7CE162 Mechanics of Composite Materials

L-T-P-Cr: 3-0-0-3

Objective: The objective of the course is that the students should have good appreciation of this new emerging material and its application potential in Civil Engineering.

Theory: 1. Introduction to Composites 3 Lectures

2. Basic constituent materials in Composites 4 Lectures

3. Behaviors of a Lamina. 4 Lectures

4. Laminated Composites: 6 Lectures

5. Strength and Failure theories 4 Lectures

6. Design Concepts 5 Lectures

7. Manufacturing Processes 6 Lectures

8. Creating Special Topics, Engineering Applications, Civil Engineering Applications 10 Lectures

Texts/References 1. Autar K. Kaw, Mechanics of Composite Materials, CRC Press, 2005. 2. Robert M. Jones, Mechanics of Composite Materials, CRC Press; 2nd Revised edition (16 November 1998)