

Centre of Excellence in Pharmaceutical Sciences (CEPS)



**Guru Gobind Singh Indraprastha University,
Sector-16C, Dwarka,
New Delhi-110078**

Centre of Excellence in Pharmaceutical Sciences

The Centre of Excellence in Pharmaceutical Sciences (CEPS) was established in 2014 at Guru Gobind Singh Indraprastha University (GGSIPU) with an objective to provide exemplary platform and promote interdisciplinary academic-cum-research activities. The Centre also aims to impart distinguishable set of knowledge and skills, and thus create technically sophisticated manpower for pharmaceutical research.

PREAMBLE

The centre would focus on quality, innovative research, as it's committed to deliver world-class education and Para Medical Health Care outcomes. It would equip our students for leading-edge positions on the rapidly changing Pharmaceutical sciences.

CEPS is a resource formed to serve academic, industrial and governmental researchers in the field of pharmaceutical sciences from across the country. The centre also offers development of new drugs. The centre's objective is to create technically sophisticated manpower for pharmaceutical research, including inter-university network. In addition to the research activities, CEPS is also involved in the development of new drugs which can be eventually availed by the industries.

VISION

This centre envisages promoting excellence in research and teaching in Pharmaceutical Sciences at a national and international level, and facilitates transfer of technology and know-how between Academia and Industry.

MISSION

To be an outstanding and renowned for excellence in discovery and advancement of science-based use of medicines, ancient Indian herbs and other interventions to enhance the vitality and quality of life.

CEPS is currently working on following research strategies

- One: Design and synthesis of New Chemical Entities (NCE's) or new molecular entity (NME) and their biological evaluation.
- Two: Process/synthesis path development.
- Three: Exploring the structural feature of therapeutically important scaffolds and manipulate them for better ADMET.
- Four: Computer aided drug designing (CADD).
- Five: Exploration of clinically failed molecule and Drug repositioning.

Programmes at CEPS

1. M.Sc. (Medicinal chemistry and drug design)
2. M.Sc. (Bioinformatics)
3. PhD (Pharmaceutical Chemistry)

1. M.Sc. (Medicinal Chemistry and Drug Design)

1.1 Eligibility Criteria:

Minimum 50% or equivalent in the qualifying examination, B.Sc. chemistry/B.Sc. with chemistry as a major subject.

1.2 Admission criteria

- i) Admission to M.Sc. (Medicinal Chemistry and Drug Design) programme is through entrance test conducted by the University **(CET Code-405)**.
- ii) The written entrance test shall be qualifying for admission as per the University norms. The syllabus of the written entrance test shall consist of 70% of chemistry (graduation level) and 30% shall be pharmaceutical sciences (graduation level).

** Note: For further details please visit the university website*

www.ipu.ac.in,

<http://www.ipu.ac.in/ceps/index.php>,

ipu.admissions.nic.in

1.3 Number of seats: 15

2. M.Sc. (Bioinformatics)

2.1 Eligibility Criteria:

Candidate desiring for admission to Master of Science in Bioinformatics Programme shall be required to have passed B.Sc. (Bioinformatics/ Biotechnology/ Microbiology/ Biochemistry/ Botany/ Zoology/ Chemistry/ Mathematics/ Physics/ Biophysics) as one of the major subjects studied at Graduation level. B.Sc. (Agriculture)/ B.V.Sc./ B.Pharm./ B.E. (Biotech/ Bioinformatics) / B.Tech. (Biotech/ Bioinformatics) and similar other subjects and must have obtained 55% aggregate at graduation level/CGPA/grade. MBBS or any other course equivalent thereto with 50% marks.

2.2 Admission Criteria:

i) Admission to M.Sc. (Bioinformatics) programme is through entrance test conducted by the University **(CET Code-411)**.

ii) The written entrance test shall be qualifying for admission as per the University norms. The syllabus of the written entrance test shall consist of 100 Questions, divided into two sections; Section A: 20 questions and Section B: 80 questions. The first section (Section A) includes questions based on General Knowledge, Language Comprehension, Analytical ability and Verbal Ability.

The second section (Section B) is subject and domain specific and would include the questions from subjects such as Chemistry, Fundamentals of Programming Language, Fundamentals of Bioinformatics, Genomics & Proteomics, Microbiology, Biochemistry and Biotechnology, Structural Bioinformatics and Bio-Sciences (graduation level).

** Note: For further details please visit the university website*

www.ipu.ac.in,

<http://www.ipu.ac.in/ceps/index.php>,

ipu.admissions.nic.in

2.3 Number of seats: 20

3. PhD (Pharmaceutical Chemistry)

3.1 Eligibility criteria for PhD

i) Candidates for admission to the Ph.D. programme should have a Master's Degree (M.Sc. in Pharmaceutical Chemistry/Chemistry (with specialization in Organic Chemistry) or M. Pharm. in Pharmaceutical Chemistry/Pharmacology or M.Sc. (Bioinformatics) or M. Tech. (Bioinformatics) or MD/MS in any discipline of clinical/non-clinical Medical Sciences) or a professional degree declared equivalent to the Master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational Institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other

statutory authority in that country for the purpose of assessing accrediting or assuring quality and standards of educational institutions.

ii) A relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, shall be allowed for those belonging to SC/ST/Differently-abled (PWD) categories.

iii) A person, whose M.Phil. dissertation has been evaluated and the viva voce is pending may be admitted to the Ph.D. programme.

iv) Candidates possessing a M.Phil. degree or a degree considered equivalent to M.Phil. Degree of an Indian Institution.

v) A degree considered equivalent to M.Phil. Degree of an Indian Institution, from a Foreign Educational Institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions, shall be eligible for admission to Ph.D. programme.

