



Department of Mechanical Engineering, IIT Indore

Presents a

AICTE-QIP Sponsored PG Certificate Programme in

Emerging Technologies in Advanced Composite Materials, Modelling, Manufacturing & Testing

About the Programme

The AICTE-QIP PG Certificate Programme on Emerging Technologies in Advanced Composite Materials is designed to provide industry-ready and research-oriented training to faculty members in the areas of composite material modelling, manufacturing, machining, and testing. The programme integrates theoretical foundations, computational simulations, hands-on laboratory exposure, and a guided project, enabling participants to strengthen teaching, research, and collaborative capabilities.

Programme Highlights

- 5-Month PG Certificate Programme (Hybrid Mode)
- Fully Sponsored by AICTE (**No Registration Fee**)
- 200+ Hours of Theory & Hands-on Training
- Expert Faculty from IIT Indore
- Strong focus on Modelling, Manufacturing & Experimental Validation
- Certification by AICTE & IIT Indore

Course Structure (18) Credits

- Micro- & Nano-Mechanics of Composites (Theory + Lab)
- Composite Materials & Machining (Theory + Lab)
- Introduction to Data Science for Engineers (Theory + Lab)
- Programming & Data Structures (Theory)
- Hands-on Project in Emerging Areas of Composites

Hands-on Training and Tools

- ✓ Micromechanical modelling using MATLAB
- ✓ Atomistic & nanomechanical simulations using LAMMPS
- ✓ FEM simulations using ABAQUS / ANSYS
- ✓ Composite fabrication: GFRP / CFRP (Hand Lay-up, VARTM)
- ✓ Mechanical testing, fatigue testing & NDT techniques etc.



Programme Duration & Mode

- **Total Duration:** 5 Months (Aug – Dec 2026)
- **Mode of Conduct:** Hybrid
- **On Campus Session I:** 17 Aug – 25 Aug 2026
- **Online Sessions:** Aug – Dec 2026
- **On Campus Session II:** 14 Dec – 22 Dec 2026

Eligibility Criteria

- Full time Regular / Permanent Faculty Members
- From AICTE approved Degree / Diploma Institutions
- Minimum 3 years Teaching Experience (UG / Diploma)

Certifications and Benefits

- PG Certificate awarded by IIT Indore and AICTE
- Free shared accommodation during on-campus sessions
- Kickstart of research activities from the beginning via hands-on training on modeling, fabrication, machining and testing of composites.
- Opportunities for collaboration & joint publications via involving participants in research activities at IIT Indore.

Places to visit nearby

- Mahakaleshwar Jyotirlinga, Ujjain
- Omkareshwar Jyotirlinga
- Maheshwar and Ahilya Fort
- Mandu – Jahaz Mahal, Hindola Mahal, Hoshang Shah's Tomb, Rani Roopmati Pavilion
- Indore City Heritage & Food- Rajwada Palace, Lal Bagh Palace and the old-city markets, plus the famous Sarafa night food street, give a vibrant taste of Malwa culture.
- Natural spots like Patalpani Waterfall, Tincha Falls, and Ralamandal sanctuary.



Course Coordinators:

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Faculty of Departments of ME and CSE, IIT Indore

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Registration deadline – 05th July 2026

Registration Portal: <https://qippg.aicte.gov.in/>

Web site: <https://shaileshkundalwal.com/>