AUTO 1101 (formerly AUTO 1100)

Division: Career and Technical Education
Department: Transportation Technology
Course: AUTO 1101 (formerly AUTO 1100)
Title: Automotive Engine Repair
Catalog Description:

This course covers construction and operational principles of basic gasoline engine systems and major overhaul of the complete automotive engine. **Co-requisite: This lecture AUTO 1101 must be taken concurrently with the lab AUTO 1105.**

General Education Requirements: N/A
Semesters Offered: TBA
Credit/Time Requirement: Credit: 2; Lecture: 2; Lab: 0
Clock/Hour Requirements: 30
Offered for Non-Credit: Yes
Corequisites: AUTO 1105

Justification:

This course is required for Automotive Service Excellence (A.S.E.) certification. It is approved by the advisory committee for an AAS degree in Automotive Technology.

Student Learning Outcomes:

Upon successful completion of this course, students will be able to safely perform the tasks listed in the current edition of *A.S.E. Certification for Automobile Training Programs.*

Content:

Upon completion of this course, students will be able to understand and explain:

- safety
- theory of engine operation
- engine diagnosis
- engine measuring and reconditioning tools and equipment
- engine removal and disassembly
- cylinder head and valve train disassembly and inspection
- reconditioning the cylinder head
- inspection and reconditioning the cylinder block

- engines past, present, and future
- inspection and reconditioning crank shaft and cam shafts
- engine reassembly and installation
- inspection and repair of engine lubricating and cooling systems.

General Education Outcomes:

Applied Education Outcomes:

1) Students will acquire entry-level skills specific to and appropriate for employment in their chosen field of study.

Students will utilize electronic and written reference manuals and computer diagnostics to identify, t roubleshoot, and repair engines, and other vehicle components. Students will participate in electrical, transmission, engine performance, and other diagnostic procedures.

2) Students will become aware of industry specific certification and develop skills sufficient to acquire the same.

The tests and homework for this class are designed to simulate and prepare the students to take A.S.E. certification tests.

3) Students will demonstrate safe practices and awareness of potential hazards in their field of expertise.

Students will study, test on, and practice a safe work environment in the lab area.

Key Performance Indicators:

Student Learning Outcomes will be assessed by two or more of the following Key Performance Indicators:

- chapter assignments
- final test
- shop cleanup
- feedback as per A.S.E. requirements
- passing A.S.E. tests
- transferring to other post-secondary institutions
- performance in subsequent courses.

Representative Text and/or Supplies:

- Hollembeak, Barry, *Automotive Engine Repair and Rebuilding*, current edition, Thomson/Delmar Learning.

Optimum Class Size: 15
Maximum Class Size: 25

Signatures:

I hereby submit this course syllabus:

Brent Reese, BS, Associate Professor

I hereby find this course consistent with the goals and resources of the Transportation Technology Department:

Brent Reese, BS, Associate Professor, Chair

I hereby find this course consistent with the goals and resources of the Career and Technical Education Division:

Michael P. Medley, MBA, Assistant Professor, Dean

I have discussed the need for library resources related to this class with the person submitting the syllabus:

Lynn Anderson, MLIS, Technical Services Librarian (Main Campus)

Michelle Olsen, MLS, Campus Librarian (Richfield Campus)