



Department of Mechanical Engineering

PhD Program in Department of Mechanical Engineering

The Department of Mechanical Engineering, IIT Indore invites applications from high caliber, sincere and research-oriented students for admission to the Ph.D. program for the Academic Year 2022-2023 as per the below-mentioned categories of admission, research areas, and time schedule. Candidates are strongly advised to visit the profiles of the faculty members at <http://people.iiti.ac.in/~meiiti/index.php/about/> before applying for the Ph.D. Program.

Categories of Admission: **FA (Fellowship Awardee) category only.** Kindly refer to the main Ph.D. Advertisement of the Institute is available at <http://academic.iiti.ac.in/phdadvt.php> for details of the FA category.

A. Eligibility for Students:

Minimum Educational Qualifications (MEQs) and Qualifying Examination (QE) for Indian applicants	Minimum Educational Qualifications (MEQs) and Qualifying Examination (QE) for International applicants
<p>B. Tech. Mechanical Engineering, Metallurgy, Automobile Engg; Marine Engineering; Ceramic Engineering; Materials Engineering, Manufacturing Engineering, Industrial Engineering, Reliability Engineering Production Engineering, Materials Science Engineering, Aerospace Engineering, Chemical Engineering, Biotechnology, Biomedical Engineering or any other related field of Engineering and Masters' degree in the Mechanical Engineering/ Technology/ Metallurgy Department/ Energy Systems Engineering; Energy and Environment; Energy Engineering; Automobile Engineering; Thermal Engineering; Heat Power; Energy Materials, Fluids & Thermal Engineering, Cryogenics & Vacuum Technology, Hydraulic Engineering, Material Science and Technology, Manufacturing Engineering, Industrial Engineering, Production Engineering, Reliability Engineering, Machine Design, CAD/CAM/Metallurgy, Materials Science or any other related field of engineering (with first division as defined by the awarding Institute/ University) and GATE qualification OR</p>	<p><input type="checkbox"/> MEQ: Masters' degree in the Mechanical Engineering or any other related field of Engineering (with first division as defined by the awarding Institute/ University)</p> <p><input type="checkbox"/> QE: Valid TOEFL/IELTS OR equivalent qualification OR Valid GATE qualification</p>

Four-year Bachelors' degree OR five-year integrated degree in the Mechanical Engineering or any other related field of Engineering (with first division as defined by the awarding Institute/ University) AND valid GATE qualification	
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B. Eligibility for International Students: Please refer to the main PhD Advertisement of the Institute (<http://academic.iiti.ac.in/phdadvt.php>)

After submitting the application online, the eligible International candidate needs to send the signed hard and soft - copy of the application (application form should be signed and paste the photograph) along with a recent photograph, self-attested relevant certificates, and Statement of Purpose (SOP) to the DPGC Convener of ME Department latest by **20th March 2022**.

C. Last date of online application: 20th March 2022

Last date of Online Application through http://academic.iiti.ac.in:8080/nregistration.jsp	20th March 2022
Shortlisted candidate intimated	Till 22nd March 2022
Last date of receiving recommendations of two referees (to be sent by referees to admission-me@iiti.ac.in)	till 20th March 2022
Date of Online Written/Interview	28th March 2022
Interview Schedule & Mode	
Online interviews for the Ph.D. admission would be conducted on 28th March 2022 through the Google Meet platform. A detailed schedule regarding the interview will be intimated to the eligible/shortlisted candidates later.	

D. Application procedure and general information for students:

[1] Candidates must apply ONLINE through the website (<http://academic.iiti.ac.in:8080/nregistration.jsp>). This will generate a unique application number for each applicant.

[2] Application Fee:

- Indian Applicants: 100/- Indian Rupees (non-refundable) to be paid through State Bank Collect.
- International Applicants: US \$ 30 (non-refundable) through RTGS. Kindly refer to the main Ph.D. Advertisement of the Institute at <http://academic.iiti.ac.in/phdadvt.php> for more details about the payment procedure and course fee structure.

Please refer to the main Ph.D. Advertisement of the Institute for more details.

[3] The application must be submitted online on or before the date mentioned above.

[4] There is no need to send hard copies of the application form and supporting documents through POST or COURIER.

[5] The shortlisted applicants will be called for a written test/interview via email only, so mention your email id carefully.

