St. Cloud State University
ETS 615: Onshape Workshop
Onshape Certification byDesign Asynchronous Course
2024
3 Credits

Classroom: Asynchronous Virtual Learning
Instructor: Ashley Fore, National Teacher Effectiveness Coach, Onshape Industry Certified
Email: Afore.iteea@gmail.com

Prerequisites

A general knowledge of computers and willingness to acquire rudimentary drafting techniques via on-line tutorials is required for successful course completion.

Required Materials

Onshape account (https://www.onshape.com/en/education/) computer with internet access, dual monitors are recommended, but not required.

Course Descriptions

The Onshape Certification byDesign course is broken down into three units that all have five learning cycles, a preliminary challenge, and primary challenge. There is a pretest/post-test besides the actual Onshape Associate Certification Exam and quizzes within most of the learning cycles to assess students' progress throughout the course. The learning cycles are scaffold to build students' knowledge and skills as they complete modeling, assembly, and engineering drawing challenges. These challenges provide students with practice and in some challenges, emulate the

Course Objectives

Onshape Associate Certification Exam.
Upon completion of this course, students will be able to:
1. Read two-dimensional engineering drawings.
2. Create two-dimensional engineering drawings using Onshape.
3. Build three dimensional models of mechanical parts using Onshape.
4. Create assembly models that include modeled content and standard content.
5. Constrain assembly models so they function as they would in the real world.
6. Collaborate with other Onshape users on the same project.
7. Share their designs using the file sharing tools within Onshape.
8. Quickly solve design challenges using Onshape.
9. Be prepared to take the Onshape Certified Associate Exam

Content Topics

These are the general categories to be covered. (Full Course Outline)
- Technical sketching
- Geometric construction
- Geometric constraints
- Two-dimensional sketching
- Three-dimensional modeling
- Assembly models
- Engineering drawings
- Collaboration
- Problem Solving

Instructional Process

This highly interactive, hands-on course consists of a blended learning approach, where face-to-face interaction and learning is mixed with independent study via technology. The instructional strategy will consist of: content introduced in class or on-line outside the classroom whereas the students come to class armed with questions and some background knowledge, in-class demonstrations, and lectures, and out of class assignments. Various instructional modes, duties and media to be utilized include class discussions, various readings, video tutorials, mini lectures, quizzes, assignments, and posting of a self-reflection & muddiest point on the topics. These items are intended to test your knowledge about the subject matter, conceptual ability, critical thinking, and communicating your concept intent precisely. If you engage with the course content, with your classmates, and with the instructor, you will undoubtedly learn more.

Evaluation Methods

Grading rubrics will be provided based on the following criteria:

Objectives Process	Fulfill assignment/project's requirements.
Process	Ability to visualize & execute assignment/project.
	Develop effective solutions.
	Ability to verbalize on work progress.
Professionalism	Respectful and good work ethics.
	Active class participation and collaboration.
	Degree of involvement.
	Meet deadlines.
Final deliverable Grading	Assignment/Project Presentation.
	Completed and on time.
Grading	Categories as follows:

1. Attendance   5%
2.   Participation/ Learning Cycle Quizzes   10%
3. Project(s)   65%
4.   Posttest/Final   <u>20%</u>

                     Total 100%

≥ 94%_____A		73% to 76.9%_____C
90% to 93.9%_____A-		70% to 72.9%_____C-
87% to 89.9%_____B+		67% to 69.9%_____D+
83% to 86.9%_____B		63% to 66.9%_____D
80% to 82.9%_____B-		60% to 62.9%_____D-
77% to 79.9%_____C+		< 60%_____F

D2L

Electronic materials, resources, syllabus, and other pertinent info will be located in the Buzz learning management system.
The due-date and instructions for submission of each assignment/project will be communicated when assigned. Projects will be submitted using the comment and assign function within Onshape as well as submission to BUZZ learning management system. Make sure you hit the assign to checkbox after tagging me in the comment.

Deadlines

<u>No late submissions will be accepted</u> after the due date and time.

Onshape
Certification bydesign
Asynchronous Course

Engineering byDesign™