Note: The eligibility criteria and procedure for admission as specified in this admission brochure are subject to "changes made in the ordinances, rules and regulations by the University from time to time as per the decision of University and/or statutory bodies governing various programmes".

3.2. Procedure for Admission to Ph.D. Programmes

i) Admission to the Ph.D. programme is through entrance test conducted by the University (CET Code-401)

ii) For those students who qualify UGC-NET (including JRF) / UGC-CSIR NET (including JRF) ** / GATE* / DBT-JRF / ICMR-JRF / Teacher fellowship holder or have passed M.Phil. programme, such candidates for admission to Ph.D. programme shall be exempted from the entrance test conducted by the University. However, they shall have to apply for admission to the University.

** Candidates with valid and qualified GATE score.*

*** Candidates with valid and qualified NET score and with Junior Research Fellowship.*

iii) Reservation shall be as per the State Reservation Policy, notified by the University from time to time.

iv) The written entrance test shall be qualifying for admission to Ph. D. programme with 50% of total marks as qualifying cut off for general category. For SC/ST/OBC/PWD category the qualifying cut off shall be 45% of total marks. The syllabus of the written entrance test shall consist of 50% of research methodology and 50% shall be subject specific (25% section A (Basic Science) and 25% section B (Chemistry/Life Sciences/Bioinformatics)).

v) An interview / vice-voce shall be organized where the candidates are required to discuss their research interest / area through a presentation before a duly constituted Admission Committee.

** Note: For further details please visit the university website www.ipu.ac.in*

3.3 Mode of Ph.D. Programme

Full Time/Part Time

3.4 Syllabus for Common Entrance Test (CET Code-401) for PhD (Pharmaceutical Chemistry)

Part A - Research Methodology

Scientific Research: Meaning and characteristics of scientific research; Validity in research; Phases or stages in research; various types of research: Quantitative, Qualitative, Experimental, Exploratory, Empirical, Descriptive, Ex-post facto, Case studies. Review of literature: Purpose of the review, Sources of the review, Citing references, Ethical and IPR issues in research.

Data representation: Collection of data, Tabulation, Organization and graphical representation of quantitative data: Line Graphs, Bar Graphs, Pie Charts, Histograms; Probability concept and theories.

Research Ethics: Research honesty and integrity, authorship, acknowledgment and citations, funding agencies and sponsorship, sources of data, sensitive materials and safety, patents & copyright, confidentiality and privacy, animal and human rights, environmental laws, scientific misconduct-fabrication of data and misrepresentation, plagiarism.

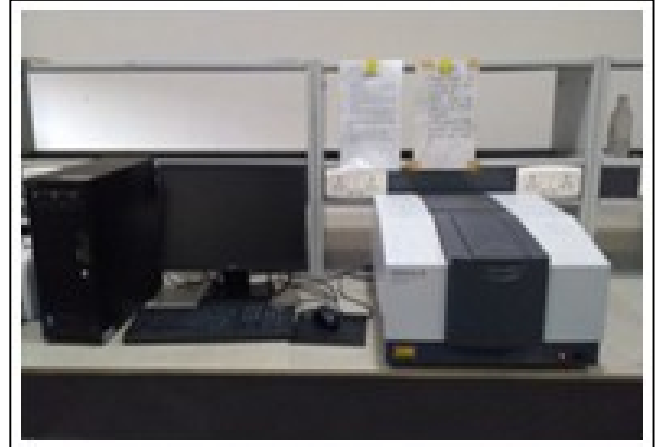
Part B – Subject Specific Test

Syllabi of subjects taught in the broad areas of Chemistry, Medicinal Chemistry, Pharmaceutical Chemistry, Biological Sciences or other Allied Sciences at Master's level, along with a basic understanding of bioinformatics.

Various instruments at CEPS



UV-Vis spectrophotometer



IR-spectrophotometer



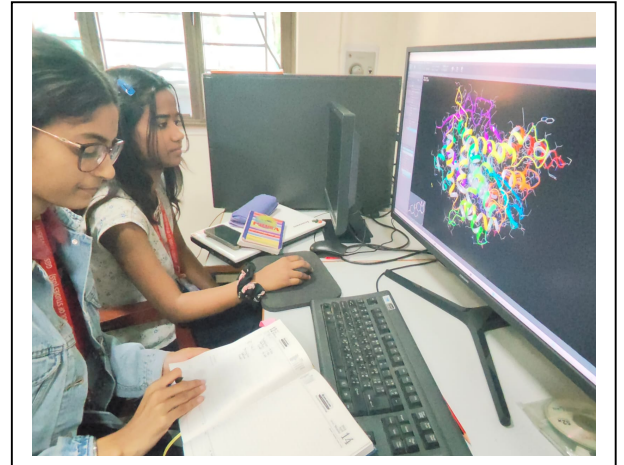
NMR



Gas chromatograph



SEM



GPU enabled Server



Computer lab facility (Byte) with GPU enabled workstations