk v/;;u djrk gSA ;g lkfgR; vkSj lekt dh mR—"V ijaijvkksa ,oa fojklr dks v{kq..k j[krs gq,] jpuk'khyrk ds fodkl rFkk Kku ds u;s vuq'kkluksa dh jpuk ,oa muesa ijLij laokn dh vksj mUeq[k gSA blds lkFk] ;g dsUnz cnyrs oS'od ifjn``; esa u;h rduhd ,oa lapkj dh fn'kk esa vxzlj gksrs gq,]

Hkkjrh; Hkk"kkvksa dks jkstxkjidd cukus ds fy, Hkh iz;kljr gSA orZeku esa bl dsaae esa ^,e-,- fgUnh\* vkSj ^ih&,p-Mh- fgUnh\* ds ikBîØe lapkfyR gks jgs gSa A blds vykok] ^Hkkjrh; Hkk"kk dsUæ\* ds f'k{kdk ^f'k{k&dsaae\* ¼nf{k.k fcgkj dsUæh; foÜofokjy;½ ds ch-,-&ch-&,M- ¼,dh—r½ dk;ZØe\* esa ^fgUnh\* vkSj ^mnZw\* fo"i;ksa ds vè;kiu dh ftEesnkjh Hkh fuHkk jgs gSaA ^dsaae\* dh Hkkoh ;kstuvksa esa ^fHkfÜk&if=dk\* o ^kks/k&if=dk\* ¼Nekgh½ dk izdk'ku] foHkkxh; CykWx o fQ+Ye&vfHkys[kkxkj dk fuekZ.k] ^ehfM;k vkSj jpukRed ys[ku\* fo"i; esa LukrdksÜkj fMlyksek dksIZ 'kq: djuk] lkfgR;dkjksa vkSj Hkk"kkfoKkfu;ksa dh Le`fr esa O;k;kuekyk dk vkjEHk] ikÜozorÊ {ks=ksa esa ykds&lkfgR; dk loZs{k.k} lekt ds oafpr lewgksa ls IEC) vè;;u ds fy, ^lkfo=hckbZ Qqys vè;;u&ihB\* avkSj ^fganh\* o ^mnZw\* esa nks 'kksèk&ihB LFkkfir djuk vkfn 'kkfey gSa A

**I. ih&,p-Mh- fgUnh % dksIZodZ ikBîØe dh lajpuk ¼dqy ØsfMV 12½**

| <b>dksIZ dksM</b> | <b>dksIZ dk 'kh"kd</b>             | <b>ØsfMV</b> |
|-------------------|------------------------------------|--------------|
| HIN 901           | 'kksèk&dk;Zç.kkyh                  | 4            |
| HIN 902           | 'kksèk % midj.k vkSj çfofèk        | 4            |
| HIN 903           | 'kksèk&çLrko % fuekZ.k vkSj çLrqfr | 4            |
|                   | dqy                                | 12           |

**II. ,e-,- fganh ikB~Øe**

orZeku esa lapkfyR ^LukrdksÜkj fganh ikB~Øe\* fganh Hkk"kk vkSj lkfgR; esa uohu ,oa ekSfyd 'kks/k esa #fp j[kusokyksa ds lkFk muds fy, Hkh mi;ksxh gS] tks vuqokn] ItZukRed ys[ku] v[kckj] Vsyhfotu] flusek vkSj u;s ehfM;k esa viuh çfrHkk dk fofu;ksx djuk pkgrs gSa A bldk mís'; ekSf[kd ,oa fyf[kr Hkkf"kd n{krk vkSj fo'ys"n.k&{kerk fodflr djus ds lkFk&lkFk] fganh lkfgR; dks fganhrj Hkkjrh; lkfgR;] fo'o&lkfgR; rFkk Kku ds fofoèk vuq'kkluksa ds ifjçs{; esa le>uk gSA bl ikB~;Øe dh lgk;rk ls fo|kfFkZ;ksa esa lkfgR; dh fofoèk:i vkLoknu&{kerk dk gh ugha] cfYd Kku o thou ds fofoèk vk;keksa esa ç;ksx djus ;ksX; vkykspukRed foosd dk Hkh fodkl IEHko gS A ikB~;Øe ds varxZr LukrdksÜkj Lrj ij gh fo|kfFkZ;ksa dks 'kks/k dh fn'kk esa mUeq[k vkSj çf'kf[kr fd;k tkuk Hkh y{;hHkwr gSA

**^,e-,-fgUnh\* ikBîØe dh lajpuk ¼dqy ØsfMV 72½**

(Likely to be modified as per CBCS)

| <b>dkslZ dksM</b>    | <b>dkslZ dk 'kh" kZd</b>      | <b>ØsfMV</b> |
|----------------------|-------------------------------|--------------|
| <b>igyk lsesLVj</b>  |                               |              |
| HIN 501              | fgUnh lkfgR; dk bfrgkl        | 4            |
| HIN 502              | fgUnh dgkuh                   | 4            |
| HIN 503              | fucUèk vkSj fofòek x  :i      | 4            |
| HIN 504              | vkèkqfud fgUnh dfork : ,d     | 4            |
| dqy                  |                               | 16           |
| <b>nwljk lsesLVj</b> |                               |              |
| HIN 551              | Hkk"kkfoKku vkSj fgUnh Hkk"kk | 4            |
| HIN 552              | fgUnh miU;kl                  | 4            |
| HIN 553              | vfLerkewyd lkfgR;             | 4            |
| HIN 554              | vkèkqfud fgUnh dfork : nks    | 4            |
| HIN 555              | fgUnh ukVd vkSj jaxeap        | 4            |
| dqy                  |                               | 20           |

