



Digital Design Graphics Technology

DDGT 130 Introduction to 3D Printing

Spring 2020 Course Syllabus

<u>Instructor:</u>	Gary Strommen
<u>Websites:</u>	
Department Website:	www.ddgt.net
Canvas Website:	www.napavalley.instructure.com
<u>Location:</u>	3902
<u>Course Length:</u>	18 weeks
<u>Times:</u>	M+W: 6:00pm – 8:15pm
<u>Units:</u>	Three
<u>Prerequisites:</u>	None
<u>Office:</u>	Room 3901B (Inside Drafting Lab, Building 3900)
<u>Office Hours:</u>	Mondays and Wednesdays: 8:00am-8:45am; 12:15-12:30; 5:45-6:00; 8:15-8:30 Tuesdays and Thursdays through Thursdays 8:00am-8:45am; 12:15-12:30
<u>Lab Hours:</u>	Mondays and Wednesdays: 8:00am – 1:00pm; 5:30pm – 8:30pm Tuesdays and Thursdays 8:00am – 1:00pm Fridays: Announced as available or by appointment
<u>DDGT Technician Hours:</u>	M-Th: 8:00 A.M – 1:00 P.M.
<u>Telephone:</u>	(707) 256-7526
<u>Email:</u>	ddgt@napavalley.edu

This syllabus is subject to change at teachers discretion.

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.

Student Learning Outcomes:

SLO1: Autodesk Certificate of Training: Fusion 360 Introduction to Parametric Modeling
SLO1 Assessment will be based on the Ascent Quiz.

SLO2: Implement technical skills in the creation of 3D parts and assemblies utilizing the Autodesk Fusion 360 software.
SLO2 Assessment will be based on your 3D Printed projects.

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: Three-ring, 2” binder
Headphones

Recommended Materials: Flash Drive
Lock for lockers

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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 to complete 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 the board at the front of the class when assigned. 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 15 – 20 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 arrive to 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.

Students will be prepared to answer the question of the day (anytime during class, possibly multiple times a day) for class participation credit. You can miss two “question of the day” activities penalty free. For every missed “question of the day” thereafter, you will receive a penalty on your class participation score of 1 point.

Example 1: If you miss three “question of the day” activities, you will be penalized 1 point and your classroom participation will be 9/10 and your overall grade for the class will drop by 1%.

Example 2: If you miss 8 “question of the day” activities, you will be penalized 6 points and your classroom participation will be 4/10 and your overall grade for the class will drop by 6%.

Quiz Scores:

Quizzes are held at the beginning of class. When the quiz is started, there will be a time limit set. The time will vary depending on how many questions are on the quiz. Students arriving late can still take the quiz as long as there is still time available but will have to turn in their quiz once the time limit is up – regardless if they are done or not. Once the last quiz is turned in, any students arriving late will not be allowed to take the quiz. If you are in need of special accommodations through DSPS, you may choose to take your exams at the Testing Center located in the library. Schedule with the instructor in advance.

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). Makeup quizzes will be held before class the day you return.

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Final Exam:

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

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 or lab computers 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 class and a referral to the vice-president of student services for formal discipline. 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. Subsequent incidents of cheating may result in failing the class and a referral to the vice-president of student services for formal discipline.

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

Attendance Information:

Regular attendance in all classes is important for satisfactory academic progress. The Napa Valley College attendance regulations make provisions for a limited number of unavoidable absences. However, a student who is absent for as many times as a class meets each week will have exhausted this provision. (Note: This does not apply to summer boot camp). An instructor may request verification of those absences. Further absences may cause the instructor to drop the student from the class.

The students dropped from a class must submit a petition to the Vice President, Student Services in order to be reinstated. If a student is absent because of illness, a signed statement from a physician must be attached to the petition. It is important that the student contact the instructor as soon as possible after an absence has occurred. The Office of Student Services is located in Room 1330, 1300 Student Services 1 Building, 256-7360.

Students are ultimately responsible for dropping the class should they wish to no longer participate or to even start the class once registered. The instructor is not obligated to drop students at any point in the course.

If you have a disability that requires accommodations, please let me know as soon as possible and I will provide you with the information you need to receive services. You may also contact the Office of Special Services (DSPS), Bldg. 1700, at (707) 253-3080, or make an appointment in the Counseling Center (Bldg. 1300) to meet with a DSPS Counselor, (707) 253-3040.

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Drafting Lab Etiquette and Policies:

1. Lab computers are to be used for DDGT course purposes only. **Working on projects for other classes during your class time is not allowed.** (Some open lab time, other than your scheduled classes in DDGT may be made available to you. At these times, you may request to use a workstation for other class work. This type of use will be on a case by case basis and you must receive prior approval from the instructor before using the Open Lab time for other than DDGT projects.)
2. Lab computers are used by many other students during the day. Do not adjust or customize the display (monitor) or the workings of the computer in any way. This includes background wallpaper on the desktop and resolution settings of the display adaptor or adjustment of the actual computer monitor hardware. (If you need special accommodation for a visual problem or otherwise, make a request and we will review your consideration.)
3. Lab computers are used by many other students during the day. Please shutdown your computer before leaving for the day. You may leave the computer monitors on as they will go into "Stand By" mode.
4. Internet access is a privilege. Do not access questionable websites. Do not download and install any software or games. Access to the internet is limited to needs for projects in the DDGT Courses. Any other access is not allowed without permission. (On occasion, you may request to access the Internet for personal use. If your request is granted, it does not override the directive regarding software/game downloads or installations. You will need to clear this type of use on a case-by-case basis.)
5. The DDGT lab computers are for learning and studying. Do not play computer games of any kind on the DDGT Lab Computers. Playing solitaire and the like on the DDGT computers is not allowed. Unless by chance you have created the artwork and programmed a computer game as part of a DDGT course project, there will be NO computer games played in this lab. Playing computer games is something that you can do at home, on your own computer, in your own time.
6. Do not touch the computer monitor screen with any items or especially with your fingers. There is absolutely no reason why anyone needs to touch the monitor screens. If you wish to point out something on your screen to another person, POINT WITHOUT TOUCHING! If you cannot seem to help yourself, use the eraser end of your pencil to point with and do not touch the screen with that either! If your monitor is found to be all fingerprinted up, you will lose the access to the DDGT Lab Computers. If you happen to accidentally touch the screen, you may use the cleaning spray and cloths available to you in the lab. DO NOT use any other cloth except for the ones designated to you. If you are unsure, ask the instructor or DDGT Technician for assistance.
7. Each student is required to clean their CAD workstation before leaving the classroom at least once a week or as needed. Ask Instructor or Assistant for cleaning supplies.