[6] The candidates must arrange recommendation letters (in the given format only) at least two referees. A sample of the recommendation letter is provided in Word format, which

can be downloaded for further use. The letters of recommendation must be sent by referees to admission-me@iiti.ac.in before **20th March 2022**.

- [7] The shortlisted candidates must submit a handwritten statement of purpose explaining why they would like to pursue the Ph.D. in the specific area (200 to 300 words) on the day of appearing for a written test/interview (in the given format only).
- [8] Only shortlisted candidates will be asked to submit a PDF of the application form along with the scanned copies of the application form (form should be signed and pasted the photograph), fee payment receipt and self-attested copies of supporting documents (10th mark sheet, 12th mark sheet, B.Tech degree mark sheets and certificate, GATE score card, Master's degree mark sheets and certificate, Caste Certificate, if applicable and all other relevant certificates) in the mentioned order (all combined into a single PDF file).
- [9] **Candidates who are Fellowship Awardees (FA) should send a combined pdf with a letter of the fellowship award (i.e. from CSIR, UGC, DST, PMRF, etc.) along with the application form generated after applying online (form should be sign and past the photograph) to admission-me@iiti.ac.in within the online application deadline.**
- [10] No interim correspondence whatsoever will be entertained from applicants regarding conduct and result of the selection process and reasons for not being called for interview or selection.
- [11] Mere fulfillment of the essential qualifications does not guarantee admission to Ph.D. program in the Department of Mechanical Engineering. The selection will be based on the overall performance, which may include a written test, interview, academic background, suitability for research in the chosen field/area, research aptitude, communication skills, and others. The Institute/department reserves its rights to set higher norms for shortlisting and call a limited number of candidates for the written test/interview.

The candidates can contact the DPGC convener for further information at the following address:

admission-me@iiti.ac.in

For any further queries, please contact Ph.D. Admission Cell, Indian Institute of Technology Indore, Indore-453552, Indore, Madhya Pradesh, India. Email: phdadmission@iiti.ac.in	For queries specific to the Department, emails can be sent to admission-me@iiti.ac.in
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Annexure

Vacancies are available in the following areas:

Sr. No.	Specialization	Research Areas
1	<p>Design Engineering (Dr. Shailesh I. Kundalwal) Fund Source: Sponsored Project.</p> <p>(Students holding fellowship award letter from CSIR, UGC, DST, PMRF are also welcome to apply)</p>	<ul style="list-style-type: none"> ● Modeling of Hydrogen Storage ● Composite Materials and Structures ● Nanomechanics & Micromechanics
2	<p>CFD and Heat Transfer/Thermal Engineering (Prof. Dhinakaran Shanmugam) Fund Source: Sponsored Project.</p> <p>(Students holding fellowship award letter from CSIR, UGC, DST, PMRF are also welcome to apply)</p>	<ul style="list-style-type: none"> ● CFD ● Biofluid Mechanics & Bioheat Transfer ● Biomedical Engineering (Microfluidics) ● Biotechnology (Microfluidics)
3	<p>Production/Manufacturing/Materials (Dr. Ashish Rajak) candidates should have their own fellowship (i.e. from CSIR, UGC, DST, PMRF, etc.)</p>	<ul style="list-style-type: none"> ● Metal Forming ● Metal Welding ● Finite Element Method ● Powder Compaction
4	<p>Design Engineering (Dr. Sandeep Singh) candidates should have their own fellowship (i.e. from CSIR, UGC, DST, PMRF, etc.)</p>	<ul style="list-style-type: none"> ● Solid mechanics and design ● Finite element method ● Computational mechanics ● Computational material science ● Multiscale modeling of nanomaterials ● Atomistic simulation ● Finite element modeling of nanostructures
5	<p>Thermal Engineering (Dr. Ankur Miglani) candidates should have their own fellowship (i.e. from CSIR, UGC, DST, PMRF, etc.)</p>	<ul style="list-style-type: none"> ● Combustion and Propulsion: Combustion of next-generation fuels (Gel and nanofluid fuels); ● Heat Transfer, micro/nanofluidics: Thermal management of high-heat-flux electronics;