|                       |   |    |
|-----------------------|---|----|
| <b>rhijk lsesLVj</b>  |   |    |
| HIN 601               | çkphu vkSj eè;dkyhu fgUnh dkO;  | 4  |
| HIN 602               | lkfgR;'kkL= : Hkkjrh; vkSj brj  | 4  |
| HIN 603               | fgUnh&{ks= dk yksd&lkfgR;   | 4  |
| HIN 604               | lkfgR;&vè;;u dk oSpkfd ifjçs{;  | 2  |
| HIN 605               | ç;kstuewyd fgUnh vkSj tulapkj   | 4  |
| dqy                   |   | 20 |
| <b>pkSFkk lsesLVj</b> |   |    |
| HIN 651               | ledkyhu fgUnh lkfgR;  | 4  |
| HIN 652               | fgUnh vkykspuk : IS)kfUrd vkSj O;kogkfd   | 4  |
| HIN 653               | y?q'kksèk&çcUèk ys[ku<br>¼iwjs ikBiØe ls lEc) fdlh fo"k; ij nl gt+kj 'kCnksa esa½ | 4  |
|                       | oSdfYid i=<br>¼fuEufyf[kr esa ls fdlh ,d dk vè;;u½                                | 4  |
| HIN 654               | vuqokn : fl)kUr vkSj ç;ksx  |    |
| HIN 655               | lwQ+h lkfgR;  |    |
| HIN 656               | xtkuu ekèko eqfäcksèk   |    |
| HIN 657               | lkfgR; vkSj flusek  |    |
| HIN 658               | fgUnh i=dkfjrk  |    |
| dqy                   |   | 16 |

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## SCHOOL OF MEDIA, ARTS & AESTHETICS

### I. Centre for Mass Communication and Media

Centre for Mass Communication and Media (CMCM) has been established with an aim to promote quality media studies in higher education. 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.



### Laboratory Facilities & Resources

The Centre has two labs, namely, Electronic Media Production lab and Computer lab. Electronic Media Production lab is well equipped with professional cameras (Panasonic), audio console, video mixer and Apple Mac-Pro editing suite with necessary software. Computer lab comprises a set of ten 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. In future, the Centre plans to establish highly advance Electronic Media Studio. Besides, Hindi and English newspapers and magazines are 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.

1. **Ph.D in Communication and Media Studies** - Centre for Mass Communication and Media is currently offering Ph.D. in Communication and Media Studies.

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

| Course Code | Course Title                                      | Credit    |
|-------------|---|-----------|
| CMS 901     | Research Methodology                              | 4         |
| CMS 902     | Tools and Techniques of Research                  | 4         |
| CMS 903     | Preparation and Presentation of Research Proposal | 4         |
|             | <b>Total Credits:</b>                             | <b>12</b> |

**2. M.A. in Communication and Media Studies**

The programme was established in 2011 with an objective to provide extensive media training and intended human resource to both media industry and academia. The specialization papers in the second year offer in-depth knowledge whereas the first year papers provide stout foundation. So, this course has been designed keeping in mind the current and future needs of media profession with provision of specializations in print, broadcast (radio and television), online and media research.

**List of courses in M.A. Communication & Media Studies (80 Credits)**

(likely to be modified as per CBCS pattern)

| Course Code          | Course Title                            | Credit    |
|----------------------|---|-----------|
| <b>Semester - I</b>  |   |           |
| CMS 501              | Communication : Concept and Process     | 4         |
| CMS 502              | Evolution of Media                      | 4         |
| CMS 503              | Print Journalism                        | 4         |
| CMS 504              | Computer Application in Media           | 4         |
| CMS 505              | Contemporary Issues in Media-1          | 4         |
|                      | <b>Total Credits</b>                    | <b>20</b> |
| <b>Semester - II</b> |   |           |
| CMS 551              | Contemporary Issues in Media- 2         | 2         |
| CMS 552              | Broadcast Journalism                    | 4         |
| CMS 553              | Communication Research                  | 4         |
| CMS 554              | Media Laws and Ethics                   | 2         |
| CMS 555              | Development Communication (Open Course) | 4         |
| CMS 556              | Communication Skills (Open Course)      | 2         |
|                      | <b>Total Credits</b>                    | <b>18</b> |

|                       |   |           |
|-----------------------|---|-----------|
| CMS 557               | Summer Internship                           | 4         |
| <b>Semester - III</b> |   |           |
| CMS 601               | Visual Communication                        | 4         |
| CMS 602               | Communication Technology and New Media      | 4         |
| CMS 603               | Advertising                                 | 2         |
| CMS 604               | Public Relation and corporate Communication | 2         |
| CMS 605               | Dissertation- I                             | 2         |
| CMS ***               | Elective –I                                 | 4         |
| CMS ***               | Elective -II                                | 4         |
|                       | <b>Total Credits</b>                        | <b>22</b> |
| <b>Semester - IV</b>  |   |           |
| CMS 651               | <b>Dissertation - II</b>                    | 4         |
| CMS 652               | Media Management                            | 4         |
| CMS ***               | Elective –IV #                              | 4         |
| CMS ***               | Elective –V #                               | 4         |
|                       | <b>Total Credits</b>                        | <b>16</b> |

Note: # Two of the Elective Courses from CMS 653 to CMS 656. However, CMS 606 & CMS 653, CMS 607 & CMS 654, CMS608& CMS655, and CMS 609&CMS656 shall constitute the cluster of Elective Courses. Open Courses: CMS 555 & CMS 556

**Elective Basket**

| Course Code           | Course Title  | Credits |
|-----------------------|---|---------|
| <b>Semester - III</b> |   |         |
| CMS 606               | Advance Print and Online Journalism                               | 4       |
| CMS 607               | Electronic Journalism   | 4       |
| CMS 608               | Radio fiction and Non-fiction (Non News programme production)     | 4       |
| CMS 609               | TV/Video Fiction and Non-fiction (Non news programme production)  | 4       |
| <b>Semester - IV</b>  |   |         |
| CMS 653               | Newsletter and News Website designing*                            | 4       |
| CMS 654               | Radio/TV News Programme Production*                               | 4       |
| CMS 655               | Radio Fiction and Non-fiction (Non News Programme production)*    | 4       |
| CMS 656               | TV/Video Fiction and Non- fiction (Non news programme production) | 4       |

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## **SCHOOL OF MANAGEMENT**

In the present age of liberalization, privatization and globalization, 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 and management students in such a way that they are able to handle the problems with ease and comfort and succeed in delivering the desired results efficiently and effectively. It is through commerce and management education and training that a pool of competent human resource can be churned out who are able to make innovative plans execute these plans with creativity and bring remarkable changes in performance. It is the magic of professional managerial 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.

