



**Course Syllabus  
SEMESTER  
School of STEM**

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|                                               |                                 |
|-----------------------------------------------|---------------------------------|
| <b><i>Course Name:</i></b>                    | <b>Cat Engines Fundamentals</b> |
| <b><i>Course &amp; Section Number:</i></b>    | <b>Cat 110-XXX</b>              |
| <b><i>Meeting Day(s) &amp; Time(s):</i></b>   |                                 |
| <b><i>Credits:</i></b>                        | <b>4</b>                        |
| <b><i>Contact Hours:</i></b>                  | <b>8</b>                        |
| <b><i>Text:</i></b>                           | <b>Cat Engines Book</b>         |
| <b><i>Instructor's Name:</i></b>              |                                 |
| <b><i>Office Hours &amp; Location:</i></b>    |                                 |
| <b><i>OCC Phone:</i></b>                      |                                 |
| <b><i>OCC Email:**</i></b>                    |                                 |
| <b><i>Additional Contact Information:</i></b> |                                 |

\*\*Please use only Owens email for course communications.

**Catalog description:**

The principles of compression ignited internal combustion engines are taught and variations in design are discussed. Caterpillar engines are used for lab disassembly and assembly.

**Prerequisite/Corequisites:**

None

**Course Materials:**

State the name of the text, course materials, and all required readings.

Caterpillar Books Cat 110 & 111. Cat Engine workbook, Black Pens, Computer/ laptop. CWS login (with access to the DPC site), Safety glasses (clear), Microsoft office, Google Chrome, SiS

(access), tool room checkout code, ability to print, Blackboard access, paint marker, and access to the internet outside of the classroom

## What You Will Learn in the Course

### Course Objectives:

Course will...

### Student Learning Outcomes:

Students will:

| Outcome                                                     | Where Assessed                                                                                                                   |
|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Disassemble, identify and assemble a running diesel engine. | A&D of a running engine with completion of workbook. Homework, DPC, Quizzes, and tests, end with a running engine with no issues |
| Determine correct engine tolerances.                        | Measuring engine during A&D and complete workbook                                                                                |
| Demonstrate correct shop safety and maintenance.            | Safety observed in class                                                                                                         |

### Technology, Lab, and File Requirements:

Cat Engine workbook, Black Pens, Computer/ laptop. CWS login (with access to the DPC site), Safety glasses (clear), Microsoft office, Google Chrome, SiS (access), tool room checkout code, ability to print, Blackboard access, paint marker, and access to the internet outside of the classroom

Books and labs will be posted to Blackboard.

<https://sis2.cat.com/#/>

<https://catdealer.com/dpc>

<http://catdealer.com/>

<https://www.owens.edu/>

## Academic Support

**Disability Services Resource Center:** If you have a disability or acquire one, you may be entitled to receive reasonable accommodations intended to assure you an equal opportunity to participate in and benefit from the program. To receive more information or to register for accommodations, please contact the Disability Resource Center at 567-661-7007, email [disability@owens.edu](mailto:disability@owens.edu), visit <https://www.owens.edu/disability/>, or stop by College Hall 124.

**Tutoring Services:** Owens Community College offers academic tutoring and assistance in a variety of subjects including: accounting, computing, economics, mathematics, science, and writing. For more information go to: <https://www.owens.edu/successcenters/>.

**Counseling Services:** Counseling Services provides assistance to students experiencing personal, educational, interpersonal/relationship, family, social, or psychological difficulties. If you feel you may benefit from this service, please contact them at [counselingservices@owens.edu](mailto:counselingservices@owens.edu). More information is at <https://www.owens.edu/counseling/>.

**Campus and Community Connections:** The Center for Campus and Community Connections (College Hall 123) is a walk-in office created to provide retention support through resource stability initiatives and community connections. Go here for more information: <https://www.owens.edu/connection/> or contact [connections@owens.edu](mailto:connections@owens.edu)

**Owens Library:** The Owens Library offers two locations (Toledo and Findlay) as well as online resources. For more information visit <https://www.owens.edu/library/>.

\*\*\*Students can find more information on campus resources, student support, student life, and security at this [link](#).\*\*\*

## General Information

**Student Code of Conduct:** All students are expected to follow Owens Community College's Student Code of Conduct, which includes academic honesty, encompassing plagiarism. See the Board Policy for more information.

**Anti-Discrimination and Harassment & Title IX/Sexual Misconduct:** All students, faculty, and staff are expected to follow Owens Community College's Anti-Discrimination and Harassment Policy and the College's Title IX Policy/Sexual Misconduct Procedures and Guidelines. The College strictly prohibits and will not tolerate harassment, discrimination, intimidation, or hostile/offensive working or learning environments.

**Religious Accommodations:** A student seeking an accommodation for an absence permitted under Ohio's Testing Your Faith Act must provide the instructor with a written email notice with the specific dates for an absence, and must do so not later than fourteen (14) days after the first day of instruction. Alternative accommodations are not retroactive, and no academic penalty will be imposed for an absence under the policy\*. The request for an alternative accommodation will be kept confidential. Students with questions about a religious accommodation under Ohio's Testing your Faith Act may contact the College's Office of Academic Affairs: [provost@owens.edu](mailto:provost@owens.edu) The policy may be found on the Owens website: [3358:11-2-63 Accommodation](#) for a Student Absence for the Observance of Religious Beliefs and Practices Policy

**Document Collection:** Throughout the semester, your instructors may ask for a variety of assignments including tests and/or quizzes for student learning of institutional general education competencies or program assessment. Please save all your class materials until the end of the semester.

**Classroom Admittance:** OCC classes shall only be attended by the officially registered OCC students or perspective students, instructor of record, guest lecturer, or substitute. Visitors are not permitted to be in the classroom and should not be invited to attend or participate in the class. See [FERPA](#) regulations for more information.

**Use of AI Tools:** This course requires you to complete various assignments that assess your understanding and application of the course content. You are expected to do your own work and cite any sources you use properly. You are not allowed to use any artificial intelligence (AI) tools, such as chatbots, text generators, paraphrasers, summarizers, or solvers, to complete any

part of your assignments. Any attempt to use these tools will be considered academic misconduct and will be dealt with according to the Owens Community College academic integrity policy. Students are expected to complete all work independently and without the assistance of AI-generated content. If you have any questions about what constitutes acceptable use of AI tools, please consult with the instructor *before* submitting your work.

## Student Responsibilities & Instructor Expectations

1. The student is responsible for all material discussed in class, handed out, seen or heard in visual/audio, or written on the board.
2. The student is responsible for all work assigned whether discussed in class or not.
3. Any missed classes, tests, or assignments must be made up by the end of the semester through agreement with the instructor. Excused absences included, sick, death, and emergency (all at the discretion of the instructor). 2 unexcused absences equal a drop in a letter grade. 2 tardies equal 1 unexcused absence.
4. The instructor, with permission of the chairman, whenever appropriate and necessary, reserves the right to amend, adjust, or deviate from the course outline and lecture topic areas to assure the students of the best possible education from the course.

### Safety Glasses

Students will not be permitted to attend lab classes without the required safety glasses.

### Safety

Since personal safety is a major concern of both this College and the employers, students will be expected to conduct themselves in a safe manner at all times. Students will be required to follow safety requirements pertaining to: safety glasses, clothing, labs, and work procedures. (Remember SAFETY is everyone's job!)

### Suggested Minimum Tool List

A list of tools are provided for the student's consideration. The tools are NOT required for this class but will be convenient for the student to own when employed and performing the tasks taught in this class.

### Instructor Expectations:

Instruction will be in lecture and lab formats. Don't message on Blackboard, but email instructors Owens' email. Responses will be sent back before 2 business days.

Excused absences included, sick, death, and emergency (all at the discretion of the instructor). 2 unexcused absences equal a drop in a letter grade. 2 tardies equal 1 unexcused absence.

## How Grades and Determined and Major Assignments

The final course grade is to be computed using the following weights.

| Evaluation Measure | Value | Student Learning Outcome Assessed |
|--------------------|-------|-----------------------------------|
| Lab:               | 60 %  |                                   |
| Quizzes & Tests:   | 20%   |                                   |
| Homework/ DPC:     | 10%   |                                   |
| Final:             | 10%   |                                   |

### Grading Scale

#### Grading Procedure:

Grades will be calculated on the following scale.

|                      |   |
|----------------------|---|
| 94% and Above        | A |
| 87% to Less than 93% | B |
| 78% to Less than 86% | C |
| 70% to Less than 77% | D |
| Less Than 69%        | F |

#### Tentative Class Assignments:

| Week | SLO     | Topic                                                                                                                                                                                                                                                                                                                                                        | Due Dates |
|------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 1    | 1,2,3   | <p><i>Unit 1 Intro to Engines, how to use SiS, how to use DPC, Start engines and start A&amp;D</i></p> <p><b>Cat 110 Unit 1</b><br/> <b>Quizzes Unit 1</b><br/> <b>Unit-1 Homework:</b><br/> <b>Start on DPCs due: October 13th</b></p>                                                                                                                      | HW DATE   |
| 2    | 1, 2, 3 | <p><i>Finish Unit 1 and Start Unit 2. Continue A&amp;D of engine start measuring engine and filling out workbook.</i></p> <p>Go over Precision Measuring Using Cat 111 Book Unit 4 Lesson 3</p> <p><b>Cat 110 Unit 1 &amp; 2 Cat 111 Unit 4 Lesson 3</b><br/> <b>Quizzes Unit 1 &amp; 2 Cat 111 Unit 4 Lesson 3</b><br/> <b>Unit-1 &amp; 2 Homework:</b></p> | Due DATE  |
| 3    | 1, 2, 3 | <p>Finish Unit 2 if needed and start Unit 3. Continue A&amp;D and measuring engine for the workbook.</p>                                                                                                                                                                                                                                                     | Due DATE  |

| Week | SLO         | Topic                                                                                                                                                                                                                | Due Dates       |
|------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
|      |             | <b>Cat 110 Unit 2 &amp; 3</b><br><b>Quizzes Unit 2 &amp; 3</b><br><b>Unit-2 &amp; 3 Homework:</b>                                                                                                                    |                 |
| 4    | 1, 2,<br>3, | Finish Unit 3 if not complete. Start Unit 4 and Continue A&D and measuring engine for the workbook.<br><br><b>Cat 110 Unit 3 &amp; 4</b><br><b>Quizzes Unit 3 &amp; 4</b><br><b>Unit-3 &amp; 4 Homework:</b>         | <b>Due DATE</b> |
| 5    | 1, 2,<br>3, | Complete Unit 4 if not complete, Start unit 5, and Continue A&D and measuring engine for the workbook.<br><br><b>Cat 110 Unit 4 &amp; 5</b><br><b>Quizzes Unit 4 &amp; 5</b><br><b>Unit-4 &amp; 5 Homework:</b>      | <b>Due DATE</b> |
| 6    | 1, 2,<br>3  | Complete Unit 5, Go over all previous quizzes and test if haven't already done. Continue A&D and measuring engine for the workbook.<br><br><b>Cat 110 Unit 5</b><br><b>Quizzes Unit 5</b><br><b>Unit-5 Homework:</b> | <b>Due DATE</b> |
| 7    | 1, 2,<br>3  | If tests and quizzes weren't gone over in week 6 complete. Review. Continue A&D and measuring engine for the workbook. Start running engines that are ready.                                                         | <b>Due DATE</b> |
| 8    | 1, 2,<br>3  | Continue A&D and measuring engine for the workbook. Finish running all of the engines and get them ready for storage. Clean lab.<br><br><b>Final Cat 110</b><br><b>DPC due DATE</b>                                  | <b>Due DATE</b> |

Disclaimer: The instructor reserves the right to amend this syllabus as deemed necessary and will communicate such amendment to the students in the course. Please note that while unlikely, there is a possibility courses might need to change the delivery method due to external issues like public health concerns, weather issues, etc. If this happens, the college will communicate any changes via email and/or other communication methods.