PEC UNIVERSITY OF TECHNOLOGY

(Formerly Punjab Engineering College)

CHANDIGARH

Admission Brochure

2015-16

Registration Fee: Rs. 1500/- (Non-Refundable)

For Admission to Ph.D. Programmes

PEC University of Technology, Chandigarh

Admission Notice

Admission to Ph.D. Programme

Online Applications are invited for admission to Ph.D. Programme in various disciplines mentioned in **TABLE-1**. The important dates regarding admission related activities are mentioned in **TABLE-2**. The candidates applying for more than one department should submit separate print of online application on website **http://pgadmissionspec.nic.in** for each discipline addressed to Chairman, PG Admissions, PEC University of Technology, Sector – 12, Chandigarh – 160012.

TABLE-1

Area of Specialization and Qualifying Degree for PhD Admission for the session 2015-16

S. No	Department	Area of Specialization	Qualifying Degree, eligible branches	Vacancies		
				With Institute Scholarships	Without Institute Scholarship	Total
1.	Electrical Engineering Department	• Power System Stability & Control • Control System • Power Electronics & Drives • Power & Energy Systems • Mechatronics	M.E / M.Tech in • Electrical Engineering • Electrical & Electronics Engg. Instrumentation and Control • Power Electronics • Electronics Engg. • Power apparatus and systems • Power Engineering • Electric Drives or equivalent.	Nil	05	05
2.	Aerospace Engineering Department	• Flight Mechanics • Aerodynamics • Pulse Detonation • Aerospace Propulsion • Renewable Energy	M.E./M.Tech in • Aeronautical Engg. • Aerospace Engg. • Mechanical Engg.	Nil	2½	2½
3.	Civil Engineering Department	• Structural Engineering • Transportation Engg. • Water ResourcesEngg. • Environmental Engg. • Geotechnical Engineering • Construction Technology & Management	Master's degree in Civil Engineering or any allied field.	08	26½	34½

4.	Materials & Metallurgical Engineering Department	• Materials and Metallurgy	M.E./M.Tech in • Materials & Metallurgy Engg. • Mechanical Engg. • Production Engg.	Nil	Nil	Nil
5.	Electronics & Communication Engineering Department	• Digital Signal Processing • Embedded Systems • Electronic Waste Management • Microwave Engg. • Electronic System Design • Assistive Technology • Digital Comm. • Computer Aided Diagnostic • Optical Communication & Photonics • Renewable Energy • Communication Engineering • Wireless Communication • Image Processing • Telecommunication System • Nano Electronics	M.E/M.Tech in • Electronics • Electronics and Comm. Engg. **Note : Candidates with the following qualification are eligible for admission to Electronics and Communication Engineering only**; • Electronics & Telecomm Engg. • Electronics and Instrumentation Engg. • Electronics (VLSI) • Electronics Product Design & Technology • Embedded System • Microelectronics • Microwave Engg. • Nano Electronics/ Nano Technology Or any other equivalent	02 + 02* (Full time)	12½	14½ + 02* (Full time)
6.	Applied Science	Physics Section • Nuclear Theory • X-ray crystallography • Dilute Magnetic Semiconductors & Multiferroics (Nanomaterials)	M.Sc. in • Physics	06	24½	30½
		Mathematics Section • Number Theory • Algebra • Coding Theory • Topology	M.Sc. in • Mathematics			
		Chemistry Section • Synthetic Organic Chemistry Nanocatalysis • Synthetic Organotin Chemistry • Analytical Chemistry • Functional Materials	M.Sc. in • Chemistry			
		Geology Section • Geology & Use of Geoinformatics in Geological Sciences	M.Sc. in • Geology			
		Humanities Section • General Management • Finance	Master's degree in • Management or equivalent			

