

The IIT Mandi B.Tech. Curriculum

The B.Tech. programme at IIT Mandi is semester-based with a flexible credit system. The curriculum is designed keeping in mind the need to produce well-rounded graduates many of whom go on to join industry in technical or managerial roles, or to join the administrative services as technocrats, while a few aspire to research careers. Thus, we have chosen to ensure that the students have broad exposure to all the types of knowledge that will enable them to perform well in tomorrow's increasingly complex and inter-dependent world. The extreme specialization and depth of the ardent researcher will be obtained via a Masters and PhD, building on the foundation of a strong B.Tech.

As a B.Tech. student at IIT Mandi, you will complete foundation courses in basic sciences, engineering sciences and practice, humanities and social sciences, and the core in your chosen discipline. You will have the liberty to take various electives in your discipline to enable you to develop significant knowledge in a specialized area and exposure to research trends and developments. The category of free/open electives outside the chosen discipline is designed to give you the flexibility to obtain significant inter-disciplinary knowledge. Overall, the curriculum will encourage and enable you to become well-qualified and well-rounded engineers in all respects.

Flexible Curriculum

In keeping with our goals of shaping tomorrow's leaders, the B.Tech. curriculum gives you considerable flexibility. This flexibility is decided by each student based on your aspirations and interest, in consultation with the faculty advisor for your branch. Some highlights of the flexible curriculum:

- ⑩ only 20-30 contact hours per week, leaves time for individual study and extra-curricular activities
- ⑩ A large number of elective courses in the branch, in other engineering branches, in basic sciences and in the humanities and management.
- ⑩ core courses can be deferred to allow you to take interesting electives early on
- ⑩ short, specialized courses by visiting experts from industry and abroad
- ⑩ elective courses offered by faculty in other IITs and universities abroad through our interactive electronic classroom
- ⑩ minor specialisation – a student of one branch takes a set of 3-4 courses in another discipline, e.g. a Mechanical student takes a minor in Computer Science
- ⑩ Provision for visits of a few weeks to one semester to other universities and industry for course work and projects.

Design Practicum

After graduating from IIT Mandi, you can aspire to design innovative solutions for society. Examples that have radically transformed our lives over the past few decades include the Tata Nano, the Google search engine, the Re. 1 shampoo sachet, the 1p/second phone call, the Green Revolution and many others.

Our curriculum is geared towards training innovative design engineers who will be responsible for the products that will become household words in years to come. Throughout the 4 years, you will spend substantial time in the labs and workshops getting hands on experience solving real-world problems. As part of the curriculum and on their own initiative, 1st and 2nd B.Tech. students have designed various products and solutions:

- ⑩ design and operation of the website www.iitmandi.ac.in
- ⑩ building a miniature robot-vehicle that drives itself along a winding road
- ⑩ hi-tech shoe that charges a cell phone while walking
- ⑩ a low-cost drip irrigation system that controls the water flow based on the needs of different plants
- ⑩ an online portal for faculty to apply to IIT Mandi

These are a sample of what you could do as a student of IIT Mandi. The possibilities are limited only by your imagination and initiative!

In a Nutshell

IIT Mandi gives you opportunities and the freedom to train yourself to become one of the path-breaking leaders of the future. It is up to you to rise to the challenge and become the next Narayana Murthy, Ratan Tata, or Bill Gates!