

Oklahoma State University Institute of Technology
Online Common Syllabus
Summer 2018

ETDG 2423 SolidWorks

Students use SolidWorks, a mechanical design automation software to create parametric, solid models of parts and assemblies, taking into consideration design intent and file naming conventions. Mechanical assemblies and detail drawings are derived from individual solid parts. Solid model part files are converted to an appropriate format for use in manufacturing processes.

Course Purpose:

The purpose of this class is to learn 3D Modeling using the SolidWorks software. This will be accomplished by creating Parts, Assemblies & Drawings and by using proven design techniques.

Type of course: Theory/Lab

Credit Hours: 3; Total hours of theory per semester: 30;

Total hours of lab for the semester: 45; Total hours of clinical per semester: N/A.

Class length - Full Semester

Class Format: Blended

Class days and times: Tuesday & Thursday 9:30-10:55AM CST & F Online

Prerequisite or Co-requisite: MATH 1513

Instructor Name: Michael Freeman

Instructor Phone: (918) 293-5052

Office: DWRTC Room #115

Instructor email: michael.freeman@okstate.edu

Contact: My preferred method of contact is E-mail. Please allow 24-48 hours to return your correspondence during the normal work week.

Instructor's Office Hours: Classroom 150 MWF 11:25 – 11:45AM, TR 11:00 – 11:45AM

School Name: Engineering Technologies

School Main Phone: 918-293-5150

REQUIRED TEXT, REFERENCES, AND MATERIALS

Texts: Engineering Graphics Essentials Fifth Edition from SDC ISBN #9781630570521

References: SolidWorks Student Workbook from SolidWorks Corp.

Materials: Notebook, writing utensil, & data storage device

Uniform/Tools: N/A

Estimated Cost for Materials: \$60.00

Estimated Cost for Uniform/Tools: N/A

Optional Resources: N/A

Upon completion of the course, students should:

| COURSE OBJECTIVES | ASSESSMENT OF COMPETENCY |
|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| *3D Model a part. | Module 2 |
| Create and modify a parametric model. Add bosses and cuts. Change parametric dimensions. Create a circular pattern. | Module 3 |
| *Assemble two or more parts. | Module 4; Quiz #1 |
| *Create a drawing of a part or assembly. | |
| Use basic drawing concepts. Create detailed drawings of parts & assemblies. Analyze dimension problems and correct as needed. | Module 5; Test #1 |
| Place Standard Toolbox Parts in Assemblies. | Module 5: Test #1 Module 6 |
| Create and modify parts and assemblies using Revolve and Sweep Features. | Module 7; Test #2 |
| Create and modify parts and assemblies using the Loft Feature. | Module 8 |
| Create eDrawings from existing SolidWorks files. | Module 9; Test #3 |
| Create an Image with Photo View 360. | Module 10; Test #3 |
| *Develop a spreadsheet to create a “Family of Parts”. | Module 11; Test #3 |
| *3D Model a complex project approved by the instructor. | Final Project |

Aspects of the course objective assessments may be used in the university’s assessment of student learning. If applicable, an asterisk (*) above indicates this assignment is used in the university assessment program.

COURSE ACTIVITIES

In this course students will:

- Participate in class discussions and activities.
- Take examinations.
- May be required to do quizzes / in class assignments.

EVALUATION - GRADES WILL BE BASED ON THE QUALITY AND COMPLETION OF THESE TASKS:

| | |
|-----------------------------------------------|-----|
| Projects/Assignments/Class Participation..... | 15% |
| Quiz..... | 5% |
| Exams (3)..... | 60% |
| *Test #3 | |
| Final Project..... | 20% |

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| OSUIT Grading Scale |
| A = 90%-100% |
| B = 80%-89% |
| C = 70%-79% |
| D = 60%-69% |
| F = 59% & below |

*The student’s grade for this assignment will be used in the university’s assessment of student learning. A 70% competency or higher receives a Pass rating. This Pass/Fail rating is independent of the student’s course grade.

Remember! All technical classes require a 70% or better for graduation.

