# INDIAN INSTITUTE OF TECHNOLOGY ROPAR Rupnagar, Punjab-140001



# INFORMATION BROCHURE FOR UG PROGRAM (AY 2025-26)

# **ABOUT THE INSTITUTE**

The Indian Institute of Technology Ropar started functioning from the academic year 2008-09 from the campus of IIT Delhi, the mentor institute. The foundation stone laying ceremony was held on 24 February 2009. The Indian Institute of Technology Ropar was initially registered under the Societies' Registration Act 1860 on 29 July 2009. Subsequently, the Institute has been established by Act of Parliament namely, the Institutes of Technology Act (Amendment) Act 2012 (No. 34 of 2012). The Institute has shifted to its permanent campus in 2018 and currently operates from its permanent campus. The permanent campus of IIT Ropar is spread across 501 acres of land located in Rupnagar in the lap of nature at the banks of river Satluj. The Institute has been awarded the 5 Star GRIHA (Green Rating for Integrated Habitat Assessment) rating, one of the highest national ratings for Green Buildings.

A total of 2,15,739 square meters of area is dedicated for academic and administration blocks along with accommodation for staff and faculty along with sports and hostel facilities.

All hostels are well furnished along with common rooms for recreational activities for each hostel. The campus also has an expansive and airy common dining area. Naturally, there is no compromise with facilities regarding academics and laboratories for undertaking practical or doing some research. New state-of-the-art equipment are available for the students to use in labs. Apart from these academic facilities, other perks of being at IIT ROPAR include excellent sports facilities (different play fields for each sport such as cricket, football, tennis, badminton, basketball, volleyball, etc), utility block, student activity centre (equipment and rooms for the various club activities and other student interest group activities), gymkhana, air-conditioned libraries with plethora of books, cafeterias, gymnasium, medical centre with top notch 24x7 medical facilities.

The Indian Institute of Technology Ropar is ranked 22<sup>nd</sup> in the engineering category in NIRF 2024 (National Institutional Ranking Framework) and overall ranked 48<sup>th</sup>. IIT Ropar is committed to provide state-of-the-art technical education in a variety of fields. The Institute is facilitating transmission of knowledge in keeping with the latest developments in pedagogy. At present, the Institute offers the degree of Bachelor of Technology in Artificial Intelligence and Data Engineering, Civil Engineering, Chemical Engineering, Computer Science & Engineering, Digital Agriculture, Electrical Engineering, Electrical Engineering (Integrated Circuit Design and Technology), Engineering Physics, Mechanical Engineering, Mathematics & Computing and Metallurgical & Materials Engineering. It offers the MSc degree in Physics, Chemistry, Mathematics and M.Sc in Data Science (jointly with IIM Amritsar). It offers the degree of Master of Technology in Computer Science and Engineering, Electrical Engineering, Mechanical Engineering, Chemical Engineering, Civil Engineering, Artificial Intelligence and Biomedical Engineering. All the departments of the Institute offer a doctoral degree. The Institute has held 13 convocations so far. The 2021 entry batch of UG students is about to receive their degrees in the 14<sup>th</sup> convocation. Presently the Institute has 1586 UG students, 519 PG students, 01 Dual Degree student and 809 PhD students. Apart from B.Tech degrees the Institute has also award M.Tech, MSc. & PhD degrees.

The overall academic system of IIT Ropar is designed to provide science-based engineering education that will produce quality engineers and scientists. IIT Ropar has implemented a new curriculum from 2017. The curriculum provides broad based knowledge and simultaneously builds a temper for lifelong learning and exploration. A set of science and general engineering courses forms part of the syllabus of the first-year undergraduate students. These courses provide a foundation for further discipline specific topics. In addition to overhauling its UG programs, IIT Ropar has introduced new PG streams.

Career Development and Placement Cell, is actively involved in organizing practical training for the undergraduate students and has been playing a catalytic role in finding placements for its final year students. IIT Ropar has undertaken the task of redefining its vision and mission and of putting a strategic plan to achieve them into action.

IIT Ropar aims to promote research in interdisciplinary areas. The Institute also undertakes a number of research and consultancy projects that are sponsored by various funding agencies, including the Government and Industry. The Institute has taken major research activities in the fields of national importance such as nonconventional energy, sensors, drug delivery, materials synthesis and their modification, image processing, cloud networks, robotics, pattern recognition, renewable energy systems, microelectronics and nanodevices, mathematical biology, fluid dynamics, Pure Mathematics, quantum optics and quantum matter physics, ion beam physics, renewable energy, nanophotonics and metamaterials, surface patterning, sustainable energy, biomedical-photonics,biomechanics, nano fluids, complex fluids, nano composites, Neurocognition, financial mathematics and markets, phonetics, etc. The Institute provides ample funds to the departments and faculty members for the upgradation of laboratories and creation of research facilities. This has enabled our faculty members to take up research projects in frontier and emerging areas of science and technology.

Institute has a counselling cell to monitor the mental well-being of the students. Its mission is to promote well-being, aiding to develop better understanding of the self, to grow both intellectually and emotionally, to be more satisfied and productive and improve the depth and quality of your life. To hike sound mental health, we provide help in dealing with emotional and behavioural problems such as guilt, anxiety, stress, lack of confidence, low self-esteem, depression and internet addiction of any sort, dependency, personal problems in relationships such as co-dependency, rejection, separation homesickness etc. Counselling Cell does foster and inculcating life skills to make better adjustments and enriching healthy relationships.

The campuses of IIT Ropar are well equipped with all required facilities. Classrooms fitted with multimedia, faculty offices and administrative wings are all in place. There are separate hostels for boys and girls. These hostels are equipped with modern mess units. Faculty recruitment, setting up of laboratories and other support facilities are done on a continuous basis to keep up with the progress.

### Motto

### Deploy our intellect on the right path

### Mission

To foster a transformative learning environment and a culture of excellence enabling creation of knowledge and development of socially responsible, enterprising leaders contributing significantly to national progress and humanity.

### Vision

To be a trendsetter among the technology universities born in this millennium.

