

# DDGT-241: DIGITAL DESIGN GRAPHICS TECHNOLOGY 4

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**Effective Term**

Fall 2018

**BOT Approval**

04/08/2010

**SECTION A - Course Data Elements**
**Send Workflow to Initiator**

No

**CB04 Credit Status**

Credit - Degree Applicable

**Discipline**

Minimum Qualifications	And/Or
Drafting/CADD (Computer Aided Drafting/Design) (Any Degree and Professional Experience)	

**Subject Code**

DDGT - Digital Design Graphics Technology

**Course Number**

241

**Department**

Digital Design Graphics Technology (DDGT)

**Division**

Career Education and Workforce Development (CEWD)

**Full Course Title**

Digital Design Graphics Technology 4

**Short Title**

Digital Design Graphics Tech 4

**CB03 TOP Code**

0953.00 - \*Drafting Technology

**CB08 Basic Skills Status**

NBS - Not Basic Skills

**CB09 SAM Code**

B - Advanced Occupational

**Rationale**

Course needs to be updated.

**SECTION B - Course Description**
**Catalog Course Description**

The last of a four-course series in the Digital Design Graphics Technology A.S. Degree program. Study in technical 3D animation, video editing, and compositing. Study of Adobe After Effects as a tool for video compositing, motion graphics design, and animation. Students will work together on a group project showcasing all of the skills they have learned in the two-year program. Students will put together and post a resume and portfolio with animated demo reel on their student websites. Students will prepare for "Autodesk Certified Professional Exams."

**SECTION C - Conditions on Enrollment**
**Open Entry/Open Exit**

No

**Repeatability**

Not Repeatable

**Grading Options**

Letter Grade Only

**Allow Audit**

Yes

**Requisites**

**Prerequisite(s)**

Completion of DDGT-240 with a minimum grade of C.

**Requisite Justification**

**Requisite Description**

Course in a Sequence

**Subject**

DDGT

**Course #**

240

**Level of Scrutiny**

Content Review

**Upon entering this course, students should be able to:**

1. Ability to create lofted objects
2. Ability to create and edit 3D objects
3. Ability to create and play animations
4. Ability to perform video post operations

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**SECTION D - Course Standards**

**Is this course variable unit?**

No

**Units**

7.00

**Lecture Hours**

54.00

**Lab Hours**

216.00

**Outside of Class Hours**

108

**Total Contact Hours**

270

**Total Student Hours**

378

**Distance Education Approval**

**Is this course offered through Distance Education?**

Yes

**Online Delivery Methods**

DE Modalities	Permanent or Emergency Only?
Entirely Online	Permanent
Hybrid	Permanent
Online with Proctored Exams	Permanent

**SECTION E - Course Content****Student Learning Outcomes**

Upon satisfactory completion of the course, students will be able to:	
1.	Obtain Autodesk Certificate of Training
2.	Ability to implement technical skills in video compositing utilizing the Adobe After Effects software.
3.	The ability to create a portfolio video utilizing all programs and skills learned in the DDGT program.

**Course Objectives**

Upon satisfactory completion of the course, students will be able to:	
1.	Effectively implement advanced skills utilizing CAD software
2.	Create complex three-dimensional models.
3.	Successfully rig and animate complex assemblies for animation purposes.
4.	Implement their knowledge of mechanical assemblies into video animation.
5.	Create and animate particle systems.
6.	Utilize multi-pass rendering techniques to create and render out professional level animations as frames.
7.	Effectively use digital visual effects, motion graphics, and compositing software
8.	Perform video post-production operations.
9.	Utilize Autodesk and Adobe software in the same three-dimensional environment.
10.	Successfully work with multiple audio and video tracks in a non-linear video editor or compositor
11.	Successfully work in a group project
12.	Organize a large-scale project to successfully meet milestones and deadlines.
13.	Properly maintain an organized file folder-structure
14.	Maintain proper file backups for large scale projects.
15.	Work on individual tasks while working as a group.
16.	Create and post a professional level website showcasing their final project.
17.	Create a professional level video and post it on their project related website.
18.	Take Autodesk Certified Professional level exams.

