

**Course Objectives/Course Outline
Spokane Community College**

Course Title: Applied Physics

Prefix and Course Number: CAD 245

Course Learning Outcomes:

By the end of this course, a student should be able to:

- computations relating to the following physical concepts:
 - Area measurement
 - Volume measurement
 - Mass and Weight
 - Newton's Laws
 - Equilibrium
 - Friction
 - Torque
 - Center of Gravity
 - Speed and Velocity
 - Acceleration
 - Gravity and Free Falling Bodies
 - Potential and Kinetic Energy
 - Momentum
 - Centripetal and Centrifugal Force
 - Mechanical Advantage
 - Power
 - Pressure
 - Archimedes' Principle
 - Temperature and Thermal Energy
 - Expansion and Contraction

Course Outline:

- I. Review of Measurement Concepts
 - A. Area measurement
 - B. Volume measurement
 - C. Mass and Weight
- II. Newton's Laws
 - A. Newton's Laws
 - B. Equilibrium
 - C. Friction
 - D. Torque
 - E. Center of Gravity
- III. Motion
 - A. Speed and Velocity
 - B. Acceleration
 - C. Gravity and Free Falling Bodies
- IV. Energy and Force
 - A. Potential and Kinetic Energy
 - B. Momentum
 - C. Centripetal and Centrifugal Force

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V. Simple Machines

- A. Mechanical Advantage
- B. Power and Torque
- C. Efficiency

VI. Fluids

- A. Pressure
- B. Archimedes' Principle

VII. Heat

- A. Temperature and Thermal Energy
- B. Expansion and Contraction