### **HOW TO GET ADMISSION IN IIT ROPAR**

The students interested in admission at IIT Ropar are required to have passed 10+2 with Physics, Chemistry and Mathematics. In addition, they need to appear for JEE Mains examination held in the month of January and April every year by National Testing Agency (NTA). Please visit the website link: <u>https://nta.ac.in/Engineeringexam</u> OR <u>https://jeemain.nta.nic.in/</u> for detailed information. The students who qualify JEE (Mains) and meet the cut - off declared by JEE (Advanced) are required to appear for JEE (Advanced) exam held in the month of May/ June every year. For further details please visit <u>https://jeeadv.ac.in/</u>. The students are selected for admission to IITs on the basis of JEE advanced Rank by JOSAA <u>https://josaa.nic.in/</u>

### **PROGRAMS OFFERED**

S.No	Programme	Department offering the program	Program Code	Seats
1.	B.Tech. in Artificial Intelligence and Data Engineering	School of Artificial Intelligence and Data Engineering AIB		80
2.	B.Tech. in Chemical Engineering	Chemical Engineering	СНВ	35
3.	B.Tech. in Civil Engineering	Civil Engineering	CEB	35
4.	B.Tech. in Computer Science and Engineering	Computer Science and Engineering	CSB	120
5.	B.Tech. in Digital Agriculture (DA)	School of Artificial Intelligence and Data Engineering	DAB	20
6.	B. Tech in Engineering Physics	Physics	EPB	25
7.	B.Tech. in Electrical Engineering	Electrical Engineering	EEB	120
8.	B.Tech. in Electrical Engineering (Integrated Circuit Design and Technology)	Electrical Engineering	ICB	20
9.	B.Tech. in Mathematics and Computing	Mathematics	МСВ	80
10.	B.Tech. in Mechanical Engineering	Mechanical Engineering	MEB	83
11.	B.Tech. in Metallurgical and Materials Engineering	Metallurgical and Materials Engineering	MMB	28

### i) Undergraduate Programme

### > FEE STRUCTURE:

### **INSTITUTE FEES:**

Institute Fees	Indian Nationals Foreign Nationals			
	Amount			
Tuition Fees	Rs.1,00,000/-(per semester)		countries & Rs. 1.5 Lacs for Non-	
		SAARC countries (per semester)		
Non-refundable	Rs.6090/- (one-time payment at the	Rs.6090/- (one-time payment at the time of		
fees	time of admission)	admission)		
Refundable fees Rs.10,500/-		Rs.10,500/-		
Other misc. fees	Rs. 16,435/-/ Rs. 15,645/-	Rs. 16,435/-/ Rs. 15,645/-		
Total fees	Rs.1,33,025/-(to be paid at the time	Rs. 1,33,025/- for SAARC		
	of admission)	Rs. 1,83,025/- for No	on-SAARC	
Fees per semester	Rs. 1,16,435/-/ Rs. 1,15,645/-	Rs. 1,16,435/-/ Rs. 1,15,645/- for SAARC		
		Rs.1,66,435/- / Rs. 1,65,645/- for Non-SAARC		
Hostel and Mess fee	e structure for UG Students		Fees to be deposited at the time	
1. Mess Security Dep	oosit (One Time, Refundable) = 6000/-		of admission:	
2. Mess Admission F	ee (One-time payment, non-refundabl	e) = 5000/-	Rs. 36,260/-approx. for new	
3.Hostel Establishm	ent Fee = 3000/- per semester		students	
4. Mess Charges = Tr	raditional Mess System in which the m	ess fee is to be	Rs. 25820/- approx. for existing	
deposited before	registration every semester. (22000/- a	approx.)	students	

### Note:

- The fee payable at IIT Ropar is subject to change as per the Institute rules.
- All SC and ST students will get 100% tuition fee exemption.
- The most economically backward students, whose family income is less than Rs. 1 lakh per annum, shall get full remission of the tuition fee.
- The other economically backward students, whose family income is between Rs. 1 lakh to Rs. 5 lakh per annum, shall get remission of 2/3rd of the tuition fee.
- The SC/ST students whose parental income is less than 4.5 lacs will get free messing scholarship.

# > FINANCIAL ASSISTANCE:

### Scholarship for B.Tech Students:

### The Institute offers the following scholarships to Undergraduate students:

- 1. Institute Merit- Cum- Means (MCM) Scholarships.
- 2. Institute Merit Prizes and Certificates.
- 3. Institute Free Studentship.
- 4. Free Messing Scholarship

Other Miscellaneous Scholarships from Central Government /State Government / NGO's / some external agencies: **National Scholarships Portal (For all category students)**: National Scholarships Portal is one-stop solution through which various services starting from student application, application receipt, processing, sanction and disbursal of various scholarships to student are enabled. Here all scholarships' information is available under one umbrella. Various scholarship schemes are launched / offered by Union Government, State Government and Union Territories for students on National Scholarship Portal. Single integrated application is used for all scholarships. The students can opt for these scholarships offered to them by State/Central Government and other external agencies / NGOs. Students are required to apply for these scholarships athttps:// scholarships.gov.in.

# > ACADEMIC STRUCTURE:

At present, the institute offers a 4-year program leading to the Bachelor of Technology (B. Tech.) degree in 11 disciplines, viz., Artificial Intelligence and Data Engineering (intake 80), Civil Engineering (intake 35), Chemical Engineering (35 intake), Computer Science and Engineering (120 intake), Digital Agriculture (20 intake), Electrical Engineering (120 intake), Electrical Engineering (Integrated Circuit Design and Technology) (20 intake), Engineering Physics (intake 25), Mechanical Engineering (83 intake), Mathematics & Computing (intake 80) and Metallurgical & Materials Engineering. (Intake 28). In addition to this, provision has also been made for the reservation of 10% supernumerary seats for the foreign nationals in B.Tech. Programme.

The curriculum followed at IIT Ropar provides a comprehensive education, with a view to producing quality engineer scientists. It facilitates broad based knowledge acquisition and, simultaneously, nurtures a temper of lifelong learning and exploration. Broad objectives of the new curriculum are the following:

- (a) It has focus on producing 21st century engineers and entrepreneurs,
- (b) It offers more flexibility to students,
- (c) It has novel and unique features to attract the brightest of students,
- (d) It has better utilization of manpower and resources,
- (e) It encourages industry academia interaction,
- (f) It makes students more practical in approach,
- (g) It imparts soft/managerial skills in addition to science and engineering fundamentals,
- (h) It develops social responsibilities in students, and
- (i) It prepares them for innovation.

# > CREDIT SYSTEM

The Institute follows a credit system. Each course has a certain number of credits assigned to it depending on its lecture, tutorial and laboratory contact hours in a week. This is coordinated by a member of the faculty called the course coordinator. He/she has the full responsibility for coordinating the course, coordinating the work of other members of the faculty in the course, holding tests and awarding grades. In case of any difficulty, students are expected to approach the course coordinator and / or faculty advisor of his/her batch, for advice and clarification. Further, on joining every student is provided with a mentor (senior student carefully selected by the Institute) who guides the student in academic, hostel and other related activities.

The student's performance in a course is continuously evaluated throughout the semester and culminates in the award of Grade on a 10-point scale. Performance in a semester is evaluated as the weighted average of grade points secured in all the courses registered in that semester, which is known as Semester Grade Point Average (SGPA). A Cumulative Grade Point Average is the weighted average of the grade points obtained in all the courses registered by the student since they entered the Institute. The teaching programs are characterized by their flexibility and informality. The strong faculty–student interaction on the residential campus provides opportunity to students to work on publications and projects sponsored by the industry and national agencies.

Apart from a Basic B.Tech. IIT Ropar offers B. Tech with minor, concentration, honours and additional internship programmes.