In the light of the above growing importance of commerce and management education, there is a heavy public demand for these courses in Bihar also. Bihar, with over 10 crores of population, is the third most populous state in India. Almost 58% of Bihar's population is below 25 years age which is highest in India. Since the existing colleges and universities of Bihar are either unable to accommodate the growing number of higher-education-aspirants or are not providing quality education, a large number of them are compelled to move out of the state for further studies. Hence, the Central University of South Bihar has decided to start the following two Departments under School of Management to cater to the need of the region especially of the socially, economically and regionally underprivileged communities with special emphasis on qualitative education to them. :-

- 1. Department of Commerce and Business Studies.**
- 2. Department of Business Management.**

**I. Department of Commerce & Business Studies** - Business (i.e. industries and commerce) is the backbone of economy of any country. The Englishmen came to India as traders and ultimately became the masters. Commerce includes all economic activities which are related to exchange of goods and services on regular basis with the motto to earn profits by bearing risk. It consists of trade (i.e., purchasing and selling on regular basis) and aids to trade (i.e., economic activities like banking, insurance, transportation, warehousing and advertising etc. which are helpful in trading). In brief, any concern which has transaction of money, a

commerce student has his footing there. Thus, Finance, Accounting & Taxation, Marketing and Human Resource Management are the major branches of commerce. Keeping in mind the fact that commerce education is a rich source of offering lucrative jobs of vivid nature in the country, we propose to start the following courses w.e.f. the academic session 2018-19 which at present are like hot cakes in the educational world:-

### **1. M. Com. – 2-Year (4-Semester)**

**(a) Introduction:** The Master of Commerce is a 2-year (4-Semester) Postgraduate academic degree which gives a comprehensive insight of commerce alongwith an overview of economics and management areas. This course covers the study of Micro & Macro Economics, Financial Accounting, Management Accounting, Principles of Marketing, Elements of Human Resource Management, Business Statistics, Behavioral Sciences, Organisational Theory, Taxation, Operations Research, Research Methodology, Labour Laws & Industrial Relations etc.

#### **(b) Objectives:**

- To provide qualitative education at post-graduate level.
- To make the students business-oriented so as to improve their employability.
- To impart ethical education to the students to make them responsible entrepreneurs of tomorrow.
- To infuse an overall research environment by enabling students to access to various databases through state of the art computer labs.
- To prepare Future Commerce Teachers who will be sharing their knowledge and skills with the students with utmost sincerity and seriousness.
- To provide a platform that facilitates all round development of students' personality.

#### **(c) Programme Highlights:**

- Thrust will be given on sharpening of Personality traits in order to make the candidate employable & industry ready.
- Special assistance will be given to economically & socially backward as well as physically challenged students in preparation of various competitive examinations like Banking, Civil services & UGC-NET etc.
- Industry visits & Study Tours are proposed at least once a year to make the participants well acquainted with the real-world situations.
- M.Com. students will be given access to various databases like Prowess, A-Views, Bloomberg, etc. for understanding market trends while facilitating an overall research environment.

- Periodic guest lectures comprising of eminent professors across the nation and industry experts are proposed at least once in a month to make the participants well aware of the modern-day business world.
- Teaching will include regular Lecture sessions, Practicals, Seminar Presentations and in-semester assessments in order to ensure the effectiveness of learning while contributing towards overall development of the course participants.

(d) **Employment Opportunities:** Master of Commerce is one of the reputed post-graduate courses 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. course, 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, Cost & Works Accountancy, Company Secretaryship or Chartered Financial Analysts programme.

The following are some other areas/sectors where M.Com. students can explore rewarding career options for them –

- Various Business Organizations in their Finance, Marketing or Human Resource Department
- Research Associates with Economic Consulting Firms
- Income Tax Department
- Customs Department
- Foreign Trade Companies
- Indian Civil Services
- Indian Economic Services
- Indian Statistical Services
- Banking/Insurance Industry
- e-Commerce Services.

**II. Department of Business Management** - Management is the integral part of human life. Without management, nothing can be achieved. It is the management which turns a loss-making business unit to profit-earning entity and vice-versa. In the present competitive business world, the demand for potent managers is increasingly growing every day.

In order to fill up the gap between the supply and demand of skilled managerial staff, we propose to introduce the following courses w.e.f. the academic session 2018-19:-

## 1. M.B.A- 2- Years (4- Semester)

**(a) Introduction:** With each passing day, the business world is becoming more challenging and dynamic. As such the modern age managers need to become more proactive rather than reactive. They are to become more concerned about the interests of the stockholders. They need to acquire the knowledge and skills for successfully dealing with stress management, change management, conflict management and cross cultural management. The Master of Business Administration, a 2-year (4-Semester) post-graduation programme, is designed to develop future managers who have leadership skills, interpersonal skills and entrepreneurial skills needed for successful operation of business organisations. The course is evenly balanced with theoretical and business interface approach. The first year is dedicated towards making the students acquainted to the basics of General Management, Organisational Behaviour, Financial Accounting, Marketing Management, Human Resource Management, Operations Research and Quantitative Techniques etc. The second year is primarily dedicated towards specialisation which the students can choose as per their linkings/abilities. The areas of specialisation are mainly in the fields of Finance, Human Resource management, Marketing and Information Technology. The teaching pedagogy is not restricted to test books, rather it is blended with real life case studies, field projects, presentations, seminars and industrial trainings, Now-a-days ethical and fair practices are of paramount importance. An MBA degree also helps in building the ethical infrastructure of the future managers.

