



EXPLORE INNOVATE EXCEL

**PUNJAB ENGINEERING COLLEGE**

**(DEEMED TO BE UNIVERSITY)**

**CHANDIGARH**



***Ph.D. Admission Brochure***

**Session 2022-23**

**(January 2023 Intake)**

**Registration Fee (Non-Refundable)**

**for General: Rs. 1500/-**

**for SC/ ST: Rs. 750/-**

**(Fee for Additional Discipline: for General: Rs. 500/-  
for SC/ ST: Rs. 250/-)**

**For Admission to Ph.D. Programmes**

## Punjab Engineering College (Deemed to be University), Chandigarh

### Admission Notice

#### Admission to Ph.D. Programmes

Online Applications are invited for admission to Ph.D. Programmes in various disciplines as mentioned in **TABLE-1**. The important dates regarding admission related activities are mentioned in **TABLE-2**. Applications may be submitted through the link on institute website <https://pec.ac.in/admissions/phd>. Hard copy of the registration form along with self-attested photocopies of the relevant documents and proof of payment of non-refundable registration fee of Rs. 1500/- or 750/- (as applicable) is to be submitted to Chairman Admissions, Punjab Engineering College (Deemed to be University), Sector – 12, Chandigarh – 160012 by hand /registered post/ speed post on or before the prescribed date and time. The candidates applying for more than one discipline should submit separate print-outs of the online registration form for the additional discipline. **A sum of Rs. 500/- (non-refundable) for General Category candidates and Rs. 250/- (non-refundable) for SC/ ST candidates is to be paid as registration fee for the additional discipline applied.** A candidate is permitted to apply for maximum two disciplines only.

**TABLE-1**

**Area of Specialization and Qualifying Degree for PhD Admission for the session 2022-23 (January, 2023 Intake)**

Sr. No	Department	Area of Specialization(s)	Qualifying Degree, eligible branches
1	Aerospace Engineering		<ul style="list-style-type: none"><li>B.Tech./B.E. / M.Tech./M.E in</li><li>• Aerospace Engineering</li></ul>
2.	Applied Sciences	<p><b>Physics</b></p> <ul style="list-style-type: none"><li>• Magnetic Semiconductors</li><li>• Multiferroics (Nanomaterials)</li><li>• Pyroelectricity</li><li>• Magneto Electric Composites</li><li>• Ferroelectrics</li></ul>	<ul style="list-style-type: none"><li>• M.Sc. Physics</li><li>• M.Sc. Material Science</li><li>• M.Tech./M.E Material Science</li><li>• M.Tech./M.E Materials and Metallurgical Engineering</li><li>• M.Tech./M.E Nanotechnology</li><li>• M.Tech./M.E Electronics</li><li>• M.Tech./M.E Electronics &amp; Communication Engineering</li></ul>

