Course Syllabus

Course #: *DMT 1100* **Course Name:** *3D Computer Animation I*

Division: Engineering and Industrial Technologies

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Class Days: **Class Time:**
Location: Classroom: *E214* Laboratory:
Credit Hours: *4* **Contact Hours:** **Lab Hours:** *1* **Lecture Hours:** *3*

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Instructor: Craig R Stinchcomb **Office Location: 215B Building E**
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Full-time Contact Person: *Craig R Stinchcomb* **Phone(s):** *(419) 559-2445*

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Course Description: *An introduction to 3D Computer Animation. World creation and walk-through development will be studied and applied. Texture mapping, lighting, virtual camera lens and angles will be applied to worlds and models. The timing and motion control of 3D elements will be practiced in 3D animation sequences. Introduction to 3D graphic special effects will also be studied.*

Prerequisite(s): *none*

Corequisite(s): *none*

Entry Level Skills and Knowledge: *Basic computer skills*

Required Texts, Supplies and Equipment: *3 Ring notebook, blank CD-R's or larger format thumb drive.*

Grading:

90 - 100 = A
80 - 89 = B
70 – 79 = C
60 – 69 = D
Below 60 = F

Learning Outcomes:
General Education
(See attached).

Assessment of Student Learning: *This is "Project" based course. Each video/audio project is treated like a quiz. Projects are averaged for a final course grade. The list of required projects is given in the "Plan of Work" section of this syllabus.*

Assessment Project and Measurement in course (if any): *See 3D proficiency topic list in the Terra CAD proficiency test document.*

Plan of Work:

Week 1

- *Introduction to Computer Animation with Flash (2D) and 3D Studio Max (3D) animation*
- 2D animations with Flash
- Frame- by- frame animations
- Frames, Key frames and In-betweens (Tweens)
- **Project 1** Simple Flash animation

Week 2

- Flash Frames and Key frames
- Layers, onion skinning and FPS (frames per second)
- Static frames and animated frames
- Modifying frames
- Adding Sound
- **Project 2** Flash animation (with backgrounds, moving and static parts, and sound)

Week 3

- Animation effects
- Effects: acceleration / deceleration, Rotation, distance, effects, color effects, more sound effects.
- Timing & Interaction
- Guide layers
- Shape tweening
- **Project 3** Letter Morphing

Week 4

- Flash Symbols
- Flash Actions
- Flash Scenes
- **Project 4** Start Final 2D Flash Creation

Week 5

- 3D Animation (3D studio MAX)
- Basic animation steps
- Animating text
- Adding sound
- Backgrounds
- **Project 5** Animated Text Advertisement

Week 6

- Copy and Clone parts
- Importing and using CAD drawings and models

Week 7

- Complex shapes

- Lofting shapes
- **Project 6** Machine or Part Design Project

Week 8

- Trajectory and motion control
- Track view control
- Patch Grid editing
- 3D lighting

Week 9

- Mapping textures
- Special Effects, Particle systems

Week 10

- Linking and Inverse Kinematics
- Pivoting and Linking
- **Project 7**, Industrial Animation

Week 11

- Combustion & Fire Effects
- Fog Effects
- Water

Week 12

- Adding Cameras,
- Free & Targeted Cameras
- Camera views and camera paths

Week 13

- Post Production Sound sync with 3D animations
- Rendering and post processing
- **Project 8,** Start Final 3D Max Project

Week 14

- Sound sync with 3D animations
- Rendering and post processing

Week 15

- Completing the final project

** This "Plan of Work" order may be changed or be adjusted to suit individual class needs and software changes.*

Course Requirements:
Complete all animation production projects as required

Policies

Course Withdrawing: If for any reason you need to withdraw from this course, be certain that you do so according to College procedure. It is your responsibility to know and follow this procedure. If you

simply stop coming to class, without officially withdrawing from the course, your grade is an automatic "F." Please follow official College procedure for withdrawing from this or any course.

College Academic Policies are located in the College Catalog. A copy of the current catalog may be picked up in any of the division offices or admissions. The list of college policies is also available online at https://www.terra.edu/register/Collegecat/policies.asp.

Support Services: The College offers a number of support services to assist in your success in this course and all courses. Among these services are the Writing & Math Center in B105, the Office of Learning Support Services, which coordinates the campus disability services and tutoring programs, the