Title:	Engineering Mechanics: Dynamics
TCCN:	ENGR 2302
Course	Basic theory of engineering mechanics, using calculus, involving the motion of particles, rigid bodies, and systems of particles; Newton's Laws; work and energy relationships; principles of impulse and momentum; application of kinetics and kinematics to the solution of engineering problems.
Description	Prerequisites: ENGR 2301—Engineering Mechanics: Statics
Course Outcomes	 Upon successful completion of this course, students will: Express dynamic quantities as vectors in terms of Cartesian components, polar coordinates, and normal-tangential coordinates. Compute mass moments of inertia for systems of particles and rigid bodies. Solve kinematic problems involving rectilinear and curvilinear motion of particles. Solve kinetic problems involving a system of particles using Newton's Second Law. Apply the principles of work and energy, conservation of energy, impulse and momentum, and conservation of momentum to the solution of engineering problems involving particles. Solve kinematic problems involving the translation and rotation of a rigid body. Solve kinetic problems involving planar translation and rotation of rigid bodies. Apply the principles of work and energy, conservation of energy, impulse and momentum, and conservation of momentum to the solution of rigid bodies. Apply the principles of work and energy, conservation of energy, impulse and momentum, and conservation of momentum to the solution of rigid bodies.