### **(b) Objectives:**

- To provide high quality management education to the students at post-graduation level.
- To sharpen the managerial skills of the participants as per the need of the business world so as to ensure their easier market acceptance for employment.
- To impart ethical education for enabling the students to be responsible Business Managers of tomorrow in true sense.
- To nurture the creative minds in such a way that they are sensitive to the business as well as the societal needs and issues, thus making them responsible citizens.
- To create an overall research environment by enabling students to access to various databases through state of the art computer labs.
- To prepare future Management Teachers who will be willing to impart quality teaching to their students with utmost devotion and dedication towards their assignments.
- To provide a platform that facilitates all round development of students' personality.

(c) **Programme Highlights:**

- Thrust will be given on sharpening of Personality traits in order to make the candidates employable & industry ready.
- Mock sessions of Group Discussions, Interview Sessions and other training programs are proposed to let the students taste the real world situations so as to compete with the outside world with confidence.
- Periodic Quizzes and Debates will be facilitated in order to update the participants while enabling them to sharpen their managerial traits.
- Special personality development sessions are proposed for the MBA students, over and above the normal class hours, to contribute towards an overall development of the students with effective communication skills.
- Special assistance will be given to economically & socially backward as well as physically challenged students in preparation of various competitive examinations like Banking, Civil services & UGC-NET etc.
- Industry visits & Study tours are proposed at least once a year to make the participants well acquainted with the real-world life.
- MBA students will be given access to various databases like Prowess, A-Views, Bloomberg, etc. for understanding market trends while facilitating an overall research environment.
- Periodic guest lectures comprising eminent professors across the nation and industry experts are proposed at least once in a month to make the participants well aware of the business world.
- Teaching will include regular Lecture Sessions, Case Studies, Seminar Presentations, and In-semester Assessments in order to ensure the effectiveness of learning while contributing towards overall development of the course participants.

(d) **Employment Opportunities:** The MBA is globally recognized brands that can open door to a new network of associates from diverse industries and diverse lands. After two years of hard work and successful completion of the programme, MBAs get jobs in different public and private sector companies on managerial positions at attractive pay packages. Reserve Bank of India and commercial banks also hire MBAs on regular/contract basis for diverse functions. Many MBAs opt for establishing their own business units and thus create jobs for other under-graduate and post-graduate students. Many business houses hire MBAs as Management Trainees and after developing their knowledge and skill as per its requirements, place them at appropriate places in the organisations.

(e)

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## SCHOOL OF EDUCATION

The School of Education honoured by Ministry of Human Resources and Development under the Pandit Madan Mohan Malviya National Mission on Teachers and Teaching to be a centre for quality assurance in Learning, Pedagogy and Assessment, 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. (B.Sc.B.Ed. programme closed in 2015). 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 is starting M.Ed. programme from the session 2017-18.

The courses of various 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, Science and ET Laboratories, 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. The Edu-Fest: SAMBODHI SARITA, a multidimensional, student-centred, students led, three days' co-curricular event, is the speciality of this school.

**1. Ph.D. in Education :** School of Education is currently offering Ph.D. in Education.

### List of Courses in 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         |
|             | <b>Total Credits:</b>                             | <b>12</b> |

### 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. The completion of programme shall lead to M.Ed. degree with specialization in secondary education.

**List of courses in M.Ed. (80 Credits)**  
(likely to be modified as per CBCS)

| <b>Course Code</b>   | <b>Course Title</b>  | <b>Credit</b> |
|----------------------|--|---------------|
| <b>Semester - I</b>  |  |               |
| EDU 501              | Educational Studies  | 2             |
| EDU 502              | Philosophical Perspectives of Education  | 4             |
| EDU 503              | Basics of Educational Research   | 4             |
| EDU 504              | Psychological Perspectives of Education  | 4             |
| EDU 505              | Assessment and Evaluation in Education   | 4             |
| EDU 506              | Application of ICT in Education *  | 2             |
|                      | ISB- I   |               |
| <b>Semester - II</b> |  |               |
| EDU 551              | Sociological, Historical, Political and Economic Perspectives of Education   | 4             |
| EDU 552              | Advanced Research Methodology and Statistics   | 4             |
| EDU 553              | Pre-Service and In-Service Teacher Education   | 4             |
| EDU 554              | Curriculum Studies   | 4             |
| EDU 555              | Communication and Expository Writing *   | 2             |
| EDU 556              | Self-Development *   | 2             |
|                      | ISB-II   |               |
| <b>Semester -III</b> |  |               |
| EDU 601              | Systems, Structure, Issues and Concerns in Elementary Education Or<br>Systems, Structure, Issues and Concerns in Secondary Education   | 4             |
| EDU 602              | Policy and Practices relating to Curriculum, Pedagogy and Assessment<br>in Elementary Education Or<br>Policy and Practices relating to Curriculum, Pedagogy and Assessment<br>in Secondary Education | 4             |
| EDU 603              | Perspectives, Research and Issues in Teacher Education   | 4             |
| EDU 604              | Internship in Teacher Education Institution *  | 2             |
| EDU 605              | **Specialization- I (A/B/C/D/ E/F)   | 4             |
|                      | ISB-III ( Data Collection)   |               |
| <b>Semester -IV</b>  |  |               |
| EDU 651-A            | E-Learning   | 4             |
| EDU 651-B            | ICT in Education   | 4             |
| EDU 651-C            | Assessment and appraisal in guidance and Counselling   | 4             |
| EDU 651-D            | Education of the Disadvantaged Groups  | 4             |
| EDU 652-A            | Pedagogy of Science Education  | 4             |
| EDU 652-B            | Pedagogy of Mathematics Education  | 4             |
| EDU 652-C            | Pedagogy of Language Education   | 4             |
| EDU 652-D            | Pedagogy of Social Science Education   | 4             |
| EDU 653              | Dissertation and Viva voce*  | 6 + 2         |