Daily and/or weekly quizzes, small weekly assignments and similar type projects: Normal return time to student by next class meeting or no later than one (1) week.

Extensive assignments, large lab projects, extensive quizzes, exams and similar type projects: Normal return time to students in one (1) to two (2) weeks.

RECOMMENDED STUDENT COMPETENCIES/SKILLS

A good working knowledge of file management i.e. save files, create folders & keep track of assignments.

AUTHORIZED TOOLS

N/A

LATE WORK

All assignments will have specific due dates and are expected to be completed by that date. However, I know life gets in the way and grace may be given with a 10% penalty applied to the graded work. The student must contact me ASAP and work out a time to turn in the late work. If a test is missed it is up to the student to work out a time when it can be made up. The penalty will be the same as late work if done in an orderly manner.

TESTING

All quizzes and tests are to be completed independently; no collaboration with classmates is permitted and any instance of such will be considered academic dishonesty.

OTHER LAB AND CLASSROOM POLICIES

INSTRUCTOR’S POLICY ON ABSENCES

Class lectures will not be repeated. However, percentage point can be earned for perfect attendance i.e. 0 absences = 2%, 1 absence = 1%, 2 absences = 0.5% and 3 or more absences = 0%.

STUDENT CONDUCT

Students are expected to cooperate in maintaining a classroom environment conducive to learning. Courteous and respectful behavior will be expected from all students each day. All pagers, cellular phones, and CD and MP3 players should be turned off. The use of tobacco in any form in University buildings is prohibited.

INSTRUCTIONS FOR SPECIFIC TASKS AND ASSIGNMENTS

Drawing Projects:

- A. Drawings will be evaluated according to the following:
 1. Solution to problem
 2. Following of instructions and completeness
 3. Appearance, including neatness, spacing and uniformity
 4. Placement of dimensions
 5. Accuracy
- B. Class time will be allotted to work on drawing projects, but may not be enough to complete assignments. **The student will have to schedule time outside of class to work on assignments.**
- C. Work can be redone if a grade is not desirable but the markup has to be handed in with the corrections and the average of the two grades will be final grade.

ETD LAB RULES

1. **Video Games:** The playing of video games on division computers **at any time is prohibited**. Students found playing video games on division computers will not only be asked to cease playing the game, but also remove any unauthorized software from the computer or network drive.
2. **Music Files:** Downloading of music files from the Internet to **any media is prohibited**. In many cases, this is illegal and may result in liability for the university as well as the individual(s) involved. Listening to music in the computer labs is allowed only if **legal** copies of compact music discs are used. Students must use their own headphones when listening to music. Listening to music during class is at the discretion of the instructor and at **no time** will listening to music be allowed during class discussions or lectures.
3. **Movies:** Downloading and/or playing of movie files from the internet (or any other source) are **prohibited**. In many cases, this is illegal and may result in liability for the university as well as the individual(s) involved.
4. **Pornography:** Downloading and/or display of pornographic materials on division computers and equipment are **prohibited**. Any such material found by faculty or staff will be **immediately** deleted or removed. The use of vulgar or suggestive names for computer files or folders will not be tolerated. Any such material, if found by faculty or staff, will be immediately deleted.

Division computers and equipment are for **educational use only**. It is the intent of the faculty and staff of the ET division to display a positive and professional environment, including the atmosphere of the classroom. It reflects negatively on our division when guests see games, movies, or hear loud or offensive music permeating from our classrooms.

Note: An official copy of the syllabus will be posted on the Online Class Room site and any changes being made to the syllabus in the future will be on this official syllabus.

ONLINE COURSE INTERACTION

OSUIT requires all online courses to include interaction between students, peers and instructors. Our online courses use a variety of tools to build a community of learners and strengthen engagement between students and their peers, as well as between students and the instructor. Communication tools used in courses may include Discussion, News, and Email. Read the syllabus completely to determine which of these methods you, your classmates and your instructor will use for interaction.

General guidelines for student conduct while interacting within an online course include: (1) Use proper language in all communications; (2) Harassment of any type will not be tolerated; (3) No jokes, insults or threats of an offensive nature.

