

**WALK-IN-INTERVIEW FOR ADMISSIONS TO PhD PROGRAMME AT IIT ROPAR**

A walk-in Interview for admission to the full-time PhD program in the first semester of the academic year 2025-26 in the **Department of Metallurgical and Materials Engineering** is scheduled as follows. Interested candidates can attend in a hybrid mode. For more details, candidates are advised to visit the **PhD Admission Brochure 2025-26 [Pages 5 to 9]** on the Institute website.

Participation	Department	Date of interview	Time	Venue
Offline	Metallurgical and Materials Engineering	08-08-2025	03:00 PM onward	MME Seminar Room, Super Academic Block
Online			09:30 AM onward	Link will be provided through email

**PhD positions are available through institute fellowships, sponsored projects, and self-funded options. Opportunities are also open for part-time and ERP candidates. For detailed guidelines, please refer to the link below.**

- <https://mme.iitrpr.ac.in/academics/phd-program-in-mme> (Department Website).
- <https://www.iitrpr.ac.in/sites/default/files/Ph.D.%20brochure-link.pdf> (Institute Website) [Page 5 to 9].

**Research Area (PhD seats under institute fellowship / Part-time / ERP)]****I. Computational Modelling and Informatics**

Computational Thermodynamics, Crystal Plasticity, Density Functional Theory (DFT), First-principles Calculations, Molecular Dynamics (MD), Monte Carlo Methods, Cellular Automata, Phase Field Methods, Finite Element (FEM) and Finite Volume Methods, Configurational force, Computational Fluid Dynamics, and Materials Informatics (Machine Learning applied to Materials).

**II. Extraction, Recycling & Sustainability, and Degradation**

Iron and Steel Making, Recovery of Mechanical and Physical Properties, Battery Materials Recycling, Recycling of Metallic Alloys and Polymers. Sustainability, Process Optimization for Carbon Footprint Reduction, Renewable Energy Materials, Green Materials Processing, Environmental Degradation of Materials, Oxidation and Corrosion in Extreme Environment, Thermal Degradation, Tribology, Erosion.

**III. Materials Chemistry and Corrosion**

Surface Chemistry, Catalysis, Crystallography, Inorganic Materials, Electrochemistry, Polymer Chemistry, Solid-State Chemistry, Materials Design, Thin Films, Chemical Vapor Deposition, Nanochemistry, Corrosion and Protection, High-Temperature Corrosion, Erosion-Corrosion, Biocorrosion.

**IV. Mechanical Behaviour of Materials**

Stress and Strain Behaviour, Elasticity and Plasticity, Dislocation Theory, Twinning, Hardening, Materials Deformation, Fracture Mechanics, Damage Mechanics, Nanomechanics, Charpy Impact Test, Fatigue, Thermal Fatigue, Crack Propagation, Creep, Superplasticity, Anisotropy and Properties Correlation, Nanoindentation, Dynamic Mechanical Analysis (DMA), Composites and associated Mechanical Behaviour.

**V. Nano, Functional & Energy Materials and Devices**

Nanomaterials, Nanofabrication, Nanomechanics, Nanosensors, Nanomaterials Synthesis, Biofunctional Materials, Shape Memory Alloys, Battery Materials, Fuel Cells, Electroactive Polymers, Conducting Polymers, Hydrogen Storage, Electrochemical Energy Storage, Catalysts for Energy Applications, Thin Film Devices, Optoelectronic Devices, Energy Storage Devices.

**VI. Processing and Manufacturing of Materials**

Additive Manufacturing, Forging, Rolling, Extrusion, Powder Metallurgy, Sintering, Welding, Heat Treatment, Machining, Metal Forming, Surface Treatment, Severe Plastic Deformation (SPD), Ceramics Manufacturing, High-Temperature Processing, Crystal Growth, Electroplating, Solidification Processing, Thin Film Deposition, Micro-fabrication, Cold Spray Coating, Magnetic Materials Design and Fabrication, Composites and Associated Processing.

