

# DET 179 Credit By Exam Study Guide

Based on Fall 2018 Course Outline

- 1) Introduction
  - a) Overview of agricultural equipment
  - b) Overview of construction equipment
  - c) Overview of public transportation
  - d) Overview of trucking equipment
- 2) Engine Operating Principles
- 3) Powertrain Operating Principles
  - a) Mechanical drivetrain
  - b) Hydrostatic drivetrain
- 4) Electrical System Operation
- 5) Fuel System Operation
- 6) Steering and Suspension Operation
- 7) Brake System Operation
- 8) Career Information
  - a) Categories of industrial occupations
  - b) Wages, salaries, benefits
  - c) Local and regional opportunities
  - d) Shop expectations, practices, and routines
- 9) Shop Safety Standards and Practices
  - a) Fire and disaster procedures
  - b) Cleanliness and order in the workplace
  - c) Emergency prevention and intervention practices
  - d) Proper lifting procedures
  - e) Personal safety practices
  - f) Environmental health and safety compliance, including hazards
- 10) Use and Maintenance of Hand, Shop and Precision Tools
  - a) Precision measuring tools
  - b) Hand and shop tools
  - c) Tool and equipment maintenance
  - d) Hoisting, rigging and slings
- 11) Fasteners and Mechanical Fitting Devices
  - a) Appropriate fastener use
  - b) Fastening techniques
  - c) Fitting application
  - d) General torque specifications
- 12) Bearings, Seals, Lubricants, Gaskets and Sealants