



# ADMISSIONS 2012-13

## CENTRE FOR ENVIRONMENTAL SCIENCE AND TECHNOLOGY

### CENTRAL UNIVERSITY OF PUNJAB, BATHINDA

Ph.D./M.Phil.-Ph.D./M.Sc.-Ph.D./M.Sc. in Environmental Science and Technology

#### THE UNIVERSITY

Established by an Act of Parliament in 2009, the Central University of Punjab is one of the fastest growing next generation universities in the country. It offers some of the most innovative academic programmes designed in tune with the challenges of present time.

In a short span of its existence, CUPB has clearly demonstrated its commitment to excellence. Exceptionally qualified, diverse and highly motivated Faculty is CUPB's pride asset. University level lecture series featuring invited talks by eminent scholars from across the world is a regular feature. There are several nationally funded research projects and international collaborations. Scholarships are provided to all M.Phil. and Ph.D. students. An air-conditioned Fitness Centre with modern equipment and a Health Centre offer free services. There is a shuttle bus for free ride between the city of Bathinda and the campus.

The city of Bathinda has excellent connectivity with other parts of the country with frequent, direct train and bus service to Delhi.

#### CENTRE FOR ENVIRONMENTAL SCIENCE AND TECHNOLOGY

The Centre for Environmental Science and Technology is a teaching and research centre, established since the very inception of the university in 2009. This Centre is planned as a strategic hub for developing sustainable environmental technologies and has the following mandate:

- To launch directed research programmes for generation of products, processes and technologies to enhance environmentally sustainable development.
- To focus on area specific environmental problems and to develop technologies for their management.
- To ensure ecological sustainability, while harnessing plant wealth.
- To contribute to human resource development and capacity building in environmental science and technology.

The centre strongly believes in research based education to students and knowledge generation for achieving sustainable use and management of the Earth's resources. The curriculum has multi-disciplinary approach across physical sciences, earth and atmospheric sciences, environmental biology, and environmental monitoring and management. The research efforts of the Centre involve the following areas:

- Advanced water purification techniques
- Solid waste management
- Air pollution management
- Radiation biology
- Environmental microbiology: Uranium bioremediation
- Bioenergy and biofuels
- Remote sensing and GIS
- Environmental analytical chemistry
- Environmental issues of local importance

#### ACADEMIC PROGRAMMES AND ADMISSION PROCEDURE

Centre for Environmental Science and Technology offers four interdisciplinary programmes following credit-based semester system. The research programmes involve course work and external evaluation.

Admission will be through an entrance examination to be conducted on July 7, 2012 at selected cities across the country followed by an interview. Performance in the selection process shall be the sole factor for admission to a programme. NET/GATE qualified candidates will be given preference for admission to M.Phil.-Ph.D. Integrated Programme.

Further, for Direct Ph.D. programme, entrance examination and personal interview will be held only at Central University of Punjab, City Campus, Mansa Road, Bathinda on a date to be announced later. Candidates who have CSIR/UGC Junior Research Fellowship are eligible to apply separately for Direct Ph.D. programme. For more details visit the university website.

#### IMPORTANT DATES

Online application open from: June 7, 2012  
Closing date of application : June 22, 2012  
All India Entrance examination: July 7, 2012  
Commencement of academic session: August 1, 2012

The eligibility criteria and number of seats available for each programme are as follows:

Programme	Seats	Eligibility	Duration (Semesters)
Ph. D.	05	M.Tech./Master's degree in Environmental Science or a relevant branch of Life Sciences/Chemical Sciences or Engineering with 55% marks from a recognised Indian or foreign university.	Six
M.Phil.-Ph.D. Integrated	15	M.Tech./Master's degree in Environmental Science or a relevant branch of Life Sciences/Chemical Sciences or Engineering with 55% marks from a recognised Indian or foreign university.	Eight
M.Sc.-Ph.D. Integrated	10	Bachelor's degree or equivalent in any branch of biological/chemical/environmental science or an engineering degree with minimum 55% marks.	Nine
M.Sc.	20	Bachelor's degree or equivalent in any branch of biological/chemical/environmental science or an engineering degree with minimum 55% marks.	Four

Tuition fee: Rs. 880/- to Rs. 1200/- per semester, depending upon course.

#### FACILITIES AT THE CENTRE

- **Environmental Wet Laboratory:** for water, soil and waste sample preparation for chemical analysis. The facilities include Flame Photometer, COD Digester, TKN apparatus, Digital Analytical Balances, Rota Evaporators, Muffle Furnace, Oven, Vacuum Oven, Ultrasonicators, Quartz Distillation Apparatus and RO water system for analytical grade water.
- **Instrumentation Laboratory:**
  - **Inorganic Section:** has the following trace metal ion speciation and analysis systems with detection up to *ppb* and *ppt* levels.
    - **Atomic Absorption Spectrophotometer with hydride generator and graphite furnace**
    - **Double Beam UV-Vis Spectrometer**
    - **Cyclic Voltammeter**
  - **Organic Section:** for analysis of trace level organics including natural products, carbohydrates, organochlorine and organophosphorus pesticides and polynuclear aromatic hydrocarbon, following equipment is available.
    - **Ultrahigh Performance Liquid Chromatography (UPLC) System from Dionex** with PDA and FLD detector. GC-MS and Accelerated Solvent Extraction System are being acquired.
- **Environmental Microbiology Laboratory:** to analyze microbial fauna in the groundwater and soil samples for eco-friendly product generation and bioremediation. The laboratory has equipment like high resolution Olympus Microscope, BOD Incubator, Shaker Incubators, Autoclave, Centrifuge and Digital Colony Counter, etc.
- **Computerized RFID System Based Central Library Facility** with access to various subscribed international and national journals in core areas of Environmental Science and Technology.
- **Computer Centre** with 100 Mbps broadband internet connectivity provides access to online Journals in Environmental Science and Technology.
- **Air conditioned classrooms equipped** with latest electronic teaching aids.
- Supported by a 24 hour central power backup.

Real Time PCR, Gradient PCR, 96 Capillary Automated DNA Sequencer, Gel Documentation system, Walk-in Cold rooms, Deep Freezers and Refrigerated Microcentrifuge are available as Central Facility.

#### FOR ADMISSION PLEASE CONTACT:

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