**Through projects (Available PhD seats)**

Sr. No	Project Title	Principal Investigator
1	Development of Cu-Ce Alloys with Optimized Conductivity and Mechanical Properties from Recycled Cu Feedstock.	<b>Dr. Nitish Bibhanshu</b>
2	Enhancement of Corrosion and Cavitation-Erosion Behaviour of Nickel-Aluminium-Bronze Alloy with Ti6Al4V Cold Spray Coating for Naval Applications.	<b>Dr. Rajiv Kumar</b>

**Minimum Eligibility Qualification (MEQs)\* for admission to Regular Full-time Ph.D. programmes**

Sr. No.	Qualifying Degree	Minimum Performance in Qualifying Degree for General/OBC (Non-Creamy Layer)/EWS Category Candidates	Minimum Performance in Qualifying Degree for SC/ST/PwD category Candidates	Qualification Through National Level Examination Requirements
1.	M.Tech./M.E/M.D. or equivalent	60% marks or 6.00 CGPA on a 10-point scale	55% marks or 5.5 CGPA on a 10-point scale	Nil
2.	M.Sc./MBA/M.A/M.B. B.S. or equivalent	60% marks or 6.00 CGPA on a 10-point scale	55% marks or 5.5 CGPA on a 10-point scale	Qualified GATE/CSIR/UGC-NET/DST-INSPIRE/JEST/NBHM or other national fellowship
3.	B.E./B.Tech. or equivalent four years program	60% marks or 6.00 CGPA on a 10-point scale	55% marks or 5.5 CGPA on a 10-point scale	Qualified GATE/CSIR/UGC-NET/DST-INSPIRE/JEST/NBHM or other national fellowship

**Exemptions:**

Requirement of qualification in GATE / National level Exam is waived off for the following categories of applicants. Candidates from Centrally Funded Technical Institutes (CFTIs) completed B.Tech./B.E./ Integrated M.Tech./ Integrated M.Sc. programmes (or any other programme of minimum four year duration, admission to which is on the basis of JEE), must obtain a CGPA of 7.5 or above (on a 10 point scale) at the time of graduation, and before they formally register for Ph.D. programme (75% aggregate marks, if marks is the primary mode of evaluation).

\*The department may fix higher cut-off/selection criteria than the MEQs

**Important Note:**

- The walk-in interview will be in **hybrid mode**.
- The candidates who want to join the interview in **online mode** must send the application form along with all required documents to [office-mme-1@iitrpr.ac.in](mailto:office-mme-1@iitrpr.ac.in) and cc'ed to [mme.acrpgs@iitrpr.ac.in](mailto:mme.acrpgs@iitrpr.ac.in); with the subject line "**PhD Walk-in-Interview Application-August 2025**" by **7<sup>th</sup> August 2025 (by 05:00 PM)**. The link and schedule for the interview will be sent only to the shortlisted candidate by **8<sup>th</sup> August 2025**.
- The candidates, who are interested in a PhD through the projects, may email to [office-mme-1@iitrpr.ac.in](mailto:office-mme-1@iitrpr.ac.in) and cc'ed to [mme.acrpgs@iitrpr.ac.in](mailto:mme.acrpgs@iitrpr.ac.in) with the subject line "**PhD application through the Project: Include Supervisor Name**" By **05:00 PM on 7<sup>th</sup> August 2025**.
- IIT Ropar reserves the right to admit/ not admit for any of the advertised areas and apply appropriate criteria for shortlisting/selection of the candidates.
- The decision of the competent authority in all matters relating to the eligibility of the candidate, written test/interview, and admission would be final and binding on all the candidates. In case of any dispute/ambiguity that may occur in the process of admission, the decision of the Institute shall be final.
- All the details furnished in the application will be treated as final, and no changes shall be entertained. Non-submission of valid/required documents and/or incomplete application will lead to summarily rejection.
- Please **bring (physical mode)** the following documents at the time of the interview, or **send (Online mode)** the documents with the application form.
  - Duly filled application form in the prescribed format appended below this advertisement.
  - All your original certificates and also self-attested photocopies of the certificates (from Class X onwards).
  - Qualifying certificate of the **GATE/UGC NET/CSIR/UGC-JRF/BET JRF/INSPIRE/NBHM or any other national fellowship**
  - Those who belong to the SC/ST/OBC/OBC-NCL/General-EWS category must produce a certificate of the same. Certificates related to OBC-NCL/EWS should be issued in the current financial year as per the DOPT format.
  - Any other relevant documents (e.g., experience certificate, etc.).
  - One updated resume & passport size photograph.
- Application Fee: Women candidates & SC/ST/PwD category candidates: Rs. 100/- All other candidates: Rs. 200/-. The fee is to be paid by SB Collect (Online Payment System). Applications without online payment details will not be considered. Fees payment method is as follows:
- Procedure for payment of application fee through SB collect:
  - Go to <https://www.onlinesbi.com/>
  - Select SB collect.
  - Tick the terms and conditions and continue.
  - Select state - Punjab.
  - Select educational institute – IIT Ropar (Type IIT Ropar after giving space in each letter of IIT).
  - Select the option for the payment category.
  - Pay the requisite fee.