- **B.Tech. with Minor:** Students can take 15 credits of the Minor Programme coursework in any other discipline than the major discipline.
- **B.Tech. with concentration:** Students can take 15 credits of Concentration Programme courses within their discipline. For example, Mechanical Engineering students may choose to specialize in Design, Manufacturing or Thermal and fluids, Computational Mechanics etc.
- **B.Tech. with additional internship:** Students can take 15 credits of the additional internship. The student can take the additional internship in their 7th or 8th semester. A student doing Basic B. Tech can finish all requirements in 7 semesters. The internship is allowed for doing projects in Research Institute/ Industry.
- **B.Tech. with Honours:** Students can take 15 credits of Honours-related coursework and 10 credits of Honours Project.

# **RULES FOR CHANGE OF BRANCH**

**A.** A student is eligible to apply for change of branch at the end of first year only, provided he/she satisfies the following criteria: -

(i) CGPA for GE/OBC category student: - > 7.50 or greater

(ii) CGPA for SC/ST/PD category student: - > 6.50 or greater

(iii) Earned credits at the end of first academic session are 36 credits or more.

**B.** Change of the branch will be permitted strictly in the order of merit, in each category as determined by CGPA at the end of the first year, subject to the limitation that

(i) the actual number of students in the third semester in the discipline to which the transfer is to be made should not exceed its sanctioned strength by more than 10%, and

(ii) The strength of the branch from which transfer is being sought does not fall below 85% of its sanctioned strength.

A minimum of two (2) students will, however, be eligible for consideration for change of branch from each discipline, irrespective of the regulation B(ii).

**C.** In case of tie in CGPA, the CGPA will be compared up to 3rd decimal place and if the tie still persists, all the students, with the same CGPA, would be allowed to change the branch, even if it violates the upper/ lower limits of 10% and 85% respectively.

**D.** The condition mentioned in items A(i)-(iii) above will not be insisted upon for a change to a branch in which a vacancy exists with reference to the sanctioned strength and the concerned student was eligible as per JEE Rank for admission to that branch at the time of entry to IIT Ropar. However, these conditions will continue to apply in the case of students seeking change to a branch to which the concerned student was not eligible for admission at the time of entry to IIT Ropar. Ropar.

### **SCOPE AND DESCRIPTIONS OF THE COURSES OFFERED:**

Admission to the following UG programmes offered by IIT Ropar, is through JEE (Advanced).

### 1. B.Tech. in Artificial Intelligence and Data Engineering

The rapid evolution of Artificial Intelligence (AI) and Data Engineering is revolutionizing industries across the globe, rendering these fields vital for professionals seeking to thrive in the future job market. By the year 2030, it is anticipated that AI and Data Engineering will collectively contribute over an astounding \$15.7 trillion to the global economy, with the demand for AI professionals projected to surge by an impressive 31.4% annually.

To address this growing need for specialized expertise, the School of Artificial Intelligence & Data Engineering (AIDE) proudly offers a comprehensive four-year Bachelor of Technology (B.Tech.) program in Artificial Intelligence & Data Engineering. Our B.Tech. curriculum is meticulously designed to align with international educational standards and delves deeply into the intricacies of deep learning and artificial intelligence. This robust program not only equips students with foundational knowledge but also facilitates collaborative opportunities with leading international organizations and pioneering researchers, ensuring that our graduates remain competitive in a rapidly evolving job landscape.

The program emphasizes the development of intelligent systems and innovative applications, incorporating state-of-the-art machine learning techniques, cutting-edge graphics, and advanced data visualization methods. A key focus is placed on enhancing students' practical experience through hands-on engagements with hardware and experimental projects. This experiential learning approach prepares them for successful and impactful careers within prominent industrial, research, and academic institutions, both in India and on the global stage.

### 2. B.Tech. in Chemical Engineering

The Department of Chemical Engineering offers undergraduate (B.Tech.), postgraduate (M.Tech.), and Ph.D. programs. A Bachelor's degree in Chemical Engineering is a versatile qualification that opens doors to a wide range of industries globally. Chemical engineers play a crucial role in sectors such as pharmaceuticals, energy, environmental technology, food processing, and materials science. Our dedicated faculty members specialize in key areas of chemical engineering such as Catalysis and Reaction Engineering, Energy and Environment, Multiscale Modeling, Soft Matter Engineering, Transport Phenomena and Thermodynamics, as well as Process Control and Optimization. In the current times, emerging fields such as green energy, pharmaceuticals, and Aldriven chemical processes are creating new job opportunities, and will continue doing so.

The department is actively engaged in cutting-edge research in various emerging fields, including Complex Fluid Mechanics, Interfacial and Particulate Engineering, Dynamics of Granular Materials, Water Treatment, Mechanics of Living Matter, Computational Fluid Dynamics, Microfluidics, Process Systems Engineering and Data Science, Scientific Computing, Computational Catalysis, Reaction Kinetics and Modeling, Biomass Conversion Processes, Renewable Energy, Computational Biology, Atomistic Modeling and Simulation, and Biophysics. Faculty members in the department are actively involved in cutting-edge research projects funded by organizations such as the Department of Science and Technology (DST), Science and Engineering Research Board (SERB), various Government of India Ministries (including Textiles and Electronics and Information Technology), ISRO, as well as consultancies with the Ministry of Education, the Government of Punjab, the World Bank, and numerous corporate entities. The department fosters collaboration among industry, academia, and government by promoting faculty entrepreneurship, facilitating faculty leadership in multidisciplinary and inter-institutional consortia, and providing student internship opportunities with industry partners.

### 3. B.Tech. in Civil Engineering

The Bachelor of Technology (B.Tech) program in Civil Engineering offers a comprehensive curriculum that encompasses fundamental principles, advanced topics, and hands-on practical experiences across various specialized fields. Key areas of study include Structural Engineering, which focuses on the design and analysis of buildings and bridges; Geotechnical Engineering, which examines soil behavior and its interaction with structures; Transportation Engineering, dedicated to the planning, design, and management of transport systems; Water Resources Engineering, addressing the sustainable management of water supply and quality; Environmental Engineering, which aims to develop solutions for pollution control and environmental protection; and Geomatics, which integrates surveying, mapping, and data analysis technologies.

This program places a strong emphasis on cultivating graduates equipped to address innovative and complex challenges within the Civil Engineering domain. With a focus on infrastructure design and management, students will learn to create sustainable solutions that benefit society as a whole. The curriculum not only equips students with theoretical knowledge but also nurtures critical thinking and problem-solving skills through project-based learning and internships.

Graduates of this undergraduate program will be well-prepared for careers in diverse sectors including industrial engineering, research institutions, and academia. They will gain expertise in essential areas such as structural and foundation design, smart city initiatives, efficient water resource management, cutting-edge remote sensing technology, effective pollution control strategies, and urban transportation planning. This holistic approach ensures that they are capable of meeting the dynamic demands of the civil engineering profession in a rapidly evolving global landscape.

### 4. B. Tech. in Computer Science and Engineering

The Department of Computer Science & Engineering at IIT Ropar proudly presents a distinguished four-year B.Tech program that is both rigorous and competitive. The curriculum is designed to lay a robust foundation in the diverse fields of Computer Science and Engineering, ensuring that students develop essential skills and knowledge necessary for their future careers. Furthermore, the wide array of elective courses offers students the opportunity to delve deeply into specific areas of interest, enabling them to specialize and tailor their educational experience.

