



WEBER STATE UNIVERSITY

CONTINUING EDUCATION CONCURRENT ENROLLMENT

DET 1010 Syllabus

WSU Department Name

Design Engineering Technology

WSU Course Number & Listing

DET 1010: Introduction to Mechanical Engineering Technology and Design (3 Credit Hrs.)
(IED-PLTW)

High School: Nuames

WSU Concurrent Adjunct Instructor: Mr. Reid

High School Course Name: Introduction to Engineering Design

(Attention: Contact the College or University you wish to attend to make sure that these Concurrent Enrollment courses will meet your goals for fulfilling General Education requirements or will count toward your chosen major).

Concurrent Adjunct Instructor's Office Hours:

M-F 7:30-8 am, 2:40-3:10 pm

Concurrent Adjunct Instructor's email:

RobertReid1@weber.edu

Prerequisite High School Courses if any:

none

WSU Department Name:

Design Engineering Technology

WSU Course Description:

An introductory course to explore engineering and technical design solutions using critical thinking in Science, Technology, Engineering and Mathematics (STEM). Learning modules include; The Engineering Design Process & Professions, Sketching & Documentation, Design Measuring, CAD & Geometric Constraints, Design Visualization, Orthographic Projection &

Multi-View Drawings, Fasteners, Assembly Drawings, Dimensioning, Tolerancing and Final Team Design Projects.

Students will demonstrate ABET Program Outcomes in the following categories:

- a. An appropriate mastery of the knowledge, techniques, skills and modern tools of their disciplines by learning and using CAD software to document the design of an assembly.
- b. Recognition of the need for, and an ability to engage in lifelong learning by identifying in a written report on career path of their choice found within the Engineering and Engineering Technology community the education and skills required as well as the credential options available to that career path and the continuing education requirements necessary to maintain that credential.
- c. An ability to understand professional, ethical and social responsibilities by researching and reporting in a written report on career path of their choice found within the Engineering and Engineering Technology community.
- d. A respect for diversity and knowledge of contemporary professional, societal and global issues by researching and reporting in a written report on career path of their choice found within the Engineering and Engineering Technology community.

Course Learning Objectives:

Upon successful completion students will be able to.....

1. Understand the role of design in society, related professions and the engineering design process
2. Document the design process using the engineering notebook to solve technological problems
3. Understand and apply mathematics, measuring conventions and scales using scale factors
4. Create a 3D model from a 2D sketch
5. Develop the ability to visualize and manipulate a design solution in 2D & 3D
6. Create orthographic projections of given objects and develop multi view drawings that include all necessary views
7. Define and identify threaded fasteners
8. Document an assembly of multiple parts
9. Fully describe the size, shape, location and manufacturing required to produce a part
10. Fully define the allowable variation of geometric size, shape, location and manufacturing required to produce a part
11. Follow the engineering design process in a team environment to document a design solution

Course Textbook:

Open source curriculum found within each module in online Canvas Learning Management Software in PDF format

Course Equipment:

Weber State computer login (\$30)
Internet accessible device (Cell phone permitted)
Camera (Cell phone recommended)
Email with cloud storage (Provided)
Pen (blue, fine tip) (Recommended)
Pencils (mechanical 0.5mm) (Recommended)
You Tube video access
Scanner Capable of digitizing Letter & Ledger size paper (Provided)
Download Student Version of AutoDesk Inventor 2017 to use at home (optional)
Engineer Notebook (Provided)
Inventor Software Templates (Provided by School)
Fractional Scale to 1/16" (Provided)
Dial Caliper (Provided)

Course Administration:

Lectures will concern the body of knowledge surrounding engineering and technical design. Demonstrations will cover specific operations and techniques. Students are expected to be at all class sessions (see Excused Absences policy below). If a student has to miss a lecture or a demonstration, permission for an excused absence must be granted by Nuames administration. **It is the responsibility of the students to secure all materials and information presented in class, even with an excused absence. Excused absences must be approved by Nuames Administration.** Lectures will not be repeated. Lectures may be taped recorded with the professor's permission.

Attendance Policy:

- Absences CAN effect student grades if they do not understand the material or are not aware of changes to the class that can include (but are not limited to) the scheduling of quizzes, exams, assignments, projects, and extra credit. The instructor has the right to alter the course at his own discretion, so students missing class may not be aware of important information.
- Students are responsible for the body of information in the lectures, labs, and assigned reading materials. Students who would like a lecture to repeated can make arrangements with the professor to meet in the morning. Similarly, tests and quizzes will. If a student misses a class, it is up to them to make sure they acquire the relevant material from another source. Please send the instructor an e-mail asking to explain the contents of a missed lecture or lab.
- Students are expected to attend class for mandatory events such as tests and quizzes, and it is up to the individual student to know when those events are. Ignorance of these events is not an excuse, and any student who wants current information is expected to attend class.

Outside Work:

Outside work will be absolutely necessary. Students will NOT be able to do well in this course if they work only in regularly scheduled class sessions.

WSU Grading:

93% - 100% = A	80% - 83% = B-	67% - 69% = D+
90% - 92% = A-	77% - 79% = C+	63% - 66% = D
87% - 89% = B+	73% - 76% = C	60% - 62% = D-
84% - 86% = B	70% - 72% = C-	0% - 59% = E

Grading:

Final Exam	20%
Tests / Projects	60%
Presentations	10%
Class participation and behavior.	10%
Engineering Notebook	Extra Credit
Homework	Extra Credit

Exams:

Tests will cover material from the lecture, demonstrations, and laboratory portions of the course and be administered during the regularly scheduled lecture period. The module assessments will be a comprehensive assessment of both theoretical (book) and applications (CAD) at the end of each module. The final comprehensive assessment will be a collection of questions taken from each of the module assessments and be given at the appropriately scheduled time.

Course Projects:

Students will be expected to successfully complete multiple projects throughout the course of the semester. Projects will be graded on professionalism, execution, creativity, technical merit, and communicative value.

Presentations:

Presentations will included a portfolio of assignments, accompanied with an oral presentation.

Participation:

Students are encouraged to participate in learning activities. Failure to participate could affect a students grade equal to, but not more than 10% of total grade.

Engineering Notebook:

Each student will keep a record of his/her work in an engineering notebook. This notebook will be submitted at the completion of a unit to be graded for extra credit towards the next test.

Homework:

Each homework assignment will be graded for extra credit. The extra credit will be applied to the next project or test.

Late Work:

Late work will be accepted if excused by WSU Administration and/or Nuames Administration. If not excused, late work will not be accepted.

Subject Mastery:

If a student receives a score less than a 75% he/she can meet with me to earn a better grade. Points are earned when a student teaches all concepts from the test to the teacher. If the student shows mastery of the topics from the test, the student's score will be changed to a 75%. If a student desires to increase his/her grade more than the 75%, extra credit assignments will be assigned. Retaking a test is not allowed.

Computers

All students are required to sign an Acceptable Use Policy before using any computer in the classroom. If you are found to be in violation of that policy, you will be taken off the computer and will have to do bookwork, the incident will be noted and your parents will be contacted. If there is a second violation, you will be referred to the principle for further action and your computer privileges will be revoked until the matter is resolved.

WSU Course Evaluation:

As a concurrent student, you are given the privilege of evaluating this concurrent course. This is an anonymous evaluation which allows you an opportunity to express your opinions of the course and the instructor.

Student Conduct & Disabilities:

WSU Code of Conduct <http://www.weber.edu/deanofstudents/judicial.html>

Concurrent Enrollment www.weber.edu/concurrent/students/CodeOfConduct.asp

Students with Disabilities <http://www.weber.edu/ssd>

Nuames Student Handbook Policies 2016-2017

PPM 3-34 notes: "When students seek accommodation in a regularly scheduled course, they have the responsibility to make such requests at the Center for Students with Disabilities before the beginning of the quarter [semester] in which the accommodation is being requested. When a student fails to make such arrangements, interim accommodations can be made by the instructor, pending the determination of the request for a permanent accommodation." Weber State University Concurrent Enrollment students who have a pre-established 504 Plan or IEP may continue using the accommodations established therein during CE courses, provided that the accommodations have proven effective and are reasonable for a university level course. Faculty, staff, parents, and students may contact WSU Disability Services at any point to discuss or verify accommodations for CE classes. CE students should discuss their accommodation needs with faculty as soon as possible. Most questions or situational issues can be discussed and subsequently resolved to meet the students' needs. Students should provide faculty with written (print or email) requests of accommodations for their approved 504 or IEP plan.

Student's Name: _____

This syllabus needs to be read and signed by the student and a legal guardian.

Syllabus Agreement Form

We, student and guardian, have read, and acknowledge, the syllabus for this course, DET 1010. We acknowledge that the student is responsible for the assignments, deadlines, and policies contained in the syllabus, as well as any other activities assigned to the class. We understand what is expected of the student as a member of the learning community. Due to the complexity of this subject and unpredictable dynamics of the class, we understand that some of the topics and projects may change, and take more or less time. It is important that the student makes every effort to be in class every day.

PARENTS: I have read this syllabus and understand what is expected of my student. I know that questions, comments, and suggestions are welcomed and encouraged.

Student Signature / Date

Parent/Guardian's Signature / Date

PARENTS:

I acknowledge that my student is beginning his/her permanent college transcript when enrolled in a concurrent enrollment course and that he/she will receive a high school grade as well as a college grade. I also understand that it is my responsibility to ensure my student is registered for his/her concurrent enrollment course by the following deadlines.

Admission Deadline:

Registration Deadline:

Parent/Guardian's Signature / Date

Emergency Contact Information

Student's Email: _____

Parent/Guardian's Name: _____

Parent/Guardian's Home Phone: _____

Parent/Guardian's Work Phone: _____

Parent/Guardian's Cell Phone: _____

Parent/Guardian's Email: _____

Circle preferred contact method: Phone Email

If you circled phone, please indicate the best time and place to call:
