



MAHARAJA RANJIT SINGH PUNJAB TECHNICAL UNIVERSITY BATHINDA-151001 (PUNJAB), INDIA

(A State University Estb. by Govt. of Punjab vide Punjab Act No. 5 of 2015 and Approved u/s 2(f) & 12 (B) of UGC; Member AIU)

Department: **MECHANICAL ENGINEERING**
Giani Zail Singh Campus College of Engineering & Technology, MRSPTU

Program: **B Tech Mechanical Engineering**

COs, POs, PSOs Mapping

Subject: <u>Engineering Mechanics</u>	Subject Code: BMECE0-001	Semester: <u>3rd</u>
Credit: <u>4</u>	L T P <u>3 1 0</u>	Duration: <u>60 Hrs.</u>

COs	Statement	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2	PSO1	PSO2
CO1	Students shall be able to understand problems related to Mechanics	1	1					2		1	1			2	1
CO2	Shall be able to apply this knowledge to find solution of engineering problems			2								2		2	1
CO3	This will make student learning life long	3	3	1					2	3	3	1		2	1
CO4	Students can use knowledge in new areas													2	1

Enter Correction levels 1, 2 or 3 as defined below:

1. Slight (Low) - upto 30% 2. Moderate (Medium) – above 30% and upto 70% 3. Substantial (High) – above 70%



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Subject: Mechanical Engineering Lab-I (Design-I)	Subject Code: BMECS1-304	Semester: <u>3rd</u>
Credit: <u>1</u>	L T P <u>002</u>	Duration: <u>45 Hrs.</u>

COs	Statement	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Student will be able to measure the various mechanical properties of various materials.	3	2	1	1	2	1	1	1	2	1	1	1	3	1
CO2	Student will be able to measure the bending stress and deflection in beams.	2	2	3	1	2	1	1		1	1	1	1	2	1
CO3	Student will be able to measure the strain energy and spring stiffness of a helical spring.	2	3	2	1	2	1	1		1	1	1	1	3	1
CO4	Student will be able to calculate load carrying capacity of long columns and their buckling strength.	2	2	3	2	2	1	1		1	1	1	1	2	1

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COs, POs, PSOs Mapping

Subject: STRENGTH OF MATERIAL-I	Subject Code: BMECS1-301	Semester: <u>3rd</u>
Credit: <u>4</u>	L T P <u>310</u>	Duration: <u>60Hrs.</u>

COs	Statement	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Understand the material properties, stress and strain and application Mohr's circle.	3	1	-	-	-	-	-	-	-	-	1	1	2	2
CO2	Understand, apply, analyse and design the beams using the concept of bending moment, shear force and stress in beams.	3	2	2	2	2	2	2	-	-	-	2	2	2	1
CO3	Understand, apply, analyse and design the beams. Column and struts using the concept of slope, deflection of beams and columns.	3	2	2	2	2	2	2	-	-	-	2	2	3	1
CO4	Understand, apply, analyse and design the shafts and frames using the concept of forces and stresses.	3	2	2	2	2	2	2	-	-	-	2	2	2	1

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COs, POs, PSOs Mapping

Subject: THERMODYNAMICS	Subject Code: BMECS1-303	Semester: <u>3rd</u>
Credit:<u>4</u>	L T P <u>310</u>	Duration: <u>60Hrs.</u>

COs	Statement	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Ability to apply various thermodynamics laws to real system	3	2					2					1	2	2
CO2	Understanding of the entropy of system and ideal gas equations	3		2				2					1	2	1
CO3	An understanding of the interrelationship between thermodynamic cycles		3	3	2			1					1	3	1
CO4	Ability to use Properties of Pure substances in real thermodynamics problems.		3	2	2									2	1

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COs, POs, PSOs Mapping

Subject: Environmental Science	Subject Code: BMNCC0-002	Semester: <u>3rd</u>
Credit: <u>1</u>	L T P <u>100</u>	Duration: <u>45 Hrs.</u>

COs	Statement	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Technologies based on ecological principles and environmental regulations, which in turn helps in sustainable development.	-	-	3	-	-	2	3	-	-	-	-	-	2	2
CO2	Conceptualize the processes and various factors involved in the formation of environment.	1	-	-	3	-	-	-	-	-	-	-	-	2	1
CO3	Recognize the importance of environment and the sustainable natural resources.	-	-	-	-	-	-	3	-	-	-	-	-	3	1
CO4	Use scientific reasoning to identify and understand environment problems and evaluate potential solution.	3	3	3	-	-	-	-	-	-	-	-	-	2	1

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