SYLLABUS CURRICULUM

COURSE	Course Name : Statics
	Course Code : TM184204
	Credit : 3 sks
	Semester : II

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

Students can conduct analysis on particle and structure equilibriums, arrange free-body diagrams of rigid-body equilibriums based on acting forces, and evaluate stresses and strains resulting from various axial, torsional, bending, shear, and combined load.

MAIN SUBJECT

The focus of this course are as follows:
- Static particle equilibrium: force vector and force system resultant on 2D and 3D Cartesian coordinates
- Static rigid-body equilibrium: types of connection, distributed load, free-body diagram and internal moment
- Structural analysis: method of joints and method of sections
- Stress-strain due to axial load, torsion, bending moment, shear force, and combined load

PREREQUISITES

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REFERENCE
1. Russel C. Hibbeler, Engineering Mechanics: Statics, 12th edition, Prentice Hall

1. Russel C. Hibbeler, Engineering Mechanics: Statics, 12th edition, Prentice Hall
2. Russel C. Hibbeler, Mechanics of Materials, 8th edition, Prentice Hall
3. F. P. Beer and E. R. Johnston Jr., Vector Mechanics for Engineers: Statics, SI Metric Edition, 9th Edition, McGraw-Hill,
4. F. P. Beer and E. R. Johnston Jr., Mechanics of Materials, 6th Edition, McGraw-Hill