The curriculum not only promotes independent thought and critical analysis but also encourages students to learn at their own pace, cultivating an environment of curiosity and self-directed exploration. A strong emphasis is placed on practical learning through hands-on training and collaborative design work, which are integral components of various course projects. The department is dedicated to providing cutting-edge infrastructure and modern facilities that empower undergraduate students to transform their innovative project ideas and research concepts into tangible outcomes.

Our ambition is to attract a world-class faculty who excel in all domains of Computer Science and Engineering. Since welcoming our inaugural batch, our graduates have received enthusiastic recognition from the industry, with prestigious organizations both in India and on a global scale actively recruiting them. We are committed to building on our initial achievements and to continually drawing in the brightest students and the most talented faculty in the coming years.

### 5. B. Tech. in Digital Agriculture:

With the global population projected to reach **9.7 billion by 2050**, food security has become one of the most pressing challenges of our time. Traditional agricultural methods, while effective in the past, are struggling to keep pace with the increasing demand for sustainable food production. This is where **artificial intelligence (AI)**, **machine learning (ML) and big data analytics** step in as game-changers, offering **precision farming**, **predictive analytics**, **and automation** to revolutionize agriculture.

Recognizing the transformative potential of AI in agriculture, the **Ministry of Education** has established **ANNAM.AI**, a **Center of Excellence (CoE) at IIT Ropar**. This initiative is part of a **₹990 Cr investment** to set up three AI CoEs in **Agriculture**, **Healthcare**, and **Sustainable Cities**. With **₹311 Cr allocated specifically for agriculture**, ANNAM.AI is driving research and innovation in **AI-powered agritech solutions** at IIT Ropar.

To fully harness AI's potential in agriculture, India's first B.Tech. program in Digital Agriculture has been launched at the School of Artificial Intelligence & Data Engineering (SAIDE) at IIT Ropar. This program equips students with expertise in artificial intelligence, machine intelligence, remote sensing, data analytics, and autonomous systems, preparing them to lead the next wave of agricultural transformation. With AI-driven agriculture projected to increase global food production by 70% by 2050, investing in education and research in this field is no longer optional—it is imperative. The future of farming is digital, and AI & ML are the keys to feeding the world sustainably.

On the technological front, AI-driven solutions can optimize irrigation, monitor soil health, and predict crop diseases, resulting in yields that are 30-40% higher compared to conventional methods. Automated farming techniques powered by AI can reduce operational costs by up to 25%, making agriculture more profitable and sustainable. Additionally, AI models can analyze weather patterns and recommend adaptive farming techniques, which helps minimize losses from unpredictable climate changes. AI-powered drones and IoT sensors provide immediate insights into crop health, allowing farmers to take timely action.

At the heart of the curriculum is the concept of Digital Agriculture, where students engage in immersive, hands-on training that encompasses advanced topics such as machine intelligence, remote sensing technologies, data analytics, and the development of autonomous systems. This comprehensive training empowers students to craft sophisticated, AI-driven solutions tailored for precision farming. They will learn to monitor soil and crop health meticulously, optimize automated irrigation systems, and predict yields with unprecedented accuracy.

The AIDE at IIT Ropar is deeply committed to nurturing a new generation of AI engineers who are not only well-equipped with technical skills but are also passionate about employing smart and sustainable technologies to transform agriculture. This ambitious initiative aligns seamlessly with national objectives focused on enhancing food security, promoting rural development, and driving digital transformation across the agricultural sector.

### 6. B. Tech. in Electrical Engineering

The B.Tech program in Electrical Engineering aims to provide students with a well-rounded education in key areas of the discipline, including Electronics Engineering, Computer Technology, Analog and Digital Communication Engineering, Control and Instrumentation, as well as Electrical Machines and Power Engineering. The core curriculum for the undergraduate program features a minimum of two core theory courses and two core laboratory courses in each area of study. This foundational education is enhanced with appropriate elective courses during the third and fourth years. Currently popular electives include VLSI, Embedded Systems, Digital Signal Processing, Medical Electronics, Digital Communication, Wireless Networks, and Optical Communication.

The undergraduate projects included in the final year curriculum emphasize experimental work and hands-on exposure to hardware across all four areas. Additionally, India is pursuing selfreliance in semiconductor manufacturing, as seen in initiatives like the India Semiconductor Mission and incentives for chip fabrication plants. Integrated Circuit (IC) design is a highly specialized and crucial field in electronics and computer engineering. In response to the future demands of the industry and advancements in technology, the Electrical Engineering department at IIT Ropar is introducing a B.Tech degree program in IC Design and Technology. This program aims to strengthen the connection between semiconductor industries and IIT Ropar by providing specialized training in industry-relevant courses and skills.

### 7. B. Tech. in Electrical Engineering (Integrated Circuit Design and Technology):

According to a report from McKinsey & Company, the global semiconductor industry is projected to become a trillion-dollar industry by 2030. This projection indicates that what took 55 years to reach a \$0.5 trillion valuation is expected to double in just the next 10 years. Key factors driving this remarkable growth include advancements in computing and storage, wireless technologies, automotive applications, and Al-driven systems.

The COVID-19 pandemic has highlighted the risks of over-dependence on localized supply chains, leading to significant disruptions. In response, many nations are focusing on reinvesting in their local semiconductor ecosystems. India's government has initiated an ambitious plan to attract semiconductor manufacturers through the Indian Semiconductor Mission launched in 2022. This

initiative aims to significantly enhance India's leadership in semiconductor fabrication plants (fabs), assembly, testing, marking, and packaging (ATMPs), and outsourced semiconductor assembly and test (OSAT) services. Numerous multinational corporations and Indian startups have already begun investing in the country, complementing other important missions like the quantum mission and the AI mission that necessitate high-end chip design and advanced packaging.

A critical issue that needs to be addressed is the creation of a skilled workforce capable of meeting the diverse needs of this ecosystem. Consequently, numerous universities and Indian Institutes of Technology (IITs) have introduced new B.Tech programs aimed at cultivating a large pool of highly skilled engineers and professionals utilizing their existing infrastructure.

In light of this, the Department of Electrical Engineering at IIT Ropar has launched a new undergraduate program in electrical engineering, specifically focusing on all aspects of integrated circuits. Currently, the department has five faculty members specializing in IC design, device fabrication, modeling, and electronic packaging. Since 2019, these faculty members have successfully offered a Master's program, and the proposed B.Tech program will further enhance our commitment to contributing to nation-building in this vital area.

Historically, students who have pursued semiconductor specializations through the concentration in the B.Tech program or the Master's program have been successfully employed by leading industries in India and abroad. Thus, the proposed B.Tech program will strengthen our connection with semiconductor industries and IIT Ropar. Additionally, students from other disciplines (such as Computer Science, AI, Mechanical Engineering, etc.) will benefit from the broader range of courses and specialized skills offered through this new B.Tech program.