		<ul style="list-style-type: none"> ● Soft matter: Instabilities in drying colloidal droplets
6	<p>Manufacturing Engineering</p> <p>(Dr. Girish Verma) candidates should have their own fellowship (i.e. from CSIR, UGC, DST, PMRF, etc.)</p>	<ul style="list-style-type: none"> ● Machining processes ● Abrasive based finishing process ● Ultrasonic-assisted machining process ● Additive manufacturing.
7	<p>Thermal and Materials Engineering</p> <p>(Dr. Satyanarayan Patel) candidates should have their own fellowship(i.e. from CSIR, UGC, DST, PMRF, etc.)</p>	<ul style="list-style-type: none"> ● Energy conversion, storage and harvesting materials ● Solid-State Refrigeration ● Piezoelectric, Pyroelectric and ferroelectric materials ● Energy Engineering
8	<p>Thermal Engineering</p> <p>(Prof. Santosh Kumar Sahu) candidates should have their own fellowship(i.e. from CSIR, UGC, DST, PMRF, etc.)</p>	<ul style="list-style-type: none"> ● Fluid Dynamics ● Heat Transfer ● Thermal Science
9.	<p>Manufacturing Engineering</p> <p>(Prof. Neelesh Kumar Jain)</p> <p>candidates should have their own fellowship award from different funding agencies such as CSIR-JRF, DST-INSPIRE, PMRF, etc.)</p>	<ul style="list-style-type: none"> ● Additive Manufacturing for biomedical applications ● Advanced Machining and Finishing Processes ● Sustainable Machining ● Miniature gear manufacturing
10	<p>Thermal Engineering</p> <p>(Prof. Ritunesh Kumar) candidates with JRF fellowship award by any external funding agency.</p>	<ul style="list-style-type: none"> ● Open Absorption system ● Microfluidics
11	<p>Manufacturing Engineering/ Surface Engineering</p> <p>(Dr. Kazi Sabiruddin)</p> <p>candidates should have their own fellowship (i.e. from CSIR, UGC, DST, PMRF, etc.)</p>	<ul style="list-style-type: none"> ● Thermally sprayed coatings ● Advanced coating technologies ● Self-lubricating composite coatings for tribological applications
12	<p>Manufacturing Engineering, Materials and Metallurgical Engineering</p> <p>(Dr. Dan Sathiaraj)</p> <p>Fund Source: Sponsored Project.</p>	<ul style="list-style-type: none"> ● Additive manufacturing of medium entropy alloys ● Thermo-mechanical processing of High entropy alloys

	(Students holding fellowship award letter from CSIR, UGC, DST, PMRF are also welcome to apply)	<ul style="list-style-type: none"> ● Severe plastic deformation ● High-temperature sintering
13.	<p>Thermal Engineering (Dr. Harekrishna Yadav) Fund Source: Sponsored Project.</p> <p>(Students holding fellowship award letter from CSIR, UGC, DST, PMRF are also welcome to apply)</p>	<ul style="list-style-type: none"> • Fluid Dynamics and Heat Transfer • Fluid-Structure Interaction • Shear Flow, Supersonic Flow, Flow and Turbulence Measurement using Optical Techniques • Applied Mathematics

Faculty members and their research profiles: To gain more insight, interested applicants are encouraged to visit below Faculty Members' websites who are going to recruit PhD candidates.

Dr. Shailesh I. Kundalwal: <https://www.sikundalwal.com/>.

Prof. Dhinakaran Shanmugam: <http://people.iiti.ac.in/~sdhina>

Dr. Ashish Rajak: <https://scholar.google.com/citations?user=eHnsIccAAAAJ&hl=en&oi=ao>

Dr. Sandeep Singh: <http://people.iiti.ac.in/~meiiti/index.php/profile/>

Dr. Ankur Miglani: <https://scholar.google.co.in/citations?user=6ABZdEoAAAAJ&hl=en>

Dr. Girish Verma: <http://people.iiti.ac.in/~meiiti/index.php/dr-girish-chandra-verma-2/>

Dr. Satyanarayan Patel: <https://sites.google.com/view/satyanarayan-patel>

Prof. Santosh K. Sahu: <http://people.iiti.ac.in/~santosh/>

Dr. Kazi Sabiruddin: <https://www.iiti.ac.in/people/~skazi/index.html>

Prof. Neelesh Kumar Jain: <http://people.iiti.ac.in/~nkjain/>

Prof. Ritunesh Kumar: <http://people.iiti.ac.in/~meiiti/index.php/dr-ritunesh-kumar/>

Dr. Dan Sathiaraj: <https://sites.google.com/view/drdansathiaraj>

Dr. Harekrishna Yadav: <http://people.iiti.ac.in/~meiiti/index.php/dr-harekrishna-yadav-2/>