



PRESS RELEASE

IIT Mandi introduces Five new UG Programs, including one-of-its-kind Program in General Engineering

These programs will cater to the skilled needs of emerging fields including General Engineering, Microelectronics and VLSI, Materials Sciences, Chemical Science and Mathematics & Computing

Mandi, 11th July 2023: [Indian Institute of Technology Mandi](https://www.iitmandi.ac.in/) announces five new undergraduate programs starting from the academic year 2023. These include:

- B.Tech. in General Engineering
- B. Tech. in Microelectronics and VLSI
- B.Tech. in Materials Science and Engineering
- B.Tech. in Mathematics & Computing
- BS in Chemical Sciences

These programs aim to equip students with specialized knowledge and skills in emerging fields, providing diverse career opportunities. Admissions are now open through the All India JEE (Adv.) ranking system.

Speaking about the New Programs at IIT Mandi, Prof. Laxmidhar Behera, Director, IIT Mandi, said, *“IIT Mandi continues to prioritize academic excellence and innovation, ensuring that students receive a comprehensive education that prepares them for the evolving demands of the industry. Considering the need of manpower with interdisciplinary, multidisciplinary, and transdisciplinary skillset for the ever-evolving world, the newly introduced programs at IIT Mandi will help the students to prepare for the industry standards while exploring the unique aspects of these NEP 2020-aligned programs.”*

Program details:

B.Tech. in General Engineering

The General Engineering Program at IIT Mandi is one-of-its-kind B.Tech. program that aims to provide students with an understanding of fundamental engineering principles while also allowing them to tailor their educational journey through flexible specializations.

The program's first two years will serve as an introduction to engineering studies, with courses in Mechanical Engineering, Civil Engineering, Data Science, and Computer Science. The program's unique flexibility stands out in the final two years



where students can choose a specialization from various options, such as, Energy Engineering, Advanced Manufacturing, e-Mobility, Artificial Intelligence and Robotics, and other emerging sectors such as fashion design and technology, animation, and product design, paving their path based on their interests and career goals.

The program's partnerships with leading institutions are a standout feature. Students will also have an opportunity to spend a year at a partner institute/industry pursuing courses/internships in their chosen specialization.

B.Tech. in Micro-Electronics and VLSI

The B.Tech. in Microelectronics and VLSI program at IIT Mandi aims to meet the industry's future needs by equipping students with theoretical knowledge and practical skills in VLSI and chip designing. The program curriculum includes advanced courses in device level, design, fabrication, and CAD tools, using industry-standard EDA tools. The program focuses on generating a skilled workforce for semiconductor design, offering clean room facilities, instrumentation facilities, and a strong industry-oriented curriculum. This program will encourage the students to explore interdisciplinary courses and choose electives in Microelectronics and VLSI engineering. Industrial internships, a year-long major technical project, and practical experience will also be provided.

B.Tech. in Material Science and Engineering

The Bachelor of Technology (B.Tech.) in Materials Science and Engineering program at IIT Mandi will offer a comprehensive education in the field of materials science, emphasizing engineering applications and employable skills. With a focus on emerging areas like sustainability, renewable energy, urban mining, quantum technologies, and artificial intelligence, the program will equip students with theoretical knowledge and practical expertise on both conventional and advanced materials. The hands-on research experience module of this program will enable students to bridge the gap between academic pursuits and real-world engineering. Graduates of this program will be prepared to take on leadership roles in industries such as semiconductors, manufacturing, automobiles, energy, and waste management. This interdisciplinary program will cater to students interested in exploring the intersection of science and engineering.

B.Tech. in Mathematics & Computing

The new B.Tech. program in Mathematics & Computing is a unique and pioneering program that will offer students a strong foundation in mathematics, computing, and computational thinking. It will focus on developing analytical and problem-solving skills that can be applied across various fields in science and engineering. By emphasizing on both theoretical and practical aspects of mathematical and scientific computing, this program will prepare graduates for diverse career opportunities in industries, academia, and research and development. It aims to



produce graduates who possess a wide range of mathematical and computational knowledge, techniques, and tools, enabling them to tackle complex real-world problems effectively.

BS Program in Chemical Sciences

IIT Mandi's School of Chemical Sciences is starting a unique and comprehensive 4-year Bachelor of Science (BS) program in Chemical Sciences. This program will allow students to specialize in key branches of Chemistry, including Organic, Inorganic, Physical, and Materials Chemistry, while also offering minors in various engineering and humanities disciplines such as Computer Science & Engineering, Communication Engineering, Management, and German Language, among others. The curriculum will provide research opportunities at the BS level, allowing students to engage in research at an early stage. Graduates of the program will have placement opportunities in chemical, pharmaceutical, and technology industries, with the option to pursue a research career after completing the Master's component (MS) of the program. The program duration is four years for the BS program along with an optional 1-year MS.

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About [IIT Mandi](#)

IIT Mandi has nine Academic Schools and five major Research Centers. The Schools are the School of Biosciences and Bioengineering (SBBE), School of Chemical Sciences (SCS), School of Mathematical and Statistical Sciences (SMSS), School of Physical Sciences (SPS), School of Mechanical and Materials Engineering (SMME), School of Civil and Environmental Engineering (SCENE), School of Computing and Electrical Engineering (SCEE), School of Humanities and Social Sciences (SHSS), and School of Management (SOM). The Centers are Advanced Materials Research Centre (AMRC), Centre for Design and Fabrication of Electrical Devices (C4DFED), BioX Centre, Indian Knowledge System and Mental Health Applications Centre (IKSMHA Centre) and Centre for Artificial Intelligence and Robotics.

The Institute offers B.Tech. programs in seven different streams, one M.A. program, ten M.Tech. programs, nine Ph.D. programs, and one iPh.D. program. The unique, project-oriented B.Tech. curriculum is centered around its 4-year long Design and Innovation stream. Since the inception of the Institute, IIT Mandi faculty have been involved in over 275 Research and Development (R&D) projects worth more than Rs. 120 crores.

IIT Mandi established the IIT Mandi iHub and HCI Foundation (iHub; a section-8 company) on its campus at Kamand with significant funding of INR 110 crores from the Department of Science and Technology (DST), Government of India. The iHub is planned to fuel research and technology development, skill development, startup and innovation, and collaborations in the HCI and allied AI/ML areas in India. IIT Mandi is the only second-generation IIT to be featured at rank 7 in the Atal Ranking of Institutions on Innovation Achievements of the Innovation Cell, Ministry of Education, Govt. of India.

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