

Indian Institute of Technology Delhi
TEQIP-III Sponsored Short-Term Course

Mechanics of Composite Materials

Department of Applied Mechanics, IIT Delhi
Hauz Khas, New Delhi
Oct 14-18, 2020



This online short-term (30 hour) course covers several topics related to the mechanics of composites at macro and micro scales.

Learning objective

Theoretical concepts and applications of Mechanics of Composite Materials.

On successful completion of the course, the participants will be able to

1. Understand the significance of light weight in design of structures
2. Appreciate the mechanical behaviour and failure of composites
3. Understand the structural mechanics of laminates
4. Understand the micromechanics of composites and its relation to macroscopic behaviour

Course contents

1. Strain and stress, boundary conditions
2. Transformation of tensors, index notation
3. Orthotropy & Isotropy (lamina)
4. Fibre Reinforced Lamina
5. Laminated Beams and Plates
6. Laminated Vibration & Buckling
7. Micro-mechanics
8. Representative Volume Element
9. Damage Mechanics of Composites
10. Characterization

Target Audience

The course is designed for faculty members and research scholars (full time PhD students) at TEQIP-III institutes. Participation from outside of TEQIP-III institutes is not permitted in this course. There is no registration fee.

Course Coordinator

Gaurav Singh
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Contact

For any query (registration or course content), please send an email to fracture_iitdelhi@outlook.com

Faculty

The following faculty, from the Department of Applied Mechanics, IIT Delhi, will be involved during this short-term course:

1. Prof. Gaurav Singh
2. Prof. Puneet Mahajan
3. Prof. Maloy Singha
4. Prof. S. Pradyumna

Registration Deadline

Oct 09 2020 (hard deadline) at [this link](#) with payment of refundable security deposit of Rs. 1000.

The link will not accept any response after the deadline.

On Oct 10 2020 an intimation to confirmed participants will be done. For the declined participants, we will process reimbursement of refundable deposit.

Participant Strength

We intend to keep the course strength to under 50 participants to maintain a high quality of instruction. An earlier registration implies a greater chance of being accepted for this short-term course.