

**Course Outline of Record**

1. Course Code: AUTO-304
2.     a. Long Course Title: Automotive Calculation  
        b. Short Course Title: AUTO CALCULATION
3.     a. Catalog Course Description:  
        This contextualized automotive math course provides Career and Technical Education specific applications of basic math skills. Topics include adding, subtracting, multiplying, and dividing, percentages, ratios and proportions measurement, and career applications. This course will also provide students with hands on activities with automotive measurement tools and equipment used in the automotive diagnosis and repair fields.  
        b. Class Schedule Course Description:  
        This contextualized automotive math course provides Career and Technical Education specific applications of basic math skills. Topics include adding, subtracting, multiplying, and dividing rational numbers, percentages, ratios and proportions, measurement, and automotive measurement equipment procedure.  
        c. Semester Cycle (if applicable): *N/A*  
        d. Name of Approved Program(s):  
            • **AUTOMOTIVE QUICK SERVICE Certificate of Completion**
4. Total Units: 0           Total Semester Hrs: 16.00  
    Lecture Units: 0           Semester Lecture Hrs: 14.00  
    Lab Units: 0           Semester Lab Hrs: 2.00  
    Class Size Maximum: 26       Allow Audit: No  
    Repeatability Noncredit - Unlimited  
    Justification 0
5. Prerequisite or Corequisite Courses or Advisories:  
    *Course with requisite(s) and/or advisory is required to complete Content Review Matrix (CCForm1-A)*  
    Advisory: ESLN 310D
6. Textbooks, Required Reading or Software: (List in APA or MLA format.) *N/A*
7. Entrance Skills: *Before entering the course students must be able:*  
    a.  
    Students must be able to speak and read basic English.

- ESLN 310D - Comprehend statements and questions in the simple present tense, the present continuous tense, the simple past tense, the past continuous tense, the simple future tense, and the present perfect tense.
- ESLN 310D - Comprehend and use statements and questions in the simple present tense, the present continuous tense, the simple past tense, the past continuous tense, the simple future tense, and the present perfect tense using previously studied vocabulary.

8. Course Content and Scope:

Lecture:

During the duration of this course, students study common mathematical situation practiced in the automotive field regularly including:

1. Measurement tools
2. Manufacturers service specification
3. Automotive math skills required in determining proper service limits

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Lab: (if the "Lab Hours" is greater than zero this is required)

In the laboratory, students will perform task needed to retrieve measurements to:

1. Proper use of automotive measurement tools to retrieve mechanical specification
2. Retrieval of manufacturers service information
3. Calculation of actual measurement compared to manufacturers service limits

9. Course Student Learning Outcomes:

1.

Measure key system components.

2.

Locate manufacturer service specifications in order to rationalize if actual reading are within service limits.

3.

Deduce manufactures specifications to determine proper service limits

10. Course Objectives: *Upon completion of this course, students will be able to:*

- a. Compare measurement specification, analyze actual measurements compared to manufacture specification
- b. Differentiate proper procedures to acquire measurements
- c. Determine if measurements are within manufacturers specifications.

11. Methods of Instruction: (*Integration: Elements should validate parallel course outline elements*)

- a. Activity
- b. Demonstration, Repetition/Practice
- c. Discussion
- d. Distance Education
- e. Individualized Study
- f. Laboratory
- g. Lecture
- h. Observation
- i. Participation

12. Assignments: (*List samples of specific activities/assignments students are expected to complete both in and outside of class.*)

In Class Hours: 16.00

Outside Class Hours: 28.00

a. Out-of-class Assignments

Out of class assignments:

1. Assigned readings and written summaries from selected instructor handouts
2. Written summaries and analysis of assigned websites/research information
3. Must complete a course project

b. In-class Assignments

Assignments may include:

1. End of class notebook including lecture notes, handout, projects
2. Presentation
3. Role play and interaction between fellow students and or instructor
4. Participation in discussion related to topic of lecture

13. Methods of Evaluating Student Progress: *The student will demonstrate proficiency by:*

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- College level or pre-collegiate essays
- Written homework
- Term or research papers
- Self-paced testing
- Laboratory projects
- Field/physical activity observations
- Product/project development evaluation
- True/false/multiple choice examinations
- Mid-term and final evaluations
- Student participation/contribution
- Student preparation
- Oral and practical examination

14. Methods of Evaluating: Additional Assessment Information:

15. Need/Purpose/Rationale -- *All courses must meet one or more CCC missions.*

IO - Personal and Professional Development

Develop realistic goals.

PO-SSS Self-Awareness, Self-Understanding, and Self-Advocacy

Evaluate their knowledge, skills, and abilities.

define their own needs.

Develop realistic goals.

16. Comparable Transfer Course

**University System**

**Campus**

**Course Number**

**Course Title**

**Catalog Year**

17. Special Materials and/or Equipment Required of Students:

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18. Materials Fees:  Required Material?

**Material or Item**

**Cost Per Unit**

**Total Cost**

19. Provide Reasons for the Substantial Modifications or New Course:

This course will prepare the student for employment in the automotive field.

20. a. Cross-Listed Course (*Enter Course Code*): *N/A*

b. Replacement Course (*Enter original Course Code*): *N/A*

21. Grading Method (*choose one*): Pass/No Pass Only

22. MIS Course Data Elements

a. Course Control Number [CB00]: CCC000581668

b. T.O.P. Code [CB03]: 94800.00 - Automotive Technology

c. Credit Status [CB04]: N - Noncredit

d. Course Transfer Status [CB05]: C = Non-Transferable

e. Basic Skills Status [CB08]: 2N = Not basic skills course

f. Vocational Status [CB09]: Possibly Occupational

g. Course Classification [CB11]: J - Workforce Preparation Enhanced Funding

h. Special Class Status [CB13]: N - Not Special

i. Course CAN Code [CB14]: *N/A*

j. Course Prior to College Level [CB21]: Y = Not Applicable

k. Course Noncredit Category [CB22]: J - Workforce Preparation

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l. Funding Agency Category [CB23]: Y = Not Applicable

m. Program Status [CB24]: 1 = Program Applicable

Name of Approved Program (if program-applicable): AUTOMOTIVE QUICK SERVICE

*Attach listings of Degree and/or Certificate Programs showing this course as a required or a restricted elective.)*

23. Enrollment - Estimate Enrollment

First Year: 40

Third Year: 160

24. Resources - Faculty - Discipline and Other Qualifications:

a. Sufficient Faculty Resources: Yes

b. If No, list number of FTE needed to offer this course: N/A

25. Additional Equipment and/or Supplies Needed and Source of Funding.

N/A

26. Additional Construction or Modification of Existing Classroom Space Needed. (Explain:)

N/A

27. FOR NEW OR SUBSTANTIALLY MODIFIED COURSES

Library and/or Learning Resources Present in the Collection are Sufficient to Meet the Need of the Students Enrolled in the Course: Yes

28. Originator Dorothy Anderson Origination Date 08/02/16