One application fee is valid for a single application. The application fee is non-refundable.

**The interested candidates are requested to visit Department of Metallurgical and Materials Engineering, A322, SAB, IIT-Ropar Main campus, Rupnagar, Punjab 140001; for a walk-in Interview in physical mode as per the given schedule.**

**Note:** The candidates need to make their arrangements for travel. No TA will be provided. The candidates need to make their arrangements for accommodation in Ropar/Rupnagar city; however, [office-mme-1@iitrpr.ac.in](mailto:office-mme-1@iitrpr.ac.in) may be approached 2 days before attending the interview if accommodation is needed inside the campus. Accommodation inside the campus is subject to availability and may be chargeable.

For any queries related to this offline interview process, send an email to [office-mme-1@iitrpr.ac.in](mailto:office-mme-1@iitrpr.ac.in)

**INDIAN INSTITUTE OF TECHNOLOGY ROPAR**

**APPLICATION FORM for PHD WALK-IN INTERVIEW**

**1. Personal Details**

Full Name (In capital)			
Name of the Department applying			
Research Area(s) <i>(Provided on the 1<sup>st</sup> page of advertisement)</i>			
Project title: (Candidate may opt for one or both, based on their interest) <i>(Provided on the 1<sup>st</sup> page of advertisement)</i>			
Interested in the PhD <i>(Though Institute Fellowship, Projects, Self-Sponsorship, ERP, and Part-time)</i>	<i>Candidate may opt for one or multiple options.</i>		
Date of Birth (DD/MM/YY):	Category (GEN/SC/ST/OBC/EWS/PWD):	Affix a recent passport-size photo	
Marital Status (Single/Married):	Gender (Male/Female)		
Nationality			
Present Address for Communication		Permanent Address	
Mobile/Phone No.		Email:	

**2. Details of School/University/Institute Studied (From Matriculation Onward)**

S.No.	Degree	Discipline	University/Institute	Regular/ Part-time	Year	%Marks /CGPA	Division

**3. Details of External Fellowship (CSIR/UGC-JRF/BET-JRF/INSPIRE/NBHM or any other national fellowship etc.)**

Qualifying Examination	Branch	Year	Valid Up-to	Percentile	Score	All India Rank	duration of fellowship

**4. Details of Qualifying Examination (NET/GATE or any other equivalent examination)**

Qualifying Examination	Branch	Year	Valid Up to	Percentile	Score	All India Rank

**5. Professional Experiences (Teaching/Research/Industrial)**

Name of Organization	Designation	Nature of Work	From	To

**6. Research Publication/Patents/Awards/Accomplishments (if any):**

**Any other Information (use a separate sheet if required):**

**DECLARATION**

I hereby declare that I have carefully read the instructions and particulars supplied to me and that the entries made in this application form are correct to the best of my knowledge and belief. If selected for admission, I promise to abide by the rules and discipline of the Institute. I note that the decision of the Institute is final in regards to the selection. The Institute shall have the right to expel me from the Institute at any time after my admission, provided it is satisfied that I was admitted on false particulars furnished by me or my antecedents prove that my continuance in the Institute is not desirable. I agree that I shall abide by the decision of the Institute, which shall be final.

Place:

Date:

Signature of the Applicant

---