		<p><b>Mathematics Section</b></p> <ul style="list-style-type: none"> <li>• Algebra</li> <li>• Coding Theory</li> <li>• Topology</li> <li>• Fuzzy Optimization</li> <li>• Operation Research</li> </ul>	<ul style="list-style-type: none"> <li>• M.Sc. in Mathematics</li> </ul>
		<p><b>Chemistry Section</b></p> <ul style="list-style-type: none"> <li>• Synthetic Organic Chemistry (Natural Products and Heterocycles)</li> <li>• Green Chemistry</li> <li>• Ionic Liquids</li> <li>• Nanocatalysis</li> <li>• Photocatalysis</li> <li>• Waste Water Treatment Metaloxide Nanomaterials</li> <li>• Organotin Chemistry</li> <li>• Environmental Chemistry</li> <li>• Doped Metal Oxides Nanostructures</li> <li>• Chemosensors</li> </ul>	<ul style="list-style-type: none"> <li>• M.Sc. in Chemistry,</li> <li>• M.Sc. Applied/ Industrial Chemistry</li> <li>• M.Sc. Environmental Sciences</li> <li>• M.Tech./M.E in Chemical Engineering</li> <li>• M.Sc. Material Science</li> <li>• M.Tech./M.E in Environmental Engineering</li> <li>• M.Tech./M.E in Material Science</li> <li>• M.Tech./M.E in Material and Metallurgical Engineering</li> <li>• M. Pharma</li> </ul>
3	Civil Engineering	<ul style="list-style-type: none"> <li>• Structural Engineering</li> <li>• Transportation Engineering</li> <li>• Water Resources Engineering</li> <li>• Environmental Engineering</li> <li>• Geotechnical Engineering</li> <li>• Construction Technology &amp; Management</li> <li>• Remote Sensing and GIS</li> </ul>	<p>B.Tech./B.E. / M.Tech./M.E in</p> <ul style="list-style-type: none"> <li>• Civil Engineering/ Any other allied relevant field</li> </ul>
4	Computer Science & Engineering	<ul style="list-style-type: none"> <li>• Artificial Intelligence</li> <li>• Machine Learning</li> <li>• Soft Computing</li> <li>• Natural Language Processing</li> <li>• Speech Technology</li> <li>• Bio-Informatics</li> <li>• Wireless Sensor Networks</li> <li>• Networks &amp; Security</li> <li>• Mobile &amp; Adhoc Networks</li> <li>• Deep Learning</li> </ul>	<p>B.Tech./B.E. / M.Tech./M.E in</p> <ul style="list-style-type: none"> <li>• Computer Science &amp; Engineering</li> <li>• Computer Science</li> <li>• Computer Engineering</li> <li>• Information Technology</li> <li>• Electronics &amp; Communication Engineering</li> <li>• Software Engineering</li> <li>• Software Systems</li> <li>• Cyber Security</li> </ul>

		<ul style="list-style-type: none"> <li>• Medical Imaging</li> <li>• IOT &amp; related areas</li> <li>• Software Engineering</li> <li>• Software Testing</li> <li>• Information retrieval</li> <li>• Prediction Algorithms</li> <li>• Cryptography</li> <li>• Data Analytics</li> <li>• Fault-Tolerant Distributed Computing</li> <li>• Explainable Artificial Intelligence and Blockchain Technology</li> <li>• IOT</li> <li>• SDN</li> <li>• Wireless Communication</li> <li>• Network Security</li> <li>• AI &amp; ML</li> <li>• VANET</li> <li>• Web Crawling</li> <li>• Dark Web and Deep Web</li> <li>• Latest Areas Related to Covid 19</li> <li>• Automata Theory</li> </ul>	
5	Electrical Engineering	<ul style="list-style-type: none"> <li>• Power System</li> <li>• Power Electronics</li> <li>• Control System</li> </ul>	<p>B.E./B.Tech/M.E/M.Tech in</p> <ul style="list-style-type: none"> <li>• Electrical Engineering</li> <li>• Electrical &amp; Electronics Engineering,</li> <li>• Power System Engineering</li> <li>• Power Electronics and Drives</li> <li>• Control Engineering</li> <li>• Instrumentation and Control Engineering</li> <li>• Systems and Control Engineering.</li> </ul>
6	Electronics & Communication Engineering	<ul style="list-style-type: none"> <li>• Green Communication</li> <li>• Resistive Switching Devices and System Design</li> <li>• Beyond CMOS Devices</li> <li>• Neuromorphic Engineering &amp; Brain Inspired Electronics</li> <li>• Nanoelectronics</li> <li>• Microelectronics</li> <li>• Photonics</li> <li>• Microwave/Terahertz (THz) Antennas</li> </ul>	<p>B.E. / B.Tech. / M.Sc in</p> <ul style="list-style-type: none"> <li>• Electronics Engineering</li> <li>• Electronics &amp; Communication Engineering</li> <li>• Electronics &amp; Electrical Communication Engineering</li> <li>• Physics (Electronics) &amp; M.E./M.Tech. in</li> <li>• Electronics</li> <li>• Electronics &amp; Communication Engineering</li> <li>• Electronics &amp; Electrical</li> </ul>