**Course Content**

1. Advanced Working Drawings
  - a. Creation of Working Drawings of Advanced Assemblies in AutoCAD and Inventor
2. 3ds Max
  - a. Review
  - b. Project Setup
  - c. Importing and Layer Management
  - d. Bones
  - e. Linking
  - f. IK Chain
  - g. Advanced Object Creation
  - h. Constraints
  - i. Multipass Rendering for Compositing Post Production
3. AutoCAD Review for Certification
  - a. Basic Object Creation
  - b. Drawing With Accuracy
  - c. Cartesian Workspace

- d. Object Modification
  - e. Additional Drawing Techniques
  - f. Organize Objects
  - g. Reuse Existing Content
  - h. Blocks and Dynamic Blocks
    - i. Block Attributes
    - j. Defining and Extracting Attributes
  - k. Attaching and Modifying External References
    - l. Design Center
  - m. Annotate Drawing
  - n. Layouts and Printing
  - o. Advanced Viewport Options
  - p. Printing to DWF
4. AutoCAD Advanced
- a. Advanced Text Objects
  - b. Annotation Scale Overview
  - c. Working With Tables
  - d. Linked Tables
  - e. Table Styles
  - f. Creating Dynamic Blocks
  - g. Dynamic Block Authoring Tools
  - h. Block Attributes (Inserting, Defining, and Modifying)
  - i. Output and Publishing (DWF's and Design Review)
  - j. Tools for Collaboration (eTransmit and Hyperlinks)
  - k. Cloud Collaboration and 2D Automation
    - l. Introduction to Sheet Sets
  - m. Publishing and Customizing Sheet Sets
  - n. Managing Layers
  - o. Layer Properties Manager
  - p. Layer Filters and Layer States
  - q. CAD Standards (Setup, Configuration, Verification)
  - r. System Setup
  - s. Introduction to Customization
  - t. Customizing User Interface
  - u. Macros and Custom Routines
5. Video Editing Compositing
- a. After Effects and Compositing Overview
  - b. User Interface
  - c. Project Management
  - d. Importing Multipass Renders
  - e. Compositor Link
  - f. Effects
  - g. Keyframing
  - h. Output Settings and Options (HD vs UHD)
6. Final Project
- a. Project Overview
  - b. Story Outline
  - c. Gantt Chart Creation and Management to Meet Milestones and Deadlines
  - d. Storyboarding
  - e. File Management of Large Scale Projects
  - f. Large Scale Project Backups
  - g. Working in a Group
  - h. Project Leadership
  - i. 3D Modeling
  - j. Materials
  - k. Lighting
  - l. Rigging

- m. Cameras
- n. Animation and Keyframing
- o. Rendering
- p. Video Editing and Compositing
- q. Website Creation for Final Project
- r. Posting of Final Video on Department Website

## Methods of Instruction

### Methods of Instruction

Types	Examples of learning activities
Activity	Class assignments.
Discussion	Students will have multiple discussions as a group with and without the instructor regarding the final project.
Individualized Instruction	There will be portions of the final project that will be worked on by students individually as tasks are relegated out. Each student will need individualized instruction and direction as they oversee these tasks.
Lab	Class assignments.
Lecture	Instructor lectures on assigned readings following industry standards and on Autodesk approved courseware.
Observation and Demonstration	Instructor provides computer demonstrations of best practices utilizing the class software for given assignments.
Projects	Class assignments. Final project will be worked on as a group.
Other	Class lectures and demonstrations are recorded and posted online as a student resource.

### Instructor-Initiated Online Contact Types

Announcements/Bulletin Boards  
 Chat Rooms  
 Discussion Boards  
 E-mail Communication  
 Telephone Conversations  
 Video or Teleconferencing

### Student-Initiated Online Contact Types

Chat Rooms  
 Discussions  
 Group Work

### Course design is accessible

Yes

## Methods of Evaluation

### Methods of Evaluation

Types	Examples of classroom assessments
Quizzes	Written exams and quizzes will be given to test student knowledge on software and technical skills. Exams and quizzes will contain short answer, multiple choice, and true and false.
Projects	Projects – Students will work in a group for the Final Project assignment - the creation of a professional video showcasing all of the skills they have learned in the program. Students will create and post a website showcasing the final video and detailing the work involved in the making of the Final Project. Group Projects – Students will work in a group for the Final Project assignment - the creation of a professional video showcasing all of the skills they have learned in the program. Students will create and post a website showcasing the final video and detailing the work involved in the making of the Final Project.
Work Assessments	Students may have lab time available during class to work on their homework.

