Malaviya Mission Teacher Training Programme (MMTTP)

Indian Institute of Technology Mandi
Kamand, Mandi, Himachal Pradesh

6 days STC
on

Design Thinking & Product Development Methodologies using Additive Manufacturing Processes

(In-person Mode)

March 9th – 14th, 2026

About the Course:

This course provides a comprehensive understanding of the generic product development process, guiding students from the early exploration of ideas to the realization of manufacturable products. It begins with concept development, where students analyze the opportunity landscape and perform structured product planning to assess market relevance and feasibility. The course emphasizes customer-driven design, covering methods for customer needs identification, formulating target specifications, and refining them into final product specifications. Students will practice systematic concept generation, selection, and testing to evaluate alternatives and choose optimal solutions. The curriculum also covers product architecture, design for the environment, and design for economics, ensuring that sustainability and cost-efficiency are embedded in decision-making. A key component is the project-oriented module, where course participants apply digital and physical prototyping methods—including **Additive Manufacturing (AM)**, **conventional non-AM processes**, generative design, and other advanced engineering techniques to develop functional product concepts. The course is further enriched with **industry-inspired case studies**, helping course participants connect theoretical principles with real-world product development practices.

Through a combination of expert-led lectures, guided hands-on sessions, and industry-based case studies, the course equips participants with practical skills in applying modern engineering tools and computational methods for **product design, analysis, and optimisation**. course participants will gain

experience with advanced **workflows, including simulation, generative design**, and both additive and conventional manufacturing processes. By the end of the programme, participants will be capable of independently **conceptualising, designing, assessing, and iterating engineering products** using cutting-edge digital manufacturing and analysis platforms, enabling them to address complex, real-world design challenges with confidence.

Participants Eligibility Criteria

Faculty members working in universities and colleges that are included under Section 2(f) of the UGC Act. The teachers of colleges that do not yet come within the purview of Section 2(f), but have been affiliated to a university for at least three years, will be permitted to participate in the courses. These conditions apply only to Residential Training Programmes/Courses.

Application/Registration Procedure

The participants should first register at https://mmc.ugc.ac.in/ and create an account.

- After logging in as a participant using User ID and Password, from the dashboard, click on "Apply for Guru Dakshta (FIP), Refresher Course and Short-Term Programme/Faculty Development Programme", next start filling the application form.
- In the application form, select "Apply for" as "Short Term Programme (residential)", next give details of your earlier participation in FIP, next select "Programme Name & Centre Name" as "Indian Institute of Technology Mandi", later fill in the remaining items and submit the application form.

Salient Features of the Course

- The course will be of 6 days duration, and 36 contact hours (six hours a day). The course will have 24 lectures.
- There will be a subjective question-based written examination conducted at the end of the course. This course will be considered for fulfilment of the requirements as laid down by UGC for the Career Advance Scheme.
- Application/registration is free of cost.
- Accommodation and food will be free of cost during the programme.
- A Certificate will be issued to those who have attended all the sessions and have qualified for the Assessment examination.

This course is beneficial for individuals looking to stay updated with current trends in research and improve their overall academic and professional output. After attending the course, the participants will independently and accurately be able to perform better research, writing and analysis.

Programme Director	Resource Person(s)
Prof Atul Dhar	Dr Prateek Saxena

Important Dates	Contact
Application Deadline Date: 20th February, 2026	mmttp@iitmandi.ac.in
Programme Start Date: 9th March, 2026 End Date: 14th March, 2026	

Relevant Important Links:

- **Step-by-Step Process:** https://docs.google.com/document/d/1KsaTz3_s4pfQIb7OtqRtqG8DpTc9UPTRUm0PinpSTVY/
- **User Participant Manual Link:** https://mmc.ugc.ac.in/S/MMTTP%20User%20Manual%20Participants.pdf
- **MMTTP Website:** https://mmc.ugc.ac.in/