		<ul style="list-style-type: none"> <li>• Microwave/ Terahertz (THz) Devices</li> <li>• Renewable Energy</li> <li>• Cognitive Radio</li> <li>• VLSI Design/ Technology</li> <li>• Communication Engineering</li> <li>• Wireless Sensor Networks</li> <li>• Electronic System Design</li> <li>• Assistive Technology</li> <li>• Computer Aided diagnostics</li> <li>• Optical Communication</li> <li>• Embedded Systems</li> <li>• Image Processing</li> <li>• Machine Vision</li> <li>• Silicon Nano Photonics</li> <li>• On-Chip Optical Devices</li> <li>• Photonic Integrated Circuits</li> <li>• Optical Networks-On-Chip</li> <li>• Wireless Communication</li> </ul>	<p>Communication Engineering</p> <ul style="list-style-type: none"> <li>• Electronics and Telecomm Engineering</li> <li>• Electronics and Instrumentation Engineering</li> <li>• VLSI Design</li> <li>• Microwave Electronics</li> <li>• Embedded System</li> <li>• Microelectronics</li> <li>• Nanoelectronics</li> <li>• Nanotechnology</li> <li>• Power Electronics</li> <li>• Microwave Engineering</li> <li>• Electronics Product Design &amp; Technology</li> <li>• Biomedical Engineering</li> <li>• Mechatronics</li> </ul> <p>Or any other equivalent</p>
7	Mechanical Engineering	<ul style="list-style-type: none"> <li>• Manufacturing</li> <li>• Production</li> <li>• Design</li> <li>• Industrial Engineering</li> </ul>	<p>B.Tech./B.E. / M.Tech./M.E in</p> <ul style="list-style-type: none"> <li>• Mechanical Engineering</li> <li>• Production Engineering</li> <li>• Metallurgy Engineering</li> <li>• Industrial Engineering</li> <li>• Design</li> <li>• Thermal Engineering</li> <li>• Any other allied relevant field</li> </ul>
8	Metallurgical & Materials Engineering	<ul style="list-style-type: none"> <li>• Advance Materials</li> <li>• Composite</li> <li>• Ceramics</li> <li>• Advanced Welding Technology</li> <li>• High Strain Rate Materials</li> <li>• Metal and Alloys</li> <li>• Corrosion</li> <li>• High Entropy Alloys</li> <li>• Power Metallurgy</li> <li>• Nano Materials</li> <li>• Energy Storage Materials</li> <li>• Advance Polymers</li> </ul>	<p>B.Tech /M.Tech in</p> <ul style="list-style-type: none"> <li>• Metallurgical &amp; Materials</li> <li>• Mechanical Engineering</li> <li>• Production Engineering</li> <li>• Chemical</li> <li>• Polymer Engineering</li> <li>• Any other allied relevant field</li> </ul>

9	Production and Industrial Engineering	<ul style="list-style-type: none"> <li>• Manufacturing</li> <li>• Production</li> <li>• Advance Manufacturing</li> <li>• Finite Element Analysis</li> <li>• Supply Chain Management</li> <li>• Industrial Engineering</li> <li>• Quality Engineering</li> <li>• Advance Welding and Coating</li> <li>• Rapid Prototyping</li> <li>• CAD</li> <li>• CAM</li> <li>• CNC</li> <li>• Smart Manufacturing</li> <li>• Digital Manufacturing</li> <li>• Industrial Teratology</li> <li>• Ergonomics</li> <li>• Metal forming</li> <li>• Design</li> <li>• Thermal Reverse Engineering</li> <li>• Hybrid Manufacturing (Addictive + Subtractive)</li> <li>• Laser Materials Processing</li> <li>• Robotics</li> </ul>	<p>B.Tech./B.E. / M.Tech./M.E in</p> <ul style="list-style-type: none"> <li>• Production and Industrial Engineering</li> <li>• Production Engineering</li> <li>• Industrial Engineering</li> <li>• Mechanical Engineering</li> <li>• Manufacturing Technology</li> <li>• Welding Engineering</li> <li>• Product Design and Manufacturing</li> <li>• Industrial Design</li> <li>• Rapid Prototyping</li> <li>• Manufacturing Science and Engineering</li> <li>• Mechatronics</li> <li>• Metallurgical Engineering</li> <li>• Foundry – Forge Technology</li> <li>• TQM</li> </ul>
10	Centre of Excellence in Industrial & Product Design	<ul style="list-style-type: none"> <li>• Ergonomics</li> <li>• Advanced CAD/CAM</li> <li>• Digital Design</li> <li>• Reverse Engineering</li> <li>• Computer aided diagnostics</li> <li>• Electronic System Design</li> </ul>	<p>B.Tech./B.E. / M.Tech./M.E in</p> <ul style="list-style-type: none"> <li>• Mechanical Engineering</li> <li>• Production and Industrial/ Production Engineering</li> <li>• Electronics Engineering</li> <li>• Electronics and Communication Engineering</li> <li>• Industrial Design</li> <li>• Electronic Product Design and Technology (EPDT)</li> </ul>
11	Centre of Management and Humanities	<ul style="list-style-type: none"> <li>• Finance &amp; Entrepreneurship</li> </ul>	<ul style="list-style-type: none"> <li>• M.Com</li> <li>• MBA</li> </ul>
12	Cyber Security Research Centre	<ul style="list-style-type: none"> <li>• Artificial Intelligence</li> <li>• Machine Learning</li> <li>• Bio-Informatics</li> <li>• IOT &amp; related areas</li> <li>• Cryptography</li> <li>• IOT</li> <li>• Dark Web and Deep Web</li> <li>• Information Security</li> </ul>	<p>B.Tech./B.E. / M.Tech./M.E in</p> <ul style="list-style-type: none"> <li>• Computer Science &amp; Engineering</li> <li>• Computer Science &amp; Information Technology</li> <li>• Information Security</li> <li>• Cyber Security</li> <li>• Information Technology</li> </ul>

		<ul style="list-style-type: none"> <li>• Cyber Warfare</li> <li>• Pervasive Sensing</li> <li>• Cloud Computing &amp; Security</li> <li>• Cyber Threat Intelligence</li> <li>• Social Media Analytics</li> <li>• Biometric Security</li> <li>• Selfie Biometrics</li> <li>• Latent Fingerprint &amp; Image Processing</li> <li>• Digital Forensics</li> </ul>	<ul style="list-style-type: none"> <li>• Electronics &amp; Communication Engineering</li> <li>• Data Science</li> </ul>
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**Note:**

1. The schedule of entrance test and interview will be notified separately on the institute website. Candidates having valid GATE/ NET Score are exempted from the entrance test.
2. Institute assistantship is available in some of the disciplines for candidates having valid GATE/ NET score, details will be provided at the time of interview.
3. Some scholarships are also available in the Departments of Computer Science & Engineering (01) and Electronics & Communication Engineering (02) under Visvesvaraya PhD Scheme for Electronics & IT initiated by Ministry of Electronics & Information Technology (MeitY), Government of India.
4. Reservation of seats shall be provided as per Govt. of India norms.
5. A candidate is permitted to apply for a maximum of two disciplines only.
6. The candidates are advised to visit the institute website regularly.

**TABLE-2: Important Dates  
Admission Schedule for Ph.D Admissions 2022-23  
(January 2023 Intake)**

Online Registration	<b>04.11.2022 to 16.11.2022 (till 5.00 PM)</b>
Last date for depositing hard copy of Registration Form along with supporting documents and proof of payment of registration fee	<b>21.11.2022 till 05:00 PM</b>
Dispatch of Registration Form to various Departments	<b>23.11.2022</b>
Publishing of final list of eligible candidates by respective Departments	<b>29.11.2022</b>
Entrance Test for non-GATE/ NET candidates (details will be uploaded on institute website)*	<b>05.12.2022</b>
Interview in respective departments along with verification of documents (details will be uploaded on institute website) *	<b>06.12.2022</b>
Result intimation with waiting list	<b>09.12.2022</b>
Payment of fees (Online)	<b>09.12.2022 to 13.12.2022</b>
Intimation to waitlisted candidates on institute website	<b>15.12.2022</b>
Payment of fees (Online) by waitlisted candidates	<b>15.12.2022 to 16.12.2022</b>
Reporting of PhD students in the respective departments for the selection of tentative topics, guide/ supervisors	<b>02.01.2023</b>

\*The admission schedule may change according to the situation prevailing at that time, the candidates are advised to visit the institute website regularly.



## **Punjab Engineering College (Deemed to be University), Chandigarh**

### **I. OBJECTIVE OF THE PhD PROGRAMME**

Punjab Engineering College (Deemed to be University) 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, motivation to learn continually, ability to 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 presence in the institute thus helping them to enter their professional life with right perspective and knowledge related to their respective fields of specialization.

### **II. Departments and Centres**

The Ph.D. Programme can be pursued in the following departments and Centres:-

1. Aerospace Engineering
2. Applied Sciences (Physics, Chemistry and Mathematics)
3. Civil Engineering
4. Computer Science & Engineering
5. Electrical Engineering
6. Electronics and Communication Engineering
7. Mechanical Engineering
8. Metallurgical & Materials Engineering
9. Production and Industrial Engineering
10. Centre of Excellence in Industrial & Product Design
11. Centre of Management and Humanities
12. Cyber Security Research Centre

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 for candidates having valid GATE/ NET Score and on the basis of written test and interview for all other candidates by PhD Admission Committee of the respective Departments provided the candidate fulfils all the requirements at the Institute level and the selected candidate deposits the requisite fees for the PhD Programme. The applications received will be processed in the various departments for interview.

The Ph.D admission committee of the department will consist of Head of the department, members of Departmental Research Committee (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 assistantship and sponsored)**
- a)** Research student with valid GATE/NET score or admitted to M.E./ M.Tech. 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 engineering college and R&D organizations/ Labs 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. These students would also be eligible for institute assistantship on lines of students admitted under (a) above.
  - f) Research fellows from reputed and established laboratories of Govt. of India/ State Govt./ accredited labs of QCI, academic and research institutions with which the institute has entered into MoU with focus on collaboration in academic and research and CRIKC institutions may be considered for registration in full time Ph.D programme of PEC as is allowed for research students working full time at PEC.
- (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 institutions and other engineering colleges 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 (**Annexure-II**). 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 full time/part time student if his Ph.D. topic is related to the project as certified by the SRC six months after joining the project. A 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
- In qualifying degree, the candidates should have passed and secured at least 6.5 CGPA (on a 10- point scale) or 60% for GEN, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute.
- Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. In case both CGPA and percentage are mentioned, then only CGPA would be considered.
- Conversion from CGPA to percentage or vice versa given by an individual Institute/university will not be allowed.
- If CGPA is on a different scale than the 10-point scale, then it would be linearly mapped to a 10-point scale.

**Details of direct admission of B.E./B.Tech. candidates to Ph.D programme are given in Section 3 below (Direct Admission of B.E./B.Tech. candidates to Ph.D programme).**

#### **b) Science Streams:**

- Master's degree in Sciences in respective discipline or equivalent
- In qualifying degree, the candidates should have passed and secured at least 6.5 CGPA (on a 10- point scale) or 60% for GEN, whereas 6.0 CGPA (on a 10-point scale) or 55% in case of SC/ST/PwD candidates. The above mentioned CGPA/Percentage should be awarded by a recognized University/Institute.
- Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. In case both CGPA and percentage are mentioned, then only CGPA would be considered.
- Conversion from CGPA to percentage or vice versa given by an individual Institute/university will not be allowed.
- If CGPA is on a different scale than the 10-point scale, then it would be linearly mapped to a 10-point scale.