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8. Please keep in mind at all times that computer use in this lab is not your private business. All access on this network is logged and may be reviewed at any time. The activity on your screen when you are working in this network can and may be recorded for later review as well.
9. 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.
10. Students may keep drinks / food at designated areas at the back of the room. Water in a closed container may be kept by students on the floor at work area. Please eat outside or in the kitchen area. Privileges may be revoked at any time if policies are abused. Any garbage that has food in it should be disposed of in the garbage cans **OUTSIDE** of the building (there are garbage cans located on the north and south ends of the building). No gum chewing allowed in class.
11. Talking during a lecture other than to a student to clarify something that is not clear will not be permitted. If you do not understand something, ask the instructor. I will be more than happy to assist you. If your question is not answered, come and see me after the lecture and we will go over the topic until everything is clear.
12. The rest rooms are located on the north end of the building. You may leave the class at any time to use them without asking permission. Keep in mind that you may miss vital information during a lecture.
13. Lab hours are available regularly. It is highly recommended that you take full advantage of the CAD workstations during these times.
14. Lockers are available at the back of each room for your convenience. Do not utilize the lockers during other classes. You will be required to supply your own padlock. Note: Locks are to be removed at the end of the semester.
15. If you know that you will be tardy or absent, you must contact the instructor of your class to let them know ahead of time.
16. In the event of a major disaster or emergency, the instructor is to lead the students to the grassy area between the 1700 and the 2000 (between the new library and science buildings) or to the sports track.
17. Scent Free Zone. The chemicals used in scented products can make some people sick, especially those with fragrance sensitivities, asthma, allergies and other medical conditions. Please do not wear perfume, cologne, aftershave, and other fragrances. Please use unscented personal care products.
18. Failure to comply with any of these directives will result in immediate suspension of DDGT Lab Computer privileges!

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Other Notices of Importance:

Students in need of an academic adjustment (accommodations) in the college learning environment:

Any student who feels they may need an academic adjustment based on the impact of learning, the student may contact Disability Support Program and Services and Learning Services on the second floor of the Library, room 1766; you may also call either 256-7442 or 256-7345. Upon filling out an online application, the student will be referred to the appropriate staff to assess your needs and provide appropriate academic adjustments. The department(s) can assist you with academic adjustments for learning disabilities, physical and mental health related or other medical conditions.

You will be asked to submit any medical/disability documentation prior to your appointment with one of DSPS/LS staff that assesses your specific needs. All information and documentation is confidential. Students with disabilities who may need academic adjustments (accommodations) are encourage to discuss their authorized accommodations from Disability Support Programs and Services (DSPS) or Learning Services (LS) with their professors early in the semester. This ensures your academic adjustment (accommodations) letter has been received and your academic adjustments accommodations may be implemented as soon as possible.

By law, it is up to the DSPS and LS Office, through the interactive process with the student, to determine which academic adjustments are appropriate, not the instructor. This includes academic adjustments in the clinical settings.

All students who have requested academic adjustment(s)/accommodations through DSPS or Learning Services check in with me (in person or via email) that I have received a letter.

Students in need of Writing and Research help:

Any student who feels s/he may need assistance with grammar, writing, and formatting should contact the Writing Success Center in room 832 (Catacula Hall), phone (707) 256-7640 or Library Services for research help in the Library and Learning Resource Center 1700 building, phone (707) 256-7400. A Specialist will review students' needs and determine appropriate assistance. Appointments available. Students may also receive assistance from an online tutor via SmartThinking by starting at:

<http://www.napavalley.edu/academics/WritingCenter/Pages/SmartThinking.aspx>

Students in need of Canvas support:

“Napa Valley College provides technical, administrative and software support for students participating in distance learning and courses utilizing Canvas. Students should contact Brandon Tofanelli, phone (707) 256-7154 or email: btofanelli@napavalley.edu for assistance.

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In accordance with Napa Valley College Board Policy D1130, the Student Code of Conduct, and applicable state and federal laws, discrimination or harassment based on gender, gender identity, race, nationality, ethnicity, religion, sexual orientation, or disability is prohibited in any form.

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.

Student Services; College Policies and Procedures

<http://www.napavalley.edu/studentaffairs/SRR/Pages/default.aspx>

Important College Numbers (707 area code)

Admissions & Records	256-7200
Career Center	256-7327
Financial Aid/EOPS	256-7300
Child Development Center	253-3046
Counseling Office	256-7220
Student Services	256-7360
Special Services	253-3080
Testing & Tutoring Center	256-7437
Transfer Center	256-7333
Welcome Center	256-7215

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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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