Homework	Homework can be found on the assignment list handed out on the first day of class or on the department website. Homework assignments will be submitted one of the following ways: digitally, printed, or require a visual checkoff. Homework assignments will demonstrate the student's ability to successfully utilize the software and demonstrate the student's skill set. 3D Animations will be created to showcase student's skills and knowledge.
Exams/Tests	Standardized instrument objectively measuring student knowledge -- Autodesk Certified Professional Examinations

## Assignments

### Reading Assignments

Usage of Autodesk approved courseware is required under the terms of the Autodesk Training Center agreement. Reading assignments are contained in each individual section of the Autodesk approved courseware licensed from Ascent.

### Writing Assignments

Students will write descriptions of the Final Project story, outline, the overall process, challenges that needed to be overcome, and their individual contributions which will be placed on the Final Project website.

Students will write and submit a review of the Final Project upon completion of the project including their insight on what went well, what did not, and what they specifically contributed.

### Other Assignments

Students will create a series of drawing files for digital submission or for hard copy printed submission.

Critical thinking to solve drafting problems in CAD.

Students will create an animated video showcasing a technical assembly. The video will be complete and professional with titles and branding. Video will be posted on their portfolio website.

Students will work in a collaborative group project to create their final project. The final project will be to create a professional level video showcasing the skills they have learned over the four semesters in the Digital Design Graphics Technology program. Students will learn how to properly manage files, file backups, organize their time to reach milestones and complete the assignment on time, create outlines and storyboards specifically for the needs of a group project. The final project will also incorporate special effects and compositing. The final video will be posted on a website dedicated to this project that will showcase the video, each member and their contributions, and a short description of skills learned and challenges they overcame.

## SECTION F - Textbooks and Instructional Materials

### Material Type

Textbook

### Author

Bertoline, G.,R., Wiebe, E.,N., Hartman, N.,W., Ross, W.,A.

### Title

Technical Graphics Communication

### Edition/Version

4th

### Publisher

McGraw-Hill

### Year

2009

### Material Type

Other required materials/supplies

### Description

Software #1:

Title: AutoCAD

Publisher: Autodesk

Edition: Latest

Software #2:

Title: Inventor  
 Publisher: Autodesk  
 Edition: Latest  
 Software #3:  
 Title: 3ds Max  
 Publisher: Autodesk  
 Edition: Latest  
 Software #4:  
 Title: Photoshop  
 Publisher: Adobe  
 Edition: CS6 or higher  
 Software #5:  
 Title: Dreamweaver  
 Publisher: Adobe  
 Edition: CS6 or higher  
 Software #6:  
 Title: Premiere  
 Publisher: Adobe  
 Edition: CS6 or higher  
 Software #7:  
 Title: After Effects  
 Publisher: Adobe  
 Edition: CS6 or higher

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#### **Material Type**

Other required materials/supplies

#### **Description**

1. 2" binder.
2. 3" binder or two 1.5" binders.
3. An external hard drive.
4. Headphones.

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### **Proposed General Education/Transfer Agreement**

**Do you wish to propose this course for a Local General Education Area?**

No

**Do you wish to propose this course for a CSU General Education Area?**

No

**Do you wish to propose this course for a UC Transferable Course Agreement (UC-TCA)?**

No

### **Course Codes (Admin Only)**

**ASSIST Update**

No

**CB00 State ID**

CCC000317217

**CB10 Cooperative Work Experience Status**

N - Is Not Part of a Cooperative Work Experience Education Program

**CB11 Course Classification Status**

Y - Credit Course

**CB13 Special Class Status**

N - The Course is Not an Approved Special Class

**CB23 Funding Agency Category**

Y - Not Applicable (Funding Not Used)

**CB24 Program Course Status**

Program Applicable

**Allow Pass/No Pass**

No

**Only Pass/No Pass**

No