



## DMT 1401

**Division:** Career and Technical Education

**Department:** Transportation Technology

**Course:** DMT 1401

**Title:** Diesel Suspension and Steering

**Catalog Description:**

This course covers repair and adjustment suspension and steering systems. Students study steering gears, rack and pinion, conventional and McPherson struts, alignment angles, and alignment with a computerized four wheel alignment fixture. **Co-requisite: This lecture DMT 1401 must be taken concurrently with the lab DMT 1405.**

**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

**Prerequisites:** N/A

**Corequisites:** DMT 1405

**Justification:**

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

**Content:**

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

- safety
- history and evolution of automotive suspension systems
- wheel bearings
- tire and wheel design and repair
- four wheel drive front end and types

- suspension electrical and electronic system design and operation
- four-wheel alignment
- spring types
- shock absorber and strut design types
- suspension angles; i.e., camber, caster, and toe.

**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 diagnose, repair, test, and study modern automotive suspension systems similar to those found in the industry.

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:**

- Knowles, Don, *Automotive Suspension and Steering Systems*, current edition, Thomson/Delmar Learning.

**Optimum Class Size:** 15

**Maximum Class Size:** 25

**Signatures:**

I hereby submit this course syllabus:

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Robert Boyer, BS, Instructor

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

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Brent Reese, BS, Associate Professor, Chair

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

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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:

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

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Michelle Olsen, MLS, Campus Librarian (Richfield Campus)