**c) Management, Humanities & Social Sciences Streams**

**Ph.D. in Management/ Commerce:** The candidate must possess M.Com/ MBA or equivalent and should have obtained minimum Cumulative Grade Point Average (CGPA) of 5.5 on a 10 scale or equivalent as determined by the institute where letter grades are awarded; or 55% marks where marks are awarded.

The admission eligibility may be relaxed to 5.0 on a 10 scale or equivalent, or to 50% marks for SC/ST/PwD candidates.

**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:

i.) 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

- a) He/she is on the regular payroll of the organization,
- b) He/she is permitted to pursue studies on a part-time basis
- c) 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.

ii.) 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).

*Note: Prevailing guidelines on course work for Ph.D part-time programme and options for Senior Executives working at the level of CEOs and Directors in industries, Government and research organizations are available in Ph.D Rules and Regulations of the institute.*

### **3. Direct Admission of B.E./B.Tech. candidates to Ph.D programme**

- a) To be eligible for the admission under this category, a candidate is required to have minimum CGPA of:
  - i. 8.0 or above with GATE or 8.5 or above without GATE for students graduated from PEC and CFT institutions at the end of the seventh semester (if applying during final year) under General category.
  - ii. 8.0 or above with GATE or 8.5 or above without GATE for students graduated from PEC and CFT institutions at the end of the eighth semester (if applying after the completion of B.E./ B.Tech) under General category.
  - iii. For SC/ST/PwD category students, the minimum CGPA requirement will be reduced by 0.5.
- b) Successful candidates in final year of undergraduate programme may be given provisional admission to the Ph.D programme. This admission shall be confirmed provided the student completes his/her undergraduate programme with required CGPA.
- c) Candidates getting direct entry to Ph.D programme after BE/ B.Tech will need to fulfill credit requirements through course work on pattern of courses offered to PG students and additional course requirements as per UGC.

### **VI. Submission of Application form**

Application for admission must be filled online (procedure for online registration is mentioned in para VII) and a copy of the filled registration form along with self attested photocopies of the following documents must be sent to Chairman Admissions, Punjab Engineering College (Deemed to be University), 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. GATE Score Card (if applicable)
- IV. Copies of Bachelor's & Master's Degrees along with marks sheets
- V. NET Certificate (if applicable)
- VI. Migration Certificate [For candidates not having their Master's degree from Punjab Engineering College (Deemed to be University)]
- VII. Persons with Disabilities certificate (if applicable)

VIII. Undertaking for candidates whose result is not declared (**Annexure-I**)

IX. Sponsorship/ NOC Certificate from current employer (**Annexure-II**)

**NOTE:**

1. Reservation of seats for SC/ST/PwD candidates shall be provided as per Govt. of India norms applicable from time to time.
2. Full-time candidates with assistantship joining on study leave must show proof of at least 3 years study leave before being allowed to register.
3. The attendance of full-time PhD candidates will be governed by the attendance requirements of the Institute.
4. Only the predetermined number of students may be admitted to a PhD programme.
5. As per the provisions 1(5) of the UGC Regulations 2009, PhD program will not be conducted through distance education mode.

**VII. Procedure for online Registration**

Online Submission of application for Registration on <https://pec.ac.in/admissions/phd>. Please read the general instructions carefully before starting the registration process. The candidates are required to pay payment of non-refundable registration fee of Rs. 1500/- or 750/- (as applicable) online and a sum of Rs. 500/- (non-refundable) for General Category candidates and Rs. 250/- (non-refundable) for SC/ ST candidates is to be paid as registration fee for the additional discipline applied. The details of online payment are to be filled during online registration.