|         |   |   |
|---------|---|---|
| EDU 654 | Internship in Teacher Education Institution | 4 |
| EDU 655 | Specialization based Internship *           | 2 |

|   |                             |
|---|-----------------------------|
| Any Two Activities Compulsory. The grading according to the rules of the University but would be included in the CGPA |                             |
| <input type="checkbox"/>  | Community Services          |
| <input type="checkbox"/>  | Field Work                  |
| <input type="checkbox"/>  | Preparing Research Proposal |
| Note- * These are Practical Papers  |                             |
| ISB- Inter Semester Break   |                             |

**\*\*List of Specialization Courses:**

**A. Distance Education and Open learning**

- I. Foundations of Distance Education
- II. E-Learning

**B. Education Technology**

- I. Basics of Educational Technology
- II. ICT in Education

**C. Guidance and Counselling**

- I. Educational Guidance and Counselling
- II. Assessment and Appraisal in Guidance and Counselling

**D. Inclusive Education**

- I. Inclusive Education for Children with Diverse Needs
- II. Education of the Disadvantaged Groups

**E. Policy, Planning, Management and Financing of Education**

- I. Education Policy and Policy Research
- II. Educational Planning, Management and Financing of Education

**F. Comparative Studies in Education**

- I. Fundamentals of Comparative Studies
- II. Education in Developing and Developed Countries

**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.

**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 History, Political Science, Economics, Languages (Hindi/English/Urdu) along with language proficiency and ICT skills.

**List of Courses in Integrated B.A.B.Ed. and B.Sc. B.Ed. Programme**  
(likely to be modified as per CBCS)

| <b>Semester – I</b>   |   |                |  |   |                |
|---|---|----------------|--|---|----------------|
| <b>Education Courses (8 Credits)</b>  |   |                |  |   |                |
| <b>Course Code</b>  | <b>Course Title</b>                       |                |  |   | <b>Credits</b> |
| EDU 101   | Language Proficiency                      |                |  |   | 2              |
| EDU 102   | Holistic Education                        |                |  |   | 2              |
| EDU 103   | Indian Society, Education and Development |                |  |   | 4              |
| <b>BA Courses</b><br>(Three Subjects of 4 Credit each as per the regulations) |   |                | <b>BSc Courses</b><br>(Three Subjects of 4 Credit each as per the regulations) |   |                |
| <b>Course Code</b>  | <b>Course Title</b>                       | <b>Credits</b> | <b>Course Code</b>   | <b>Course Title</b>   | <b>Credits</b> |
| 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              |
| URD 101   | Origin and Development of Urdu Language   | 4              | CHE 101  | ATOMIC STRUCTURE, BONDING AND FEATURES OF s- and p-BLOCK ELEMENTS | 4 (3L+1P)      |
| ECO 101   | <i>Basic Principles of Economics</i>      | 4              | ALS 101  | Animal Taxonomy   | 4(3L+1P)       |
| PSC 101   | Basic Principles of Political Science     | 4              | PTS 101  | Plant Taxonomy  | 4 (3L+1P)      |
| HIS 101   | Ancient Indian History upto 1206 A.D.     | 4              |  |   |                |
| <b>Semester – II</b>  |   |                |  |   |                |
| <b>Education Courses (8 Credits)</b>  |   |                |  |   |                |
| <b>Course Code</b>  | <b>Course Title</b>                       |                |  |   | <b>Credits</b> |
| EDU 151   | Language Proficiency                      |                |  |   | 2              |
| EDU 152   | Environmental Education                   |                |  |   | 2              |
| EDU 153   | Cognitive Psychology                      |                |  |   | 2              |
| EDU 154   | Basics in Education                       |                |  |   | 2              |
| <b>BA Courses</b><br>(Three Subjects of 4 Credit each as opted in Semester-I) |   |                | <b>BSc Courses</b><br>(Three Subjects of 4 Credit each as opted in semester-I) |   |                |
| <b>Course Code</b>  | <b>Course Title</b>                       | <b>Credits</b> | <b>Course Code</b>   | <b>Course Title</b>   | <b>Credits</b> |
| ENG 151   | Introduction to                           | 4              | MTH 151  | Analysis-I  | 4              |

|         |  |   |         |  |           |
|---------|--|---|---------|--|-----------|
|         | English Literature I:<br>Understanding Poetry  |   |         |  |           |
| HIN 151 | çkphu ,oa<br>e;/dkyhudkO;  | 4 | PHY 151 | Elasticity, Waves,<br>Thermodynamics - 3<br>credit + Practical – 1<br>Credit | 4         |
| URD 151 | History, Socio<br>Cultural Influence,<br>Schools, movements<br>and trends of Urdu<br>Languages and<br>Literature | 4 | CHE 151 | STATES OF MATTER<br>AND NUCLEAR<br>CHEMISTRY                                 | 4 (3L+1P) |
| ECO 151 | <i>Microeconomics</i>  | 4 | ALS 151 | Biochemistry & Cell<br>Biology   | 4(3L+1P)  |
| PSC 151 | Indian Government<br>and Politics  | 4 | PTS 151 | Genetics & Evolution   | 4(3L+1P)  |
| HIS 151 | Medieval Indian<br>History 1206 to 1756  | 4 |         |  |           |