For more information, go to: <http://osuit.edu/center/netiquette>

SYLLABUS ATTACHMENT

View the Syllabus Attachment, which contains other important information, by visiting http://osuit.edu/center/student_syllabus_information.

It will also be in the Online Classroom (D2L/Brightspace) in the Content – Start Here.

COURSE SCHEDULE

| DATE | SolidWorks Topic |
|-------------------------|-------------------------------------------------------------------------|
| Thursday, May 3, 2018 | Introductions, Syllabus & Module 2 - Parts |
| Friday, May 4, 2018 | Module 2 |
| Tuesday, May 8, 2018 | Module 2 - <i>Due 5/9</i> |
| Thursday, May 10, 2018 | Module 3 - More Parts |
| Friday, May 11, 2018 | Module 3 |
| Tuesday, May 15, 2018 | Module 3 - <i>Due 5/16</i> |
| Thursday, May 17, 2018 | Module 4 - Assemblies |
| Friday, May 18, 2018 | Module 4 |
| Tuesday, May 22, 2018 | Module 4 & Bottom Plate (Online Video) - <i>Due 5/28</i> |
| Thursday, May 24, 2018 | Module 4 & <i>Start</i> - Module 5 - Drawings |
| Friday, May 25, 2018 | Module 5 |
| Tuesday, May 29, 2018 | Quiz #1 |
| Thursday, May 31, 2018 | Module 5 |
| Friday, June 1, 2018 | Module 5 |
| Tuesday, June 5, 2018 | Module 5 |
| Thursday, June 7, 2018 | Module 5 - <i>Due 6/11</i> |
| Friday, June 8, 2018 | Review Module 5 & <i>Start Module 6 - Revolve, Sweep & Sections</i> |
| Tuesday, June 12, 2018 | Test #1 |
| Thursday, June 14, 2018 | Module 6 |
| Friday, June 15, 2018 | Module 6 |
| Tuesday, June 19, 2018 | Module 7 - Toolbox |
| Thursday, June 21, 2018 | Module 6 |
| Friday, June 22, 2018 | Module 6 |
| Tuesday, June 26, 2018 | No Class Summer Break |
| Thursday, June 28, 2018 | No Class Summer Break |
| Friday, June 29, 2018 | No Class Summer Break |
| Tuesday, July 3, 2018 | No Class Summer Break |
| Thursday, July 5, 2018 | No Class Summer Break |
| Friday, July 6, 2018 | No Class Summer Break |
| Tuesday, July 10, 2018 | Review Module 6 - <i>Due 7/11</i> & <i>Start</i> Module 8 - Loft |
| Thursday, July 12, 2018 | Test #2 |
| Friday, July 13, 2018 | Module 8 - <i>Due 7/18</i> |
| Tuesday, July 17, 2018 | Module 9 - eDrawings |
| Thursday, July 19, 2018 | Module 10 - Visualization |

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| Friday, July 20, 2018 | Module 10 - <i>Due 7/23</i> |
| Tuesday, July 24, 2018 | Module 11 - Design Tables |
| Thursday, July 26, 2018 | Module 11 |
| Friday, July 27, 2018 | Module 11 |
| Tuesday, July 31, 2018 | Module 11 Equations & Mass Properties |
| Thursday, August 2, 2018 | Review Module 11 |
| Friday, August 3, 2018 | Module 11 <i>Due 8/6</i> & Module 12 - Sheet Metal |
| Tuesday, August 7, 2018 | Test #3 |
| Thursday, August 9, 2018 | Final Project - <i>Start</i> & Module 12 |
| Friday, August 10, 2018 | Final Project |
| Tuesday, August 14, 2018 | Final Project & Module 12 <i>Due</i> |
| Thursday, August 16, 2018 | Final Project |
| Friday, August 17, 2018 | Final Project |
| Tuesday, August 21, 2018 | Final Project |
| Thursday, August 23, 2018 | Final Project - <i>Due</i> |
| Friday, August 24, 2018 | Catch up day if needed |

Schedule is subject to change at instructor discretion.