



SYLLABUS TEMPLATE

Course Number Course Name	MET 201 Applied Mechanics I
Credit Value (Breakdown of theory and lab credits)	3 (3 Theory)
Catalog Course Description	The focus of this course is on learning the fundamentals of mechanics of bodies that are in static equilibrium. Students will learn conceptual skills that will build the foundation for performing force analysis of particles and rigid bodies in both two and three dimensions. Students will learn to draw the free-body-diagram and perform force and moment analysis. Students will apply concepts of force and moment and couple to solve practical problems. Students will learn to analyze distributed force systems and forces in members of trusses and frames. They will apply concepts of centroids, center of mass and center of gravity to solve mechanics problems. Finally, the students will learn concepts and applications on friction. <i>Prerequisite:</i> ENGR 215 (3, 3T + 0L)
Student Learning Outcomes/Objectives /Competencies of the Course	<ol style="list-style-type: none"> 1. Understanding of the difference between scalars and vectors. 2. Ability to represent forces and moments in vector form and resolve them into components. 3. Ability to draw a complete free-body-diagrams and to use free-body diagrams to solve equilibrium problems in two dimensions and three dimensions. 4. Ability to recognize different types of reaction forces and moments from the external supports to a structure 5. Analysis of structures (trusses, frames etc.) by method of joints and sections. 6. Analysis of distributed force systems. Calculation of center of mass and centroids 7. Analysis of problems involving applications of frictions in machines.
College-Wide Student Learning Outcomes	<p>MET 201 learning objectives align with the following NNMC College Wide Goal:</p> <p>Critical Thought</p>