



Digital Design Graphics Technology

DDGT 130 Introduction to 3D Printing

Fall 2020 Course Syllabus - Napa Learns

Instructor: Gary Strommen

Websites:

Department Website: www.ddgt.net

Canvas Website: www.canvas.instructure.com

Location: Online

Course Length: 18 weeks

Class Times: T+Th: 6:00pm – 9:00pm

Units: Three

Prerequisites: None

Office Hours: Tuesdays and Thursdays: 5:30pm – 6:00pm and
9:00pm – 9:30pm

I am also available for appointments scheduled via email.

Telephone: (707) 332-0873

Email: gary@napalearns.org

Course Description:

This course focuses on 3D Modeling and 3D Printing for the beginner and those currently in industry. This course will cover the study of additive manufacturing as it pertains to 3D Printing. Topics covered include 3D Parametric Modeling, 3D Printing applications, and the advantages and limitations of 3D printing technology. Students will learn how to create three-dimensional parts and assemblies using the current version of the Autodesk Fusion 360 software specifically for 3D Printing. This course also provides the opportunity for students to earn the Autodesk Certificate of Training and to prepare for the Autodesk Certified User exam.

This syllabus is subject to change at teachers discretion.

Course Objectives:

Upon successful completion of this course, the student will be able to:

1. Explain current and emerging 3D Printing applications in a variety of industries.
2. Describe the advantages and limitations of various 3D Printing technologies.
3. Identify opportunities to apply 3D Printing technology for time and cost savings.
4. Discuss the economic implications of 3D Printing.
5. Effectively use the latest release of the Autodesk Fusion 360 software program in a three-dimensional workspace.
6. Perform various geometric constructions.
7. Construct and edit two-dimensional and three-dimensional CAD entities.
8. Construct multi-view drawings utilizing orthographic projection.
9. Place and edit detail drawing annotations.
10. Print hard copies of detail drawings.
11. Design and 3D Print objects containing moving parts without assembly.

Required Texts:

ASCENT:
Autodesk Fusion 360 – Introduction to Parametric Modeling

Required Materials:

Web Camera
Microphone
Computer with internet

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Grading Policy:

Students are responsible for completing any reading assignments prior to the next class meeting. Any graded coursework not performed with assigned and/or required equipment will be marked down accordingly. Letter grades are assigned as follows:

- A 90-100%
- B 80-89%
- C 70-79%
- D 60-69%

Final course grades are determined as follows:

ASCENT Assignments	25%
3D Printed Project 1	5%
3D Printed Project 2	10%
3D Printed Project 3	15%
3D Printer Technology Research Presentation	5%
Classroom participation	10%
Quiz scores	20%
<u>Final examination score</u>	<u>10%</u>
Final course grade	100%

You can login online to Canvas at any time to see your current grade.

All courses required for the DDGT AS Degree or Local Skills - Certificates of Achievement must be completed with a grade of C or better.

ASCENT Assignments:

You will be asked to work on multiple assignments at once. Assignments may be turned in as many times as necessary to earn full credit unless there is a due date associated with the assignment. Some assignments may have a due date and it will be posted on our department website, on our "Assignment List" handout, or on schedule handout. Any assignments turned in after the due date will be penalized 12.5% - you will only be able to receive a maximum of 87.5% on that assignment.

3D Printed Projects:

You will be allowed to print up to 60 cubic inches of material (including support material) on your various 3D Printed projects. You will be graded on meeting your deadline, originality, creativity, design complexity, your use of material, and how successful you were to reaching your goal.

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3D Printer Technology Research Presentation:

You will research and present your findings on a new use for 3D Printing used in any industry. Your presentation will be roughly 20 – 30 minutes in length and may include videos or other visual aids. You will be graded on how prepared you are, the topic of your presentation, and your use of presentation materials.

Class Participation

Class participation is a maximum of 10 points and this is 10% of your final grade.

Students are expected to participate fully in all class activities including (but not limiting to) assignments, lectures, group activities, and peer critiques. Students are expected to attend class on time and be engaged on DDGT related tasks to the end of the class. Lab time is not considered optional and your participation score will be affected if you leave early.

