Material Science

Course Code: ES 312

Students: B. Tech. VI and VIII Semester

Structure: 3-0-0-3

Faculty: Deepak K. Ghodgaonkar (deepak_ghodgaonkar@daiict.ac.in) (Extn. 623)

Pre-Requisite: None

Time Table:

Lecture Schedule:

1. Introduction to Material Science. (3 Lectures)
2. Atomic Bonding (3 Lectures)
3. Crystal structure and defects, and Non-Crystalline materials (4 Lectures)
4. Diffusion and Phase Equilibria (4 Lectures)
5. Microstructures; Deformation and fracture (4 Lectures)
6. Polymers and composites (4 Lectures)
7. Conduction materials and Semiconductors (4 Lectures)
8. Semiconductor Materials (4 Lectures)
9. Magnetic, Dielectric and optical properties of materials (8 Lectures)
10. Corrosion of materials (2 lectures)
11. Selection and Design Considerations (4 Lectures)

Reference Books


Evaluation:

1st In-Sems Exam. - 25 %
2nd In-Sem Exam. - 25 %
Final Exam. - 25 %
2 Quizzes - 15 %
Attendance - 10 %

Office Hours: Wednesday 4 to 5 pm