### 8. B. Tech. in Engineering Physics:

The Department of Physics, in a dynamic partnership with the Department of Electrical Engineering, proudly presents a comprehensive four-year B.Tech. degree in Engineering Physics. This innovative interdisciplinary program is meticulously designed to seamlessly integrate the principles of Physics and the practical applications of Engineering, with a particular focus on the rapidly evolving field of semiconductor technology. Given the strategic initiatives outlined in the Government of India's Semiconductor Mission, this program equips students with the foundational knowledge and cutting-edge technical skills essential for contributing to the nation's ambitions in chip design and fabrication.

In an era where India is turning its gaze toward the future, particularly within the realm of quantum technologies under the National Quantum Mission, this program stands as a beacon for aspiring researchers and developers eager to delve into the exciting world of quantum computing and quantum-enabled technologies.

The curriculum is thoughtfully crafted to provide students with a robust grounding in core physics concepts while simultaneously offering hands-on experiences in engineering applications. Students have the flexibility to specialize in either Physics or Electrical Engineering, allowing them to tailor their academic journey according to their passions and career aspirations. Moreover, they can explore minors from other pertinent departments, enriching their educational experience and broadening their expertise.

Upon successfully completing the program, graduates will be exceptionally well-prepared to embark on careers in high-tech industries, including semiconductor manufacturing, quantum technology development, financial sectors, and a variety of research-oriented paths, both domestically and internationally. We warmly invite motivated students with outstanding achievements in JEE Advanced to seize the opportunity to join our distinguished Engineering Physics program and be part of shaping the future of technology in India.

### 9. B. Tech. in Mathematics and Computing

The Department of Mathematics, in collaboration with the Department of Computer Science and Engineering (CSE), offers a flagship B.Tech. program in Mathematics and Computing starting from the Academic Year 2019-20. This program combines Mathematics and Computer Science, focusing on areas where the two disciplines are particularly relevant to one another. It is designed to prepare graduates for advanced degrees and diverse careers in various industries.

The curriculum provides a solid foundation for students interested in strong mathematical and analytical skills, and offers a wide range of electives, including Mathematical Modeling, Pure Mathematics, Theoretical Computer Science, Machine Learning, Big Data, Computer Architecture, the Internet of Things (IoT), Algorithms, Game Theory, Financial Mathematics, Data Science, Time-Series Analysis, Mathematical Image Processing, and more. Emphasizing hands-on learning, the program is actively integrating lab components into nearly every course. This program attracts students with top ranks in the Joint Entrance Examination (JEE)

### 10. B. Tech. in Mechanical Engineering

The Department of Mechanical Engineering is one of the founding departments of the Institute and is also one of its largest, with 22 faculty members who possess diverse research expertise. The department covers all major areas of mechanical engineering, including mechanics and design, fluids and thermal engineering, materials and manufacturing.

The Department of Mechanical Engineering offers various programs: B.Tech., M.Tech., and Ph.D. Currently, the B.Tech. program in Mechanical Engineering includes minors in several fields. Additionally, the department provides Master's degrees in four disciplines: Manufacturing Engineering (MF), Mechanics and Design (MD), Thermal and Fluid Engineering (TF), and Computational Mechanics (CM).

Beyond conventional core courses, the department also features cutting-edge courses such as product design and realization, sustainability for engineers, continuum mechanics, medical devices and equipment, biomechanics, noise and vibration, finite element analysis, energy science and technology, robotics and mechatronics, micromanufacturing, and deep learning of physical systems.

The laboratories are equipped with state-of-the-art facilities designed to enhance both teaching and research. The main research focus areas of the department include Additive Manufacturing, Biomechanical Engineering, Energy Efficiency and Sustainability, Intelligent Mechanical Systems, and Micro/Nano Engineered Systems.

### 11. B. Tech. in Metallurgical and Materials Engineering

The Department of Metallurgical and Materials Engineering offers B.Tech, M.Tech, and PhD programs. It has faculty members specializing in all major areas of Metallurgical and Materials Engineering. The department's focus areas include Physical Metallurgy, Extractive Metallurgy, Mechanical Metallurgy, Computational Materials Engineering, Energy Materials, Functional Materials, and related fields.

In addition to covering the fundamentals of Metallurgical and Materials Engineering, the curriculum includes multiple courses on Computational Materials, emphasizing coding and data science/engineering. This design encourages innovative thinking, preparing students to be industry-ready.

The department also provides a platform for interdisciplinary studies in collaboration with both academia and industry. Graduates have secured positions in various companies, including Dassault, JSW, JSL, and Otsuka. Additionally, the department promotes strong interactions between students and faculty. For more information about the department, please visit <a href="https://mme.iitrpr.ac.in">https://mme.iitrpr.ac.in</a>.

### > Faculty:

At the Institute, faculty members are meticulously chosen through a rigorous selection process that ensures only the most exceptional candidates are invited to join. The typical age of a faculty member at IIT Ropar is around 35 years, reflecting a vibrant blend of fresh ideas and seasoned expertise. This dedicated group of educators hails from prestigious institutions both in India and across the globe, infusing the campus with a dynamic and youthful spirit.

They are not only committed to imparting cutting-edge technical knowledge but also prioritize instilling ethical and moral values in their students. This holistic approach ensures that graduates emerge not just as adept engineers but as conscientious individuals ready to make a positive impact in the world.

IIT Ropar expertly nurtures the finest raw material—students who have qualified through the highly competitive JEE. Under the mentorship of this outstanding faculty, these young minds are meticulously shaped into the engineers and innovative entrepreneurs of tomorrow, equipped with both the skill set and the values needed to thrive in an ever-evolving landscape.

### > Facility:

The institute is deeply committed to fostering collaborative programs with prestigious international organizations and esteemed universities. In addition to its fundamental academic resources, the institute boasts several advanced facilities designed to enhance the educational experience. Among these are two state-of-the-art Virtual Classrooms, enabled by the National Knowledge Network (NKN). This innovative initiative interconnects institutions dedicated to research, higher education, and scientific advancement across the nation, creating a dynamic environment for knowledge exchange and academic collaboration.

# Nalanda Library

The Nalanda Library at IIT Ropar is an invaluable resource for knowledge and learning, playing a crucial role in supporting various academic and research activities at the institute. The library's primary objective is to provide users with the necessary information resources and support by offering the latest services that are integrated with teaching, learning, and research.

In addition to textbooks and recommended readings for each course offered at the institute, the library houses a growing collection of research monographs, reports, multi-volume reference works, dictionaries, encyclopedias, handbooks, and more. It also boasts a substantial collection of theses, dissertations, and annual reports, as well as standards in the fields of science, engineering, technology, humanities, and social sciences. The library facilitates access to over 13,000 electronic journals from 30 publishers through its participation in the One Nation One Subscription (ONOS) initiative by the Government of India. Additionally, it subscribes to several e-journals directly from publishers and through reputable subscription agencies.

