

1	Course Code	BHM1123					
2	Course Name	MECHANICS OF MATERIALS					
3	Version						
4	Name(s) of Academic Staff	Ahmad Najmuddin Bin Ibrahim Nanang Fatchurrohman					
5	Program Level	Dwi Degree					
6	Credit Hours	3					
7	Student Learning Time (SLT)	Face-to-Face	Non Face-to-Face			Formal Assessment	Total SLT
			Guided	Non-Guided	Assessment Preparation		
		56	0	46	0	18	120
8	Prerequisite Course	BHM1103	BHM1113				
9	Contact Hours	Face-to-face Session	Total Hours per semester		Hours per Week		
		Lecture	28		2		
		Tutorial	28		2		
		Laboratory			0		
		Supervision	0				
		Online Learning					
		Others	0				
10	Course Synopsis	This course covers the concept of stress and strain, stress and strain under axial, torsion, bending, transverse-shear and combined loadings in elastic structural members. This course also covers the plane stress transformation.					
11	Course Outcome	By the end of semester, student should be able to:					
		CO Statements	Domain	Keyword	Level (Bloom)	Sub Keyword	
		CO1 Apply the concept of stress and strain in mechanics of materials.	COGNITIVE	Knowledge	3		
		CO2 Apply the stress and strain calculations in structural members subjected to axial loads and torsional loads.	COGNITIVE	Problem Analysis	3		
		CO3 Apply the stress and strain calculations in structural members subjected to the bending and shear loads.	COGNITIVE	Problem Analysis	3		
		CO4 Analyze the stress and strain in structural members subjected to the combined load and analyze the stress transformation to solve problems in mechanics of materials.	COGNITIVE	Problem Analysis	4		
		CO5 Design solution of complex engineering problem related to mechanics of materials.	COGNITIVE	Design/Development Of Solution	4		
12	Rationale	Category : Core Programme Note: This course will provide the students with knowledge of the mechanics of material; including: concept of stress and strain, stress and strain under axial, torsion, bending, transverse-shear, combined loadings in elastic structural members and plane stress transformation.					
13	Transferable Skills	Ability to apply engineering knowledge and analyze fundamental stress and strain, stress and strain under axial, torsion, bending, transverse-shear, combined loadings in elastic structural members and plane stress transformation. Thus to develop the solution for real engineering problem related to mechanics of materials.					
14	Teaching - learning and Assessment Strategy	This course will be delivered by way of problem-based learning activities, demonstrations and co-operative learning activities. Students' active participation is expected during classes as to maximize the understanding of the course content and to build students' confidence in the subject matter. Formative assessments will be conducted through various assessment methods such as quiz, assignment and test. Summative assessments will be given at the end of the semester in the forms of project and final examination.					

**TEACHING PLAN
FACULTY OF MANUFACTURING ENGINEERING
UNIVERSITI MALAYSIA PAHANG**

15	Assessment Methods	Methods	Weighting	CO1	CO2	CO3	CO4	CO5	
		ASSIGNMENT	15 %	3.75	3.75	3.75	3.75		
		FINAL EXAM	40 %			20	20		
		PROJECT	10 %					10	
		QUIZ	5 %	5					
		TEST 1	15 %	15					
		TEST 2	15 %		15				
			100 %	23.75	18.75	23.75	23.75	10	
16	Learning Reference	Author	Title	Edition	Publisher	Year of Publish	Reference Type	Note	
		1	F.P. Beer	Mechanics of Materials	7	McGraw-Hill Companies, Inc	2016	BOOK	
		2	R.C.Hibbeler	Mechanics of Material	4	Pearson Prentice-Hall, Inc	2014	BOOK	MAIN