The process of online registration consists of three steps.

**Step 1:**

- 1.1 Enter a valid email address and other personal details.
- 1.2 On submission, a system generated username & password will be displayed on the screen. Note down this username and password for future reference.

**Step 2:**

- 2.1. Enter the academic qualifications.
- 2.2. The candidate then has to upload the scanned images of Photograph and Signature.
- 2.3. All Scanned images should be jpg/jpeg format only.
- 2.4. Size of the photograph image must be greater than 4kb and less than 200kb. The photograph should preferably have the frontal face with a light background.
- 2.5. Size of the signature image must be greater than 4kb and less than 100 kb.
- 2.6. Dimension of photograph image should be 200x150(height x width) pixels only.

- 2.7. Dimension of signature image should be 100 x 200 (height x width) pixels only.
- 2.8. The candidates are required to pay the registration fee as applicable through online mode and enter the transaction ID/UTR number of online payment.
- 2.9. The candidates have to select their choices of area of specialization in order of their preference.
- 2.10. Mention number of papers published and awards and scholarship, if any.
- 2.11. Mention any other relevant information.
- 2.12. After successful completion the registration form and choice filling, a confirmation page will be generated.

**Step 3:**

- 3.1 The candidates are advised to take 2 printouts of the confirmation page and send one copy of print-out along with documents to following address by hand/speed post/registered post so as to reach by the prescribed date.

Chairman Admissions, Punjab Engineering College (Deemed to be University) Sector-12, Chandigarh - 160012
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- 3.2 The institute will not be responsible for any delay in the receipt of hard copy of the Registration Form.
- 3.3 The candidates are advised to keep one copy of the confirmation page with them for future reference.



## IX. GENERAL INSTRUCTIONS

1. Separate Registration form along with all enclosures should be sent for each department if applying for more than one department.
2. The Registration Fee is to be deposited through online payment in the following account:-

### Bank Details

Name Of Account Holder	<b>Punjab Engineering College- Admissions</b>
Institute Name with Complete Address	<b>State Bank of India</b>
Branch Name With Complete Address	<b>PEC Branch, Sector 12, Chandigarh</b>
IFSC Code of The Branch	<b>SBIN0002452</b>
MICR Code	<b>160002008</b>
Bank Account Number (Saving Account)	<b>37646936859</b>

3. Self attested copies of relevant certificates are to be enclosed.
4. Candidates should bring original certificates along with the Master's Thesis at the time of interview.
5. Duly filled Registration form must reach the Chairman Admissions, Punjab Engineering College (Deemed to be University), Sector - 12, Chandigarh - 160012 on or before the due date.
6. Name of the department in which the admission is sought should be super-scribed on the envelope.
7. In case result of qualifying degree is awaited, provisional admission is permitted to the candidate subject to meeting the above qualifying degree requirement latest by **January 31, 2023**. A certificate from the head of current institute to that effect should be submitted during document verification.
8. **Cancellation due to non fulfillment of essential requirements:**  
If a candidate fails to satisfy the prescribed minimum educational qualifications, her/his allotted seat shall automatically stand cancelled. Candidate, for whom the result of qualifying degree is awaited, can take part in counseling process. However, they have to produce a course completion certificate duly signed by Head of the Institute at the time of the reporting. If any admitted candidate, whose result was awaited at the time of reporting, is not able to submit her/his qualifying degree certificate and marks sheet by January 31, 2023, her/his admission shall automatically stand cancelled and refund of any fee will be done as per the institute norms.

