

NG1033, Engine Overhaul 1

Credits 3 Lab Hours 0 Lecture Hours 0 Clinical Hours 0

Course Description

This course provides instruction in beginning skills and techniques to overhaul an internal combustion natural gas engine. This course will include a complete teardown of a natural gas engine to include the air intake system, exhaust system, lubrication & cooling system, ignition system & fuel system

For each unit of credit, a minimum of three hours per week with one of the hours for class and two hours for studying/preparation outside of class is expected.

Program and/or Department Mission Statement

The Industrial Technology Division is a committed leader in innovative workforce development by meeting the dynamic needs of business and industry through the development of student-centered education, technical excellence, and citizenship.

Academic Year AY2024-25

SCCC Outcomes

Outcome #1: Read with comprehension, be critical of what they read, and apply knowledge gained from their reading to broader issues of the day.

Outcome #5: Demonstrate the ability to think critically by gathering facts, generating insights, analyzing data, and evaluating information.

Outcome #9: Exhibit workplace skills to include respect for others, teamwork competence, attendance/punctuality, decision making, conflict resolution, truthfulness/honest, positive attitude, judgment, responsibility.

Course Outcomes

The student will be able to:

service and disassemble an internal

combustion engine

various components following

industry recognized standards &

procedures

overhaul preparation

for disassembly & inspection

materials

components for diagnosis &

inspection

Cooling, Exhaust, Fuel, Ignition &

Safety systems

components & installation

1. Properly/safely remove from

2. Inspect, analyze & document
3. Identify out-of-service parameters
4. Follow safety procedures for
5. Organize equipment, site & tools
6. Prepare for disposal of hazardous
7. Remove & safely store engine
8. Remove & inspect Lubrication,
9. Properly document condition of

Course Outline

procedures for engine disassembly

installation of components

components for maintenance &

repair

cooling by products

1. Prepare equipment, site, tools, and
2. Document procedures, components,
3. Safely handle, store & transport
4. Storage & Disposal of all lubrication,

Instructional Methods

1. Lecture
2. Demonstrations
3. Hands on Practice
4. Lab Exercises
5. Performance Tasks
6. Video

Instructional Resources and Materials

Tasks

video

1. Custom Labs/ Jobs/ Work Orders
2. Industry Approved Performance
3. Internet: Online environment with
4. Lectures

Methods of Assessment

Self-assessment provides an opportunity for the student to determine their own level of understanding or position relative to the topic, reflect on skills and abilities, and examine personal values and attitudes

1. SCCC Outcome 1 will be assessed using essay questions that allow the student to illustrate knowledge, depth of understanding, and creativity and concept maps to demonstrate connections and relationships.
2. SCCC Outcome 5 will be assessed using long-term investigations to assess inquiry and decision-making skills, experimental design, communication and understanding of the scientific process; problem-based learning for assessment of critical thinking and decision-making skills, and values.
3. SCCC Outcome 9 will be measured by peer performance assessment for project evaluation and group work, attendance and punctuality in class and lab, and academic integrity.

SCCC Policy

Academic Calendar

[View the Academic Calendar](#)

Final Exams

[View the Final Exam Schedule](#)

Academic Integrity

[View the Honor Code Policy](#)

Technical Help

Technical support is available by contacting the SCCC IT Department at itech@sccc.edu

Canvas Help: canvashelp@sccc.edu

[View Computer Minimum Requirements](#)

Americans with Disabilities Act (ADA) Statement

Under the Americans with Disabilities Act, Seward County Community College will make reasonable accommodations for students with documented disabilities. If you need support or assistance because of a disability, you may be eligible for academic accommodations. Students should identify themselves to the Mental Health Counselor at 620-417-1106 or go to the Student Success Center in the Hobble Academic building, room A149.