

SYLLABUS CURRICULUM

COURSE	Course Name : Mechanics of Material
	Course Code : TM184308
	Credit : 3 sks
	Semester : III

COURSE DESCRIPTION

LEARNING OUTCOMES

LO6	Understand the engineering principles in mechanical system to identify, formulate and solve the problem of mechanical engineering.
LO9	Able to find the source of engineering problems in mechanical system through research that includes identification, formulation, analysis, data interpretation based on engineering principles.

COURSE LEARNING OUTCOMES

Student is able to make transformation diagram of 2D stress – strain in analytical and graphic, choose static failure theories materials that suite with the materials condition, analyze strength, deflection, and certain and uncertain static buckling structure, also able to understand the use of energy method for material design, both individually and group.

MAIN SUBJECT

The focus of this course are as follows:

- Stress – Strain transformation and failure theories with its application.
- Design principal of material that cover : strength, deflection, and buckling.
- Energy method and virtual load

PREREQUISITES

Statics

REFERENCE

1. Russel C. Hibbeler, Mechanics of Materials, 8th edition, Prentice Hall
2. F. P. Beer and E. R. Johnston Jr., Mechanics of Materials, 6th Edition, McGraw-Hill
3. J. M. Gere and B. J. Goodno, Mechanics of Materials Brief, SI Edition, 2012, Cengage Learning