**X. DOCUMENTS TO BE PRODUCED DURING PHYSICAL REPORTING ALONG WITH TWO SETS OF SELF ATTESTED PHOTOCOPIES:**

- i. Printout of the Registration form
- ii. GATE score card/ NET Certificate
- iii. Photo ID proof as per Govt. of India norms (Aadhaar Card)
- iv. Original Birth certificate issued by competent authority/Class X (High School) Board Certificate as proof of date of birth
- v. Original Marks sheet of class XII
- vi. Original Grade/Marks sheets of qualifying examination for all semesters
- vii. Original Degree/ Provisional certificate, if degree is completed
- viii. Original Certificate of category (SC/ST), if applicable, as per Government of India, issued by the competent authority.
- ix. Original Migration certificate of last Institute/ University attended
- x. Three colour passport size photographs
- xi. Original Conduct/ Character Certificate from the Head of the institution last attended
- xii. Original Course completion certificate from the Head of the University/Institute in case result is awaited
- xiii. Persons with Disabilities certificate (if applicable)
- xiv. Undertaking if applicable
- xv. Sponsorship/ NOC Certificate (wherever applicable)

**Note:** If the original certificates are not in English/Hindi, English/Hindi version/translation of such certificates, duly certified by the Principal/Director of the graduating Institute, will be required during the verification of documents.

**UNDERTAKING FOR CANDIDATES WHOSE RESULT IS NOT DECLARED**

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 Punjab Engineering College (Deemed to be University), Chandigarh. He/She has completed/ will complete the requirements of qualifying examination including theory papers, practical and project/dissertation examination for M.E/M.Tech./M.Sc./M.A by **31<sup>st</sup> January, 2023**.

\_\_\_\_\_ (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 has been "GOOD".

Place: \_\_\_\_\_

Date: \_\_\_\_\_

Signature of Principal/Dean/Registrar/  
Dy.Registrar/Proctor/Administrative Officer of the  
institute attending/last attended with seal

**FORMAT FOR CERTIFICATE OF SPONSORSHIP FOR NOMINEES**

Certified that \_\_\_\_\_ son/daughter of Shri\_\_\_\_\_ has been working as\_\_\_\_\_ (e.g. Engineer/ Teacher) on regular full time basis in\_\_\_\_\_ (Department/Organization) since\_\_\_\_\_ (date). His/ Her provident fund account no. is \_\_\_\_\_.

The officer/ official is permitted to pursue higher studies on full-time/ part-time basis. The officer/ official will be granted leave as per requirement for the period of study.

He/She is hereby sponsored for admission to Ph.D. Programme in\* \_\_\_\_\_ at Punjab Engineering College (Deemed to be University), Chandigarh for the session 2022-23. In case he/she is selected for admission, he/she will be relieved from his/her duty and allowed to join the classes for full duration of the said programme.

If he/she leaves this Department/Organization during his/her period of study, Punjab Engineering College (Deemed to be University) will be informed accordingly to cancel his/her admission.

Further certified that he/she shall continue to be an employee of this Department/Organization and shall join back his/her duties after completing the programme. Certified that this institute is approved by AICTE (*only for an educational Institute*).

Date: \_\_\_\_\_

(Signature & Seal of the employer)

\* Both the branch and the department should be mentioned.

### FEE STRUCTURE FOR Ph.D. STUDENTS

<b>One-time (at the time of Admission only)</b>	
Admission Fee	Rs. 5,000/-
One- time Student service fee	Rs. 6,000/-
Security deposit (Refundable)	Rs. 8,000/-
<b>Annual Fees</b>	
Academic (Full Time Regular students)	Rs. 23,000/-
Academic (Part Time Students)	Rs. 45,000/-
Other facilities and services	Rs. 6,000/-
<ul style="list-style-type: none"><li>• <b>Total Payable at the time of admission (for full time regular students) is Rs. 48,000/-</b></li><li>• <b>Total payable at the time of admission (for part time students) Rs. 70,000/-</b></li></ul>	

*Every component of fees is subject to revision by Punjab Engineering College (Deemed to be University), Chandigarh from time to time without any prior notice. Tuition fees will be raised by at most 10% every year.*