**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<br>English Literature II:<br>Understanding Drama       | 4       | MTH 201     | Linear Algebra  | 4         |
| HIN 201     | fganh<br>dFkklkfgR;%<br>mn~Hko] fodkl<br>,oa ikB ¼dgkuh<br>,oa miU;kl½ | 4       | PHY 201     | Electricity and<br>Magnetism – 3 credit +<br>Practical – 1 Credit | 4         |
| URD 201     | Important Centres of<br>Urdu Literature                                | 4       | CHE 201     | ORGANIC<br>CHEMISTRY  | 4 (3L+1P) |
| ECO 201     | <i>Macroeconomics</i>  | 4       | ALS 201     | Molecular Biology &<br>Immunology                                 | 4(3L+1P)  |
| PSC 201     | Indian Political<br>Thought  | 4       | PTS 201     | Ecology &<br>Environmental Biology                                | 4(3L+1P)  |
| HIS 201     | Modern Indian<br>History 1757 to 1857                                  | 4       |             |   |           |

**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<br>(Three Subjects of 4 Credit each as opted in Semester-I) |   |         | BSc Courses<br>(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         |
| URD 251  | Grammar, Rhetoric and Prosody                                       | 4       | CHE 251   | PHYSICAL CHEMISTRY-I: THERMODYNAMICS, EQUILIBRIUM AND SOLUTIONS | 4 (3L+1P) |
| ECO 251  | <i>Indian Economy: Problems and Prospects</i>                       | 4       | ALS 251   | Animal Biodiversity   | 4(3L+1P)  |
| PSC 251  | International Relations From 1914 to the Present                    | 4       | PTS 251   | Plant Biodiversity  | 4(3L+1P)  |
| HIS 251  | Modern Western Civilization 1776 to 1945                            | 4       |   |   |           |

| 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<br>(Any two Subjects of 6 Credit each out of the three subjects opted in Semester-I) |  | Credits | BSc Courses<br>(Any 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 1                                     | 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       |

|         |  |   |         |  |          |
|---------|--|---|---------|--|----------|
| URD 301 | Literary Personalities (Creative Writers)            | 3 | CHE301  | Transition Elements and Coordination Compounds | 2 (2L)   |
| URD 302 | Literary Personalities (Non-Creative Writers)        | 3 |         |  |          |
| ECO 301 | <i>Elements of Statistics for Economic Analysis</i>  | 3 | CHE302  | Chemicals Kinetics and Surface Phenomena       | 2 (2L)   |
| ECO 302 | <i>Elements of Mathematics for Economic Analysis</i> | 3 | CHE303  | Chemistry Practical                            | 2 (2P)   |
| PSC 301 | Western Political Thought                            | 3 | ALS 301 | Animal Behaviour & Applied Animal Science      | 6(4L+2P) |
| PSC 302 | Comparative Government and Politics                  | 3 | PTS 301 | Plant Pathology & Applied Plant Science        | 6(4L+2P) |

### 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<br>(Two Subjects of 6 Credit each as opted in Semester-V) |   | Credits | BSc Courses<br>(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        |
| ENG 352  | 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        |
| URD 351  | Critical and Biographical study of the prescribed Authors and their works         | 3       | CHE302  | CHEMICAL KINETICS AND SURFACE PHENOMENA             | 2 (2L)   |
| URD 352  | Critical and Biographical study of the prescribed authors and their works (Prose) | 3       | CHE352  | ORGANIC CHEMISTRY- III                              | 2 (2L)   |
| ECO 351  | <i>International Trade and Balance of Payments</i>                                | 3       | CHE353  | CHEMISTRY PRACTICAL                                 | 2 (2P)   |
| ECO 352  | <i>Growth and Development</i>   | 3       | ATS 351   | Animal Physiology                                   | 6(4L+2P) |
| PSC 351  | Basic Principles of Public Administration   | 3       | PTS 351   | Plant Physiology and Plant Development              | 6(4L+2P) |

|         |  |   |         |
|---------|--|---|---------|
|         |  |   | Biology |
| PSC 352 | India's Foreign Policy                           | 3 |         |
| GEO 351 | Economic Geography                               | 3 |         |
| GEO 352 | Geography of Development                         | 3 |         |
| HIS 351 | India and Contemporary world                     | 3 |         |
| HIS 352 | History of West Asia in 20 <sup>th</sup> 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<br>(Two Subjects of 6 Credit each as opted in Semester-V) |   | Credits | BSc Courses<br>(Two Subjects of 6 Credit each as opted in Semester-V) |  | Credits  |
|--|---|---------|---|--|----------|
| Course Code  | Course Title  |         | Course Code   | Course Title   |          |
| ENG 401  | Literary Criticism  | 3       | MTH 401   | Algebra II   | 3        |
| ENG 402  | Indian English Novel  | 3       | MTH 402   | Programming in C with Numerical Methods                      | 3        |
| HIN 401  | ukVd ,oa jaxeap   | 3       | PHY 401   | Atomic & Molecular Physics – 3 credit + Practical – 1 Credit | 4        |
| HIN 402  | vuqkn% fl)kar ,oa vuqç;ksx  | 3       | PHY 402   | Electrodynamics and Plasma Physics                           | 2        |
| URD 401  | Explanation and Analytical study of Creative writings from prescribed text books (Poetry) | 3       | CHE-401   | ELECTROCHEMISTRY-I (Including redox chemistry)               | 2 (2L)   |
| URD 402  | Explanation and Analytical study of Creative Writings from prescribed text books (Prose)  | 3       | CHE-402   | Electrochemistry – II And photochemistry                     | 2 (2L)   |
| ECO 401  | <i>Public Finance</i>   | 3       | CHE-403   | Chemistry Practical  | 2 (2P)   |
| ECO 402  | <i>Money, Financial Institutions and Markets</i>  | 3       | ALS 401   | Developmental Biology & Endocrinology                        | 6(4L+2P) |
| PSC 401  | United Nations Organisation   | 3       | PTS 401   | Microbiology   | 6(4L+2P) |
| PSC 402  | Issues in Indian Politics   | 3       |   |  |          |
| GEO 401  | Agricultural Geography  | 3       |   |  |          |
| GEO 402  | Urban Geography   | 3       |   |  |          |
| HIS 401  | History of far East Asia in   | 3       |   |  |          |