This class will be taught synchronously, meaning you can and should login and attend class during class hours. You will have the best chance for success by attending class and participating in class discussions. However, this class can also be attended asynchronously, meaning you can watch class videos outside of class time and still keep up with the class. I do not recommend this method of participation because most people who attend this way end up falling behind and dropping the class. If you still decide to attend asynchronously, know that I still expect class participation by emailing me weekly to let me know what assignments you have completed and what problems you may be encountering. Failure to do so will directly affect your class participation score.

Quiz Scores:

Quizzes will be emailed out via Canvas email. Due dates will be included in the email. Failure to review your canvas email is not an excuse for missed quizzes. All quizzes will be open book.

There are no makeups for missed quizzes unless you contact me prior to the quiz AND you are sick or there is an emergency (oversleeping is not an emergency).

Final Exam:

The Final Exam is worth 10% of your final grade. The final may be taken early under special circumstance. See instructor.

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Online Resources:

If you are unable to attend class, or wish to review course material, you may watch our recorded video lectures placed online at our department website:

<http://www.ddgt.net/ddgt130.html>

Lectures are recorded daily and are usually uploaded within 24 – 48 hours.
Lectures are password protected. Please contact the instructor for the password.

Class documents and assignments are also available for download on the same page.

Academic Honesty

Students are prohibited from sharing their username and password with anyone. Students shall not allow other students or others not enrolled in the course to access course materials without instructor's permission. Allowing anyone else to access your account may result in failing the course.

All students are expected to complete their own work and all written work must be original. Work cited from other sources must be cited properly using quotations marks and references as appropriate. Plagiarism in any form will not be tolerated and will result in no credit for the assignment. Subsequent incidents of plagiarism may result in failing the. Students are expected to take all course exams individually. Cheating includes accessing test information in any way that is not approved by the instructor or sharing test information with another student in any way not approved by the instructor. Cheating on a test shall result in a failing grade on that test.

If you have been found cheating, you will receive no credit for that test or assignment. If it is found that you have copied an assignment from another student in the class, then both parties will receive no credit for that test or assignment.

Drafting Lab Etiquette and Policies:

1. Please keep in mind that at all times the webcam you are using is being recorded and you should refrain from utilizing your computer for private business. The activity on your screen when you are working in this class can and may be recorded for later review as well.
2. Please set cell phones to “vibrate” during class times. Take all phone calls outside. Do not take phone calls during lecture or demonstrations unless it is an emergency and do so quietly. Keep in mind that you may miss vital information during a lecture.
3. When attending class meetings online using Zoom or a similar technology, students are expected to conduct themselves and participate as if they were in a live classroom. This means students must at least have a working microphone and use it to participate in discussions and to respond to questions posed by the instructor. The online live class experience is more effective with a working camera and students are strongly encourage to participate in live class sessions with their cameras turned on. Participation in live class meetings is part of the student’s participation grade.
4. Normally, live class sessions conducted on Zoom will be recorded. Assume that all class sessions will be recorded. Access to recordings of class sessions is restricted to class members only and not available for download, duplication, or distribution in any manner.
5. In accordance with Napa Valley College Board Policies, the Student Code of Conduct, and applicable state and federal laws, discrimination based on gender, gender identity, gender expression, race, nationality, ethnicity, religion, sexual orientation, or disability is prohibited in any form.
6. **Students are encouraged to participate fully in class discussions and to engage other students and the instructor in honest productive discussions. All interactions online shall be professional and respectful.**

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I have received, read, and understood the contents of this syllabus and I understand the consequences of not following the assignments and rules. It is my responsibility to complete the assignments of this course, to study the course material, and to attend each class meeting on time. I also understand that it is my right to ask the instructor, at any time, for clarification of any assignment, rule, or my responsibilities for this course.

Signature _____

Print Name _____

Student ID _____

Date _____

Phone number _____ Cell Phone _____

E-Mail address (print very neatly) _____

What do you hope to get out of this class? _____

Anything I should know? _____

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