Currently, users can consult more than 25,000 books available on shelves, along with thousands of electronic books. The library provides online access to specialized databases, including economic and political databases such as Prowess IQ and CMIE States of India, as well as scientometric databases like Scopus, MathSciNet, and Web of Science. To assist researchers in improving their scientific writing skills and ensuring the originality of their work, the library offers online access to tools such as Overleaf, Grammarly, and Turnitin.

The library's circulation operations have been automated using RFID-based LMS-KOHA software. The Online Public Access Catalogue (OPAC), which is publicly accessible, enables users to search for documents in the library's collection. The library implements Radio Frequency Identification Technology (RFID), a cutting-edge auto-identification technique that supports self-service and enhances security.

A dedicated Digital Learning Hub has been established in the library, where users can access e-journals and browse CDs and DVDs containing books, theses, and dissertations. Additionally, the library has created an Institutional Digital Repository (IDR) using open-source DSpace software to archive and provide online access to the institute's intellectual output. The IDR is publicly available, facilitating the dissemination of scholarly work while promoting the institution's visibility.

To further enhance resource accessibility, the library has developed a web-based Subject/Research Guide using the Subject Plus tool. This guide allows users to explore comprehensive library resources based on subject areas or research interests, including e-journals, books/e-books, databases, and theses/dissertations. The library is continually striving to identify and adopt emerging academic and research support tools, thereby helping the institute achieve its vision and mission.

# Hostel Accommodation

The vibrant campus of IIT Ropar boasts an impressive array of accommodations with four boys' hostels— Satluj, Beas, Chenab, and Brahmaputra Boys—and three girls' hostels—Raavi, T-6, and Brahmaputra Girls each situated within the central expanse of the grounds. These hostels are thoughtfully designed and wellfurnished, providing a comfortable haven for students. Each residence features inviting common rooms that serve as lively spaces for recreational activities, fostering a sense of community among the residents.

The campus further enhances the student experience with spacious and airy common dining areas, allowing for social gatherings over shared meals. Excellent drinking water facilities are readily available in all hostels, ensuring the wellness of students. Each hostel is equipped with a wealth of common amenities, including indoor recreational spaces and various games, catering to diverse interests. Adding to the convenience, a selection of shops within the hostel precincts caters to the everyday needs of the residents, making life on campus even more accommodating.

Moreover, the institute takes pride in its well-maintained gymnasium, offering students fitness facilities to help them stay active and healthy amid their rigorous academic schedules. The lush greenery surrounding the IIT campus breathes life into the daily routines of students, creating an enchanting environment that inspires creativity and tranquility.

At IIT Ropar, campus life is vibrant and dynamic, with students encouraged to explore their hidden talents and reignite their passions. State-of-the-art classrooms equipped with advanced audiovisual aids, alongside cutting-edge laboratories that offer the latest research tools, significantly enhance the teaching and learning experience. The high-tech library, replete with a vast collection of books, journals, and periodicals, serves as a gateway for students to connect with a world of knowledge and information.

To cater to diverse palates, the mess has undergone thoughtful updates to its menu, offering students an extensive selection of meal options. With a foundation of a fixed base menu, students can also choose from additional items at an extra cost, allowing for a more personalized dining experience.

At IIT Ropar, students not only engage in rigorous academic pursuits but also thrive in research and extracurricular activities, developing into well-rounded aspiring engineers grounded in moral and ethical integrity. The carefully curated environment nurtures both personal growth and academic excellence, preparing students for their future endeavors.

\*Note: Hostel accommodation will be provided on a sharing basis only depending upon the availability.

# > Health Care

The Institute Medical Centre is located in a separate building adjacent to the hostel complex on the Main Campus. A team of doctors, pharmacists, and nursing staff has been appointed to assist campus residents in case of a medical emergency. We also have a state-of-the-art ambulance for medical emergencies. Additionally, the Institute collaborates with several super specialty hospitals in the cities of Ropar, Mohali, and Chandigarh to provide advanced medical care to its members.

### General Facilities

The Institute has a Bank branch of SBI as well as a Post office to cater to the needs of the faculty, staff and students.

### Student Activities

Under the ambit of Student Affairs Section, there are various Boards/Clubs viz Board of Science & Technology (BOST), Board of Cultural Affairs (BOCA), Board of Sports Affairs (BOSA), Board of Literary Affairs (BOLA) etc. which aims to promote various technological, cultural and other aspects among the student fraternity and to develop their overall skills.

In addition, there are various clubs under these boards viz Alankar (Music) Club, Dance Club, Dramatics (Undekha) Club, Arturo (Photography) Club, Fine Arts clubs, Epicure-The Cooking Club, and also Clubs in Board of Science & Technology viz Robotic, Monochrome, Astronomy, Quiz, Coding clubs, where the students can participate and develop a well– rounded personality. Apart from above all, an Outdoor Adventure Club (ODAC), Snehita Wellbeing Cell are also there for the physical and mental wellness of Students.

### Student Life at Institute

Currently, the Main Campus offers excellent facilities for a variety of sports, including a cricket field, three lawn tennis courts, a football field, a hockey field, a gymnasium, a basketball court, badminton courts, an athletics track, and a table tennis room. The Institute encourages students to participate in inter-IIT sports events and other competitions. There are also spaces available for recreational and creative activities.

# CAREER DEVELOPMENT & PLACEMENT CELL

The Career Development and Placement Cell (CDPC) at IIT Ropar plays a crucial and transformative role in nurturing the professional growth and securing placement opportunities for its students. With a steadfast commitment to closing the gap between academic learning and industry expectations, the CDPC organizes a diverse array of workshops, seminars, and training programs aimed at equipping students with the essential skills needed to thrive in a competitive job market. By actively facilitating participation in the campus placement process, particularly for graduating students in their fourth year, the CDPC ensures that pupils are well-prepared to embark on their professional journeys.

In addition to securing placements, the CDPC provides invaluable support to all B.Tech students as they seek mandatory summer internships at the culmination of their third year, as well as assisting those who opt for the B.Tech with Additional Internship program in finding one-semester-long internships during the seventh or eighth semester. The unwavering efforts of the CDPC have empowered students to achieve remarkable success, landing positions at esteemed companies spanning a wide range of sectors.

During the academic year 2024-25, a notable 75.38% of undergraduate students at IIT Ropar secured placements through on-campus opportunities, boasting an impressive average salary package of INR 23.08 LPA. A remarkable 142 companies graced the campus with their presence, offering students a staggering 247 profiles to choose from. This year witnessed an encouraging surge in interest from core sector companies, including prominent Public Sector Undertakings (PSUs). Noteworthy organizations such as BPCL, HPCL, EIL, MECON, C-DOT, Reliance Industries, Texas Instruments, Bechtel, JSW, Jindal Stainless, Potectol, ArcelorMittal Nippon Steel, Lummus, GE Vernova, WCB Robotics, and L&T actively sought talented candidates from IIT Ropar, particularly in the core engineering domain.

In addition to these powerhouses, leading firms like Google, Sprinklr, Amazon, DE Shaw, Salesforce, Arsaga Partners Inc. (Japan), Arista Networks, GE Healthcare, Strand Life Sciences, Truminds, Mathworks, Oracle, Flipkart, Accenture, Perceptive Analytics, Logic Fruit, Samsung Research, Analog Devices, Zomato, Amex, Future First, Yum Brands, Hi-Tech Robotics, and Rapid Fort presented exciting opportunities across a plethora of roles in Software Development, Consulting, Data Analytics, Product Development, and other

non-core profiles. The response for internships was equally impressive, with 85 B.Tech students managing to secure Pre-Placement Offers (PPO), highlighting the efficacy of the CDPC's initiatives.

Additionally, the CDPC orchestrated the successful event Corporate Connect 3.0, which was graced by senior leaders from a multitude of Core and Non-Core companies, including the likes of Standard Chartered Bank (Global), NXP, Harness, RigBetel, Commonwealth Bank, Mahindra and Mahindra, TRADO, and Rockpecker. This event aimed to foster collaborative avenues with IIT Ropar. Throughout Corporate Connect 3.0, several engaging activities unfolded, including case study competitions for students, thought-provoking panel discussions on current industry trends, and opportunities for students to interact directly with company representatives, alongside enlightening department and lab visits that enriched the academic experience.

### > INDUSTRY AND ALUMNI RELATIONS

### **Industry relations**

The R&D office plays a pivotal role in fostering robust partnerships between academia and the industry, as well as with esteemed international research institutions, thereby paving the way for dynamic research and academic collaborations. Situated at the forefront of innovation and learning, the institute boasts strong connections to the industrial sector and proudly maintains membership in the Confederation of Indian Industry (CII). This affiliation has facilitated a notable increase in consultancy projects, with IIT Ropar witnessing a remarkable growth, culminating in a total of ₹46.66 crore from a diverse portfolio of 789 projects executed by its distinguished faculty.

To cultivate meaningful relationships with industrial stakeholders, the institute hosts regular Industry Institute Conclaves. These interactive forums serve as a vital platform for industry leaders and academic professionals to converge, exchange insights, and collaboratively address pertinent topics—ranging from the expectations of the industry from educational institutions to refining curriculum structures. These conclaves also provide valuable opportunities to explore pressing issues and potential pathways in industrial projects and consultancy services.

In addition to these engaging discussions, the institute enhances its academic environment by inviting industry experts to share their insights and experiences through the Industrial Lecture Series. This initiative enriches the educational experience, exposing students and faculty alike to real-world challenges and innovations.

Moreover, the Centre for Innovation and Business Incubation (CIBI) at the institute is a thriving hub of creativity and entrepreneurship, currently nurturing 200+ startups as part of its Technology Business Incubator (TBI) and iHub-AWaDH. This initiative highlights IIT Ropar's commitment to fostering an entrepreneurial spirit and driving innovation in various fields, ultimately contributing to the growth of the local and national economy.

### **Alumni relations**

IIT Ropar places a strong emphasis on fostering lifelong connections with its alumni, recognizing them as valuable ambassadors and contributors to the institute's growth. Since the formation of the IIT Ropar Alumni Association in 2013, the institute has launched several initiatives to engage alumni and enhance their participation in academic, professional, and cultural aspects of campus life. As of March 2025, our alumni network has grown to 3750 members.

#### Alumni Student Relationship Cell (ASRC):

A dedicated cell working in coordination with the Placement and Internship Cell to leverage the alumni network for internships, live projects, and placement opportunities.

#### Hangout with Alumni:

Regular interaction sessions in the form of webinars, podcasts, and meet ups, offering students insights into alumni experiences, career journeys, and personal stories.

#### **Dedicated Alumni Portal:**

IIT Ropar maintains a centralized online portal to facilitate seamless engagement between alumni and the institute. The portal enables alumni to stay connected, participate in events, mentor students, share opportunities, and contribute to institutional initiatives.

#### Alumni WhatsApp Groups:

Active WhatsApp groups have been created for various graduating batches and interest areas, enabling real-time communication, networking, event coordination, and a strong sense of community among alumni.

# **RECREATIONAL/EXTRA CURRICULAR ACTIVITIES**

In order to take care of various students activities, we have a Student Affairs Section with the following functional units:

- Board of Hostel Affairs (BOHA)
- Board of Cultural Activities (BOCA)
- Board of Science & Technology (BOST)
- Board of Sports Activities (BOSA)
- Board of Literary Activities (BOLA)
- Board of Academic Affairs (BOAA)
- Board of Wellness Affairs (BOWA)
- Institute Student Mentorship Program (ISMP)
- Outdoor Adventure and Social Activities Club (ODAC)
- National Service Scheme (NSS)

#### 1. Board of Hostel Affairs (BOHA)

The Board of Hostel Affairs (BOHA) oversees all hostels and mess facilities at the institute, ensuring a comfortable and well-managed residential experience for students. It monitors food quality, menu planning, and overall mess operations through the Mess Committee. For hostel-related concerns, the Hostel Committee addresses student issues and works towards improving hostel life. BOHA also organizes cultural celebrations, special dinners, and various activities to enhance student engagement. A major highlight is the General Championship (GC), a prestigious inter-hostel competition that fosters camaraderie and competitive spirit. All these activities are managed under the leadership of the General Secretary, BOHA.

#### 2. Board of Cultural Affairs (BOCA)

The Board of Cultural Activities (BOCA) at IIT Ropar is the heart of the institute's cultural scene, fostering artistic expression and vibrant student engagement. It oversees a diverse array of clubs, including Alankar (Music Club), Arturo (Photography Club), D'Cypher (Dance Club), Epicure (Culinary Club), Undekha (Dramatics Club), Vibgyor (Fine Arts Club), and Panache (Fashion Club). Throughout the year, BOCA organizes exciting events like jamming nights, Bhangra sessions, ramp walks, and street plays, ensuring a lively campus atmosphere. The flagship event, Zeitgeist, is IIT Ropar's annual cultural fest, featuring renowned celebrities, musicians, and comedians, drawing immense participation. BOCA also proudly represents IIT Ropar at the Inter-IIT Cultural Meet, held every December, where students compete against peers from all 23 IITs in a prestigious display of talent and creativity. Through these initiatives, BOCA not only enriches the cultural landscape on campus but also fosters leadership, teamwork, and artistic excellence.

#### 3. Board of Science and Technology (BOST)

The Board of Science and Technology at IIT Ropar is a vibrant hub of innovation, comprising 11 dynamic clubs—Aeromodelling, Automotive, CIM, Coding, Fincom, Robotics, Softcom, Zenith, Esportz, Monochrome, and Softcom. We explore diverse domains, including mechatronics, software development, cybersecurity, game development, and competitive coding, fostering a culture of technical excellence. Our board extends its reach into high-power model rocketry, astronomy, esports, computational simulations, and design, pushing the boundaries of scientific exploration. We also focus on case studies, quantitative finance, and advanced computational techniques, providing students with real-world problem-solving skills. Engaging in national and international competitions, we showcase our expertise on global platforms. From cutting-edge robotics and automation to financial modeling and digital art, our clubs cater to every tech enthusiast. With hands-on projects, workshops, and mentorship, we empower students to innovate and lead in the evolving technological landscape. Also, the annual technical festival i.e. Advitiya is held every year.

#### 4. Board of Sports Activities (BOSA)

We have a Board of Sports Activities (BOSA) which encourages the students to participate in local / Inter- / Intra-college / Hostel Sports Activities to boost their performance in inter IIT Sports meet under the guidance of Sports Officer & professional coaches.

All sports facilities including gymnasium are being upgraded to enhance the quality of facilities at the Institute. There are international level modern sports fields / grounds with floodlights facilities. Since 2016, BOSA, IIT Ropar is organizing an Annual Sports Festival "AAROHAN" in which students of various Colleges, Institutes and Universities participate in more than 13 sports events.

#### 5. Board of Literary Affairs (BOLA)

The Board of Literary Affairs at IIT Ropar is dedicated to nurturing and promoting literary excellence and creativity within the campus. It oversees and organizes all literary activities, providing a vibrant platform for students to explore and showcase their talents. Under its umbrella, the board hosts various clubs, including poetry, quizzing, debating, oratory, filmmaking, Model United Nations (MUN), and a movie club, catering to diverse literary and artistic interests. Additionally, it proudly organizes MALHAR, the annual literary fest of IIT Ropar, which celebrates the spirit of literature, culture, and expression through a series of exciting events, competitions, and interactive sessions, fostering a dynamic and intellectually stimulating environment for the student community.

#### 6. Board of Academic Affairs (BOAA)

The Board of Academic Affairs (BOAA) acts as a crucial link between students and the administration, focusing on addressing academic concerns effectively. With representatives from all branches of each year, BOAA ensures clear communication between students and professors. It advocates for student interests, influencing positive changes in academic policies. The board plays a vital role in improving the overall academic experience, aiming to create a supportive environment where every student's voice matters. Its efforts promote collaboration and address challenges to enhance learning throughout the college community.

#### 7. Board of Wellness Affairs (BOWA)

The Boards caters the mental health and counseling needs of the students, faculties and staff. Our system is especially working towards addressing the psychological difficulties of the students and promoting wellness among the whole campus community. Our main focus is to create a proactive and preventative environment for mental health care for all. The objective of this cell is to increase the help seeking behavior among the community, and to remove the fear of stigma by close others and to make the counseling services more user friendly.

There is another unit working in coordination with the Board of Wellness Affairs i.e. a Counselling Cell named as "Snehita Wellbeing Cell". This cell conducts various educational activities/sessions for student's well-being like – Dealing with Academic Anxiety, Self Discipline & Wellbeing, Time Management, Power of Happiness, Relaxation Exercises & Mindfulness etc. Snehita Buddies have been constituted to address the stress related concerns of students under Snehita Wellbeing Cell.

#### 8. Institute Student Mentorship Program (ISMP)

The Institute Student Mentorship Program (ISMP) at IIT Ropar is a student-driven initiative designed to help fresher's adapt to college life. It provides guidance on academics, co-curricular activities, and maintaining a balanced lifestyle. Each fresher is assigned a mentor, a carefully selected senior student who offers support and advice throughout the year. ISMP ensures a smooth transition into IIT Ropar by organizing interactive sessions, activities, and events that introduce fresher's to the campus culture. The program fosters a strong support system, encouraging personal and academic growth. Through mentorship, fresher's gain insights, resources, and confidence to make the most of their college journey.

#### 9. Outdoor Adventure and Social Activities Club (ODAC)

The Club organizes events specifically designed to help students, faculty, and staff members improve their fitness and overall well-being. Every year, on occasions such as National Unity Day, Yoga Day, and others, the club organizes events like the IIT Ropar Unity Run, Yoga Day in coordination with the Board of Sports Affairs, the celebration of Bicycling Day, and the Holy Run, among others.

#### **10.** National Service Scheme (NSS)

With the goal to work for the betterment of society and instill the spirit of social service among the young students, IIT Ropar established NSS at institute level, headed by Faculty in Charge, IIT Ropar. Currently, NSS, IIT Ropar has over 100 active members from different disciplines, working rigorously for community health care, literacy drives, and environmental protection. Blood donation camps, informative lectures on human values are organized regularly. The aim of the organization is to produce engineers, who are socially responsible, and work for the development of the nation.

### ZEITGEIST: A RETRO RENAISSANCE, CULTURAL FEST, IIT ROPAR 2024

The Annual Cultural Fest i.e. **Zeitgeist: A Retro Renaissance, Cultural Fest, IIT Ropar 2024** held from 25<sup>th</sup> to 27<sup>th</sup> Oct, 2024. The Hon'ble Director, IIT Ropar Prof. Rajeev Ahuja inaugurated Zeitgeist 2024 by addressing the participants, audience expressing his support for the event and inspiring all of us to make the most of the fest. Various cultural events, star performances, workshops were organized during the period. In the Zeitgeist 2024, the overall footfall was around 12,000 with more than 3,000 registrations from student bodies in all the events.

### ADVITIYA 2025 – IIT ROPAR'S ANNUAL TECHNICAL FESTIVAL

Advitiya 2025, the flagship annual technical festival of the Indian Institute of Technology Ropar, was held from February 7th to 9th, 2025. As one of North India's premier technical fests, Advitiya 2025 showcased a blend of innovation, creativity, and technological prowess, attracting a diverse group of participants and attendees. Various technical events, workshops, other performances and an exhibition by the Indian Army were organized during the event. In a remarkable achievement, around 40,000+ students from across the country participated in an online event organized by the Coding Club during the Advitiya 2025, contributing to an overall event footfall of 50,000 (offline+online).

# > LOCATION AND ACCESSIBILITY

The Institute is nestled in the vibrant town of Ropar, which serves as the administrative center of Rupnagar district in Punjab. Its establishment adds to the esteemed lineage of premier educational institutions that have become synonymous with this region. Located just 42 kilometers away from Chandigarh, the capital of Punjab, Ropar is easily accessible and well-connected, making it a convenient hub for students and visitors alike. The town's strategic position boasts robust transportation links, with the National Highways NH21 and NH205 facilitating smooth road travel, while the Delhi-Ambala-Una railway line gracefully cuts through Rupnagar, offering efficient rail connectivity. This dynamic environment enhances the appeal of the Institute, situated amid the rich cultural and educational tapestry of Punjab.

### By Air:

The nearest international airport is in Chandigarh, about 50 kms from Rupnagar. Any visitor wishing to come to Rupnagar / Ropar could take a flight from his/her respective place to Chandigarh, if available, or a flight from Delhi to Chandigarh and then take a taxi from the airport to reach the campus of Indian Institute of Technology Ropar (IIT Ropar) which is approximately one-and-a-half-hour journey.

### By Train:

There are regular trains running between Delhi and Rupnagar. The Delhi Ambala Una railway line passes through Rupnagar. The duration of the journey is around six hours from Delhi.

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