|         |  |   |  |
|---------|--|---|--|
|         | 20 <sup>th</sup> Century                               |   |  |
| HIS 402 | History of South East Asia in 20 <sup>th</sup> 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 – II                    | 2       |

| BA Courses<br>(Two Subjects of 6 Credit each as opted in Semester-V) |  | Credits | BSc Courses<br>(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       |
| URD 451  | Dissertation   | 6       | CHE451  | SPECTROSCOPY AND NATURAL PRODUCTS                     | 2 (2L)  |
|  |  |         | CHE452  | DYES, DRUGS, MACROMOLECULES AND HETEROCYCLICS         | 2 (2L)  |
| ECO ***  | Elective -I  | 3       | CHE453  | CHEMISTRY PRACTICAL                                   | 2 (2P)  |
| ECO ***  | Elective-II  | 3       | ALS 451   | Animal Biotechnology & Project Work                   | 6(4+2)  |
| PSC 451  | Regional Organizations   | 3       | PTS 451   | Plant Biotechnology & Project Work                    | 6(4+2)  |
| PSC 452  | Gandhian Philosophy and Action                                       | 3       |   |   |         |
| GEO 451  | Remote Sensing and Geographical Information System                   | 3       |   |   |         |

|         |  |   |  |
|---------|--|---|--|
| GEO 452 | Field Study and Project Report                 | 3 |  |
| HIS 451 | History of U.S.A. in 20 <sup>th</sup> Century  | 3 |  |
| HIS 452 | History of U.S.S.R in 20 <sup>th</sup> 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 Programing       | 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                                | <i>Environmental Economics</i> | 3 |
| ECO 452                                | <i>Basic Econometrics</i>      | 3 |
| ECO 453                                | <i>Financial Economics</i>     | 3 |
| ECO 454                                | <i>Human Development</i>       | 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 |

*Note: 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.*

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## SCHOOL OF LAW AND GOVERNANCE

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 subserve 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 personal development. The mission of the school is to equip the students with critical thinking, analytical and applied skills and also to make members for 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 2017-18; students of the School have brought many laurels, such as; 11 PG students qualified UGC NET Examination, selected as Civil Judge in Bihar Judiciary and Our Team qualified as best five team to represent India in SAARC Moot Court Competition.

**1. Ph.D in Law** – School of Law & Governance is currently offering Ph.D. in Law.

### List of Courses in Ph.D. Law

| Course Code | Course Title                                      | Credit    |
|-------------|---|-----------|
| LAW 901     | Research Methodology                              | 4         |
| LAW 902     | Tools and Techniques of Research                  | 4         |
| LAW 903     | Preparation and Presentation of Research Proposal | 4         |
|             | <b>Total Credits:</b>                             | <b>12</b> |

## 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 for 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)

(likely to be modified as per CBCS pattern)

| Course Code | Course Title                                 | Total Credits |
|-------------|--|---------------|
|             | <b>Semester - I</b>                          |               |
| LLM 500     | Research Methods and Legal Writing           | 3             |
| LLM 501     | Comparative Public Law/ System of Governance | 3             |
| LLM 502     | Law and Justice in a Globalizing World       | 3             |
|             | Optional Course I                            | 2             |
|             | Optional Course II                           | 2             |
|             | Optional Course III                          | 2             |
|             | <b>Total Credits</b>                         | <b>15</b>     |

| <b>Semester - II</b> |                    |           |
|----------------------|--------------------|-----------|
|                      | Optional Course IV | 2         |
|                      | Optional Course V  | 2         |
|                      | Optional Course VI | 2         |
| LLM562               | Dissertation       | 5         |
| <b>Total Credits</b> |                    | <b>11</b> |

**Elective Specialization Groups with Course Code:**

| Course Code                           | Specialization Group         | Credits |
|---------------------------------------|------------------------------|---------|
| LLM503 to LLM505<br>LLM 550 to LLM552 | Criminal Law                 | 12      |
| LLM506 to LLM508<br>LLM 553 to LLM555 | Corporate and Commercial Law | 12      |
| LLM509 to LLM511<br>LLM 556 to LLM558 | Intellectual Property Law    | 12      |
| LLM512 to LLM514<br>LLM 559 to LLM561 | Human Rights                 | 12      |

**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 54 subjects in ten semesters. These include 8 Honors Law papers, 28 General Law papers, 4 Clinical Law papers, 2 English Language papers, and 12 Social Science papers.

**List of courses in Five Year Integrated B.A. LL.B. (Hons.) Programme (232 Credits)**

(likely to be modified as per CBCS)

| S. No | Course Code | Course Title                              | Credits | Course Code | Course Title  | Credits |
|-------|-------------|---|---------|-------------|---|---------|
|       |             | <b>Semester- I</b>                        |         |             | <b>Semester- II</b>                                 |         |
| 1.    | LAW 101     | Legal Method                              | 4       | LAW 150     | Contract-I  | 4       |
| 2.    | LAW 102     | Law of Torts                              | 4       | LAW 151     | Constitutional Law-I                                | 4       |
| 3.    | PSC 111     | Political Science-I<br>(Political Theory) | 4       | ENG 161     | English-II (Legal Language)                         | 4       |
| 4.    | SOC 111     | Sociology-I<br>(Concept and Theory)       | 4       | ECO 161     | Economics-I (General Principles of Micro Economics) | 4       |

|    |         |   |   |         |   |   |
|----|---------|---|---|---------|---|---|
| 5. | ENG 111 | English-I<br>(Communication Skill)                      | 4 | HIS 161 | History-I (Ancient Justice System)<br>(Communication Skill) | 4 |
|    |         | <b>Semester- III</b>                                    |   |         | <b>Semester- IV</b>   |   |
| 1. | LAW 200 | Contract-II   | 4 | LAW 250 | Criminal Law-II [Cr.PC.]                                    | 4 |
| 2. | LAW 201 | Constitutional Law-II                                   | 4 | LAW 251 | Family Law-I  | 4 |
| 3. | LAW 202 | Criminal Law I [IPC]                                    | 4 | LAW 252 | Law of Evidence   | 4 |
| 4. | SOC 211 | Sociology-II [Indian Sociology]                         | 4 | PHL 261 | Philosophy-I [Logic and Legal Reasoning]                    | 4 |
| 5. | PSC 211 | Political Science-II [Political Obligation]             | 4 | HIS 261 | History-II [Legal History]                                  | 4 |
|    |         | <b>Semester-V</b>                                       |   |         | <b>Semester-VI</b>  |   |
| 1. | LAW 300 | Family Law-II   | 4 | LAW 350 | Jurisprudence   | 4 |
| 2. | LAW 301 | Civil Procedure Code [CPC]                              | 4 | LAW 351 | Public International Law                                    | 4 |
| 3. | LAW 302 | Property Law (T.P. Act)                                 | 4 | LAW 352 | Administrative Law  | 4 |
| 4. | ECO 311 | Economics-II [General Principles of Macro Economics]    | 4 | PSC 361 | Political Science-IV [Public policy and Administration]     | 4 |
| 5. | PSC 311 | Political Science-III [International Relations]         | 4 | PSY 361 | Psychology- I [General and Criminal Psychology]             | 4 |
|    |         | <b>Semester-VII</b>                                     |   |         | <b>Semester-VIII</b>  |   |
| 1. | LAW 400 | Interpretation of Statutes & Principles of Legislations | 4 | LAW 450 | Company Law-II  | 4 |
| 2. | LAW 401 | Labour Law- I   | 4 | LAW 451 | Taxation Law-I  | 4 |
| 3. | LAW 402 | Environmental Law                                       | 4 | LAW 452 | Labour Law-II   | 4 |
| 4. | LAW 403 | Company Law- I  | 4 | LAW 453 | Alternative Dispute Resolution [Clinical Paper- I]          | 4 |
| 5. |         | [Hons. I]   | 6 | LAW 454 | Hons.-III]  | 6 |
| 6. |         | [Hons.-II]  | 6 | LAW 455 | Hons.-IV]   | 6 |
|    |         | <b>Semester- IX</b>                                     |   |         | <b>Semester- IX</b>   |   |
| 1. | LAW 500 | Intellectual Property Laws                              | 4 | LAW 550 | Professional Ethics [Clinical Paper- III]                   | 4 |
| 2. | LAW 501 | Drafting, Pleading & conveyancing [Clinical Paper- II]  | 4 | LAW 551 | Moot Court and Internship [Clinical Paper- IV]              | 4 |
| 3. | LAW 502 | Taxation-II   | 4 | LAW 552 | Human Rights and Humanitarian Law                           | 4 |
| 4. | LAW 503 | Conflict of Laws  | 4 | LAW 553 | Banking and Insurance Law                                   | 4 |
| 5. | LAW 504 | [Hons.-V]   | 6 |         | Hons. VII   | 6 |
| 6. | LAW 505 | [Hons.-VI]  | 6 |         | Hons. VIII  | 6 |

## **B.A.LL.B. (Hons.) Elective Specialization Groups**

| <b>Specialization Group</b> | <b>Credits</b>                  |
|-----------------------------|---------------------------------|
| Constitutional Law          | 6 credits x8 Courses=48 Credits |
| Business Law                | 6 credits x8 Courses=48 Credits |
| International Trade Law     | 6 credits x8 Courses=48 Credits |
| Crime and Criminology       | 6 credits x8 Courses=48 Credits |
| International Law           | 6 credits x8 Courses=48 Credits |
| Intellectual Property       | 6 credits x8 Courses=48 Credits |

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## 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](http://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](http://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 Patna 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                 |  | Fee Per Academic Year<br>(in US Dollar)                                 |
|-------------------------------|--|---|
| S. No.                        | Particulars (Processing Fee)   |   |
| <b>Academic Programme Fee</b> |  |   |
| <b>1</b>                      | <b>PG Programme</b>  |   |
|                               | (a) M.A.   | 850=00  |
|                               | (b) M.Sc. / M.Ed. / M.Com*   | 1000=00   |
|                               | (c) M.Tech / LLM / MBA*  | 1500=00   |
| <b>2</b>                      | <b>Integrated Programme</b>  |   |
|                               | (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   |
| <b>3</b>                      | <b>Research Programmes</b>   |   |
|                               | (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   |
| <b>Other Fees</b>             |  |   |
| 1                             | Transportation Fee   | 300=00  |
| 2                             | Hostel (Optional)<br>(a) Accommodation Fee<br>(b) Mess Fee   | 500=00<br>Actual Basis<br>(presently approximately 50-80 USD per month) |

\* These courses will be launched in the Academic Session 2018-19 subject to approval of the University Grants Commission (UGC).

## 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 2018-2019. The foreign national students are exempted to appear in entrance exam of (CUCET-2018) 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.

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