Title: TCCN:	University Physics I PHYS 2325
Course Description	Fundamental principles of physics, using calculus, for science, computer science, and engineering majors; the principles and applications of classical mechanics, including harmonic motion and physical systems; emphasis on problem solving. Co-requisite: PHYS 2125—University Physics I Laboratory Prerequisite: MATH 2413—Calculus I
Course Outcomes	 Upon successful completion of this course, students will: 1. Determine the components of linear motion (displacement, velocity, and acceleration), and especially motion under conditions of constant acceleration. 2. Solve problems involving forces and work. 3. Apply Newton's laws to physical problems. 4. Identify the different types of energy. 5. Solve problems using principles of conservation of energy. 6. Define the principles of impulse, momentum, and collisions. 7. Use principles of impulse and momentum to solve problems. 8. Determine the location of the center of mass and center of rotation for rigid bodies in motion. 9. Discuss rotational kinematics and dynamics and the relationship between linear and rotational motion. 10. Solve problems involving rotational and linear motion. 11. Define equilibrium, including the different types of equilibrium. 12. Discuss simple harmonic motion and its application to real-world problems.

Note: University Physics I and University Physics I Laboratory can be taught as a single 4-SCH course.