INTEGRAL UNIVERSITY, LUCKNOW
DEPARTMENT OF MECHANICAL ENGINEERING

COURSE: BASIC MECHANICAL ENGINEERING
COURSE CODE: ME101

COURSE OBJECTIVES:

1. Be able to have the basic concepts of thermal sciences and temperature measurement on the basis of zeroth law of thermodynamics.
2. To understand and apply first and second law of thermodynamics to various processes and real systems.
3. Be able to model the problem using free-body diagrams and reach to solution by using equilibrium equations.
4. Be able to draw Shear Force Diagram (SFD) and Bending Moment Diagrams (BMD) for statistically determinate beams.
5. Be able to design simple components on the basis of knowledge of stress, strain and strength of material.

COURSE OUTCOMES (CO):

After completion of the course, a student will be able to

COURSE OUTCOME (CO)	DESCRIPTION
CO1	Explain basic concepts of thermal sciences and temperature measurement on the basis of zeroth law of thermodynamics.
CO2	Understand and apply first and second law of thermodynamics to various processes and real systems.
CO3	Model the problem using free-body diagrams and reach to solution by using equilibrium equations.
CO4	Draw Shear Force Diagram (SFD) and Bending Moment Diagrams (BMD) for statistically determinate beams.
CO5	Design simple components on the basis of knowledge of stress, strain and strength of material.

CO-PO MAPPING:

	CO	PO1 Engineering Knowledge	PO2 Problem Analysis	PO3 Design/development of solutions	PO4 Conduct investigations into complex problems	PO5 Modern tool usage	PO6 Engineer and Society	PO7 Environment and Sustainability	PO8 Ethics	PO9 Individual and Team work	PO10 Communication	PO11 Project Management and Finance	PO12 Lifelong learning
CO1	Explain basic concepts of thermal sciences and temperature measurement on the basis of zeroth law of thermodynamics.	3	2	2	1		2						3
CO2	Understand and apply first and second law of thermodynamics to various processes and real systems.	3	3	3	2		3						3
CO3	Model the problem using free-body diagrams and reach to solution by using equilibrium equations.	3	3	3	2		3						3
CO4	Draw Shear Force Diagram (SFD) and Bending Moment Diagrams (BMD) for statistically determinate beams.	3	2	2	2		3						3
CO5	Design simple components on the basis of knowledge of stress, strain and strength of material.	3	3	2	1		3						3
	3: Strong contribution, 2: average contribution, 1: Low contribution												