		• Entrepreneurship	• MBA/ M.Com.			
7.	Mechanical	• Mechanical Engineering	M.E./M. Tech in • Mechanical Engg. • Aeronautical Engg. • ProductionEngg. • Production & Industrial Engg. • Aerospace Engg.	01	01	02
8.	Production	• Production & Industrial	M.E./M. Tech in • Mechanical Engg. • ProductionEngg. • Production & Industrial Engg. • Metallurgy Engg. • Industrial Design	Nil	06	06
	CoE (Production)	• Industrial & Product Design	M.E./M. Tech in • Mechanical Engg. • Production Engg. • Production & Industrial Engg. • ElectronicsEngg. • Electronics Product Design • Instrumentation Engg. • Industrial Design	Nil	Nil	Nil
9.	Computer Science & Engineering	• Computer Science & Engineering	M.E/M.Tech in • Computer Science & Engineering • Information Technology or equivalent.	03 + 03* (Full time) + 02* (Part time)	19	22 + 03* (Full time) + 02* (Part time)

Note:

1. Only GATE qualified candidates are eligible for admission to Ph.D. programme in Mechanical and Computer Science & Engineering departments.
2. Entrance test will be conducted for non-GATE candidates by the respective departments followed by interview. For GATE candidates, only interview will be conducted.
3. The schedule of written test and interview will be notified separately on the institute website.
4. The candidates are advised to visit the institute website regularly.

*Under "Visvesvaraya PhD Scheme for Electronics and IT" of Govt. of India.

TABLE-2: Important Dates for Ph. D. admissions 2015-16

Date of Advertisement	13.06.2015
Online Registration starts	23.06.2015 from 11.00 a.m.
Last Date of online registration and fee payment	02.07.2015 till 5.00 p.m.
Last date of receiving the confirmation page along with documents	07.07.2015 till 5.00 p.m.
Dispatch of online applications to various departments	09.07.2015
Publishing of final list of eligible candidates by the respective departments	14.07.2015
Ph. D. admission test and interview in respective departments	15.07.2015 to 17.07.2015
Date of result intimation with waiting list	21.07.2015
Payment of fees (Fee should be in the form of DD in favour of "Director, PEC University of Technology" payable at Chandigarh).	21.07.2015 to 22.07.2015
Reporting of new Ph. D. students in the respective departments (Meeting faculty members in the department and selection of tentative topics, guide/ supervisors)	24.07.2015
Academic registration	29.07.2015 at 9.00 a.m.

PEC University Of Technology, Chandigarh

I. OBJECTIVE OF THE PhD PROGRAMME

The PEC University of Technology has a mission to develop high quality science and engineering specialists having strong base in principles of science and the scientific methods, deep understanding of their chosen areas of specialization, the motivation to learn continually, interact with multi-disciplinary groups and to handle new challenges offered by the front-end technologies.

The PhD programme is designed to impart knowledge, consolidate concepts and intellectual skills through courses, seminars, projects, and thesis work. Above all, it helps the scholars to develop the capacity for free and objective enquiry, courage and integrity, awareness and sensitivity to the needs and aspirations of the society.

The programme provides the candidates an enabling research experience during their stay in the institute thus helping them to enter their professional life with right perspective and knowledge related to their respective fields of specialization.

II. Areas of Research

The Ph.D. Programme can be pursued in the disciplines of Applied Sciences, Civil, Electrical, Mechanical, Production & Industrial, Computer Science & Engineering, Aerospace, Materials & Metallurgical, Electronics and Communication Engineering and Industrial and Product Design. The institute encourages inter-disciplinary research across various departments.

III. Admission to Ph.D. Programme

Admission to the PhD programmes is made on the basis of interview or written test (GATE/NET syllabus) or both as determined by PhD Admission Committee of the Department provided the candidate fulfils all the requirements at the Institute level and the selected candidate deposits the requisite fees for the PhD Programme. Admission through online registration will be done once a year. The applications received will be processed in the various departments for written test/interview.

Internal faculty/staff members who are GATE/NET qualified, will be eligible for admission through interview only, while Non GATE/non NET candidates will be admitted through interview and written test.

The admission to Ph.D. programme will take place once a year. However, students having National/ State/ Industry/ R&D sponsored scholarship such as UGC NET/ CSIR NET/ DSP inspire/ Vishvesveraya etc. & related scholarships or are sponsored foreign

nationals can be given admission throughout the year based upon an interview to be conducted by Departmental Research Committee (DRC) & prospective supervisors.

The Ph.D admission committee of the department will consist of Head of the department, members of DRC and potential supervisors in various areas.

IV. **Categories of Ph.D. Programme Admissions**

The applicant for admission to the Ph.D. programme shall be classified under any one of the following categories which will be decided and recommended by the Ph.D admission committee of the department.

(i) **Full-time Research Student/Candidate (with/without Scholarship and sponsored)**

a) Research student with valid GATE/NET score or admitted to M.E. with GATE and getting Institute assistantship.

b) Research student including foreign nationals getting financial support from Govt. / Semi Govt. agencies (QIP, CSIR, UGC, DAE, DST, DBT, NBHM, JEST, ICCR, NDF, DRDO, etc.)

c) Research student on study leave: This category refers to persons who are released from governmental or educational institutions on study leave for a period of not less than three years for pursuing Ph.D. programme. They will be admitted along with the regular research students through the usual admission procedure.

d) Self-Financed Research student/Candidate

—**Indian:** This category refers to persons with experience and with good track record to join the doctoral programme. They will be admitted along with the regular research students through the usual admission procedure.

—**Foreign:** Admission of Foreign nationals to Ph.D. programme will be made as per policy and direction of the Govt. of India from time to time.

e) Research student working full time (JRF/SRF/RA) in a sponsored R & D project at PEC provided his Ph.D. topic is related to the project as certified by the SRC six months after joining the project. To be accepted as a Ph.D. student, a research student working in a project will have to undergo the same admission procedure as applicable in general.

(ii) **Part-time Research Student/ Candidate (sponsored)**

a) Research student/Candidate working as a regular employee in the institute.

b) Research student/Candidate working as a regular employee in research organization like DRDO/ CSIR etc and scientist/faculty working in the CRIKC institutes will be eligible for admission to PhD Programme as a Part-Time Scholar provided he/she is in continuous service for the last 2 years in the same organization and can provide a No objection certificate from the employer. The DRC has to ensure the fulfillment of these conditions at the time of interview.

c) Research student / candidate working regularly full-time in an R&D project in the institute can join as a part time student if his Ph.D. topic is not related to the project as certified by the SRC six months after joining the project However, part time research student/candidate may be given full time status when the project tenure is completed. To be accepted as a Ph.D. student, a research student working in a project will have to undergo the same admission procedure as applicable in general.

V. Eligibility Criteria for Admission to Ph.D. Programme

1. Eligibility for Full-time Research Student/Candidate

An applicant belonging to the above admission categories should possess the following qualifications in appropriate areas to be eligible to apply for admission for the Ph.D. programme of the Institute.

a) Engineering Technology streams:

Master's degree in Engineering/ Technology of 2 years duration after graduation in respective discipline or equivalent with a minimum Cumulative Grade Point Average (CGPA) of 6.00 on a 10 point scale or equivalent as determined by the Institute wherever letter grades are awarded; or 60% marks in aggregate (of all the years/semesters) where marks are awarded.

b) Science/ Humanities & Social Science, Management Streams:

Master's degree in Sciences/Humanities & Social Sciences/ Management in respective discipline or equivalent and minimum Cumulative Grade Point Average (CGPA) of 6.00 on a 10 point scale or equivalent as determined by the institute where letter grades are awarded; or 60% marks where marks are awarded.

c) The admission eligibility requirements may be relaxed to 5.5 on a 10 point scale or equivalent, or to 55% marks for admission in all categories of scholars for the following categories:

   i) SC/ST candidates

   ii) PwD (Persons with disability)

2.   Eligibility for Part-time PhD

a)   The eligibility criteria shall be the same as that for full time students. Additionally, the part time candidates need to fulfill the following conditions and provide the information along with the application:

1.   The applicants must have been in continuous service with the sponsoring organization for at least two years at the time of submitting the application form for admission and submit 'No Objection Certificate' from the employer stating that (i) He/she is on the regular payroll of the organization, (ii) He/she is permitted to pursue studies on a part-time basis, and (iii) His/her official duties will permit sufficient time for research. Sponsorship letter (on letterhead of the sponsoring organization) should include an undertaking stating that the period of study of the candidates will be treated as 'on duty' with usual salary/allowances, and he/she will be relieved for the period of studies.

2.   He / She will be required to reside at the Institute for a period of not less than one semester i.e. six months duration which is mandatory in the first year of PhD Programme. (This condition of minimum residence period will be automatically waived for candidates who are working in PEC or in organizations / institutions located within a distance of 50 km from the Institute).

VI.   Scholarship:-

Institute scholarships are available for GATE Qualified students in some departments as shown in **TABLE-1.**

VII.   Ph.D. Course Work

After having been admitted, a PhD candidate shall be required to undertake course work for a minimum period of one semester. For this purpose, PhD scholar has to take at least a minimum number of two courses subject to the condition that a minimum of 6 total credits for the PhD Course Work will be mandatory. Further, one of the courses offered during the course work will be a course on research methodology, which may include

quantitative methods and computer applications. It may also involve reviewing of published research in the relevant field. The other course will be based on the recommendations of the SRC. In case, the research student has done research methodology during his Masters degree, he has to complete two other courses as recommended by the SRC. The minimum grade requirement to pass in a PhD Course will be B with an overall minimum CGPA of 7.

VIII. MINIMUM AND MAXIMUM TIME FOR THESIS SUBMISSION

a)   Full time research student/candidate shall be required to be registered for the degree for a minimum period of not less than three years (36 months), before being allowed to submit his thesis. In exceptional cases, the minimum period of registration may be reduced with the approval of the Senate.

Part-time research student/candidate shall be required to be registered for the degree for a minimum period of 4½ years (54 months).

b)   The candidates of all categories shall submit their thesis within a period of five years from the date of their initial registration for the Ph.D. Programme. However, as a special case, this limit may be extended on the recommendation of SRC to a maximum of six years for Full time research candidate and seven years for Part time research candidate by the Dean, Academic Affairs after which the registration shall stand cancelled automatically.

IX.   Submission of Application form

Application for admission must be filled online (guidelines mentioned in point X below) and a printed copy of the filled registration form along with following documents must be sent to Chairman, PG Admissions, PEC University of Technology, Sector – 12, Chandigarh – 160012 on or before the closing date as mentioned in Table-2:

   I.   Date of Birth Certificate

  II.   SC/ST Certificate (if applicable)

 III.   Sponsorship/NOC Certificate (wherever applicable)

 IV.   GATE Score Card (if applicable)

  V.   Copies of Bachelor's & Master's Degrees

 VI.   Migration Certificate (For candidates not having their Master's degree from PEC University of Technology)

VII.   Persons with Disabilities certificate (if applicable)

Note: The candidates applying for more than one department should submit separate print of online application for each discipline.

NOTES:

1. Reservation of seats for SC/ST/PwD candidates shall be provided as per Govt. norms applicable from time to time.

2. Full-time candidates with scholarship coming on study leave must show proof of at least 3 years study leave before being allowed to register after the selection.

3. In case an eligible degree does not bear the awards in percentage, the following Conversion Formula will be used to convert CGPA into percentage of marks for the purpose of admission at PEC: Percentage of Marks = CGPA x 10, on 10-Point Scale.

4. The minimum prescribed percentage will be based on the marks obtained in aggregate of all the years/ semesters of the qualifying examinations as per the weightage followed by the concerned University.

5. The relevance/equivalence of Master's degree for admission to a given discipline will be defined / determined by the DRC of the concerned department and approved by standing committee of Senate.

6. The attendance of full-time PhD candidates will be governed by the attendance requirements of the Institute.

7. Part-time PhD candidates will be required to meet the supervisor at least once every fortnight throughout the semester. Attendance record should be maintained with the supervisor and office of the Department.

8. All Non-GATE/Non-NET qualified candidates have to qualify a PhD entrance exam of the Institute. However, M.E. students who were admitted to M.E. on basis of GATE score are exempt from the PhD entrance exam of the Institute.

9. For admission to PhD Programmes in Science/Humanities/Management, if the candidate does not have a NET Fellowship (UGC/ CSIR) valid for the current year in relevant areas, the candidates has to qualify the PhD Entrance Test of the institute.

10. Only the predetermined number of students may be admitted to a PhD programme.

11. As per the provisions 1(5) of the UGC Regulations 2009, PhD program will not be conducted through distance education mode.

X. Guidelines for Online Registration

1. All the eligible candidates have to fill online application form on website **http://pgadmissionspec.nic.in**. After successful submission, a unique Application Number will be generated.

2. Candidates have to login using unique Application Number and Password generated during application form filling for further activities**.**

3. After login, Candidates have to upload the scanned images of Photograph & Signature with the following restrictions.

    - All the scanned images of photograph and Signature should be in **jpg/jpeg** format only.

    - Size of the photo image must be greater than 4 kb and less than 100 kb.

    - Size of the signature image must be greater than 1 kb and less than 30 kb.

    - Dimension of photograph image should be 3.5 cm (width) x 4.5 cm (height) only.

    - Dimension of signature image should be 3.5 cm (length) x 1.5 cm (height) only.

4. **Payment of Fee:**

    After successfully submission of Application Form and uploading of images, candidates are required to pay Registration Fee (Non-refundable) of Rs. 1500/- (one thousand five hundred only) through Debit Card/ Credit Card/ e-Challan.

5. **Fee Refund Rules:**
    a) A student leaving a programme in between (on his/ her own request) will not be entitled for any refund of fee.
    b) If a student after being granted admission pays the fee but does not register with the institute on the prescribed date, withdraws his admission, the entire fee paid by him/ her (except the registration fee) shall be refunded.
    c) The refundable deposits will be refunded whenever the student withdraws his admission from the institution.

6. **Download confirmation page:**

    The candidates can download the confirmation page after successful payment of the registration fee online.

XI. GENERAL INSTRUCTIONS

1. Separate application form should be used for each department if applying for more than one department.

2. Self attested copies of relevant certificates are to be enclosed.

3. Candidates should bring original certificates along with the Master's Thesis at the time of interview.

4. The filled application form must reach the Chairman, PG Admissions, PEC University of Technology, Sector – 12, Chandigarh - 160012 before the due date.

5. Name of the department in which the admission is sought should be superscribed on the envelope.

XII. CHECK LIST

The self-attested photocopies of the following documents (whichever applicable) are required to be enclosed with the application form.

1. Date of Birth Certificate

2. SC/ST Certificate

3. Sponsorship/NOC Certificate/letter indicating applied for NOC wherever applicable

4. GATE Score Card if applicable

5. All Mark-sheets and Degrees.

6. NET Certificate if applicable

7. Migration Certificate

8. Undertaking if applicable

9. Persons with Disabilities certificate (if applicable)

<u>UNDERTAKING FOR CANDIDATES WHOSE RESULT IS NOT DECLARED</u>

I hereby certify in connection with the application of Mr./Ms._____that he/she is a bonafide student of our institution and is applying for admission to Ph.D. programme(s) at PEC University of Technology, Chandigarh. He/She has completed the requirements of qualifying examination including theory papers, practical and project/dissertation examination for M.E/M.Tech./M.Sc./M.A. _____(Strike out the non-applicable ones and write in the blank space if the degree is not mentioned). The percentage of aggregate marks/CGPA obtained by him/her upto pre-final Semester/year examination (Strike out the non-applicable) is _____ His/her conduct and character during his/her stay at the Institute/University is "GOOD".

Place:_____

Date:_____   Signature of Principal/Dean/Registrar/

Dy.Registrar/Proctor/Administrative Officer /

Asstt. Registrar of the institute attending/last

attended with seal

FEE STRUCTURE FOR Ph.D. STUDENTS

ONE-TIME (At Admission only)

Admission Fee	:	Rs. 3000/-
Student services	:	Rs. 5000/-

RECURRING (Annual)

Tuition Fees	:	Rs. 5000/-
Other facilities & services	:	Rs. 10000/-

SECURITY (Refundable)   :   Rs. 5000/-

The other facilities and services fee will not be payable by students who are pursuing the programme on a part-time basis.

ADDITIONAL FEE FOR HOSTEL FACILITIES AT THE TIME OF ADMISSION:

Refundable security	:	Rs. 5000/-
Hostel fees (Annual)	:	Rs. 17200/-
Hostel & mess establishment charges (Annual)	:	Rs. 24800/-
Maintenance Charges	:	Rs. 5000/-
Mess advance	:	Rs. 2500/-

Total additional sum payable for hostel facilities   :   Rs. 54500/-

Every component of fees is subject to revision by PEC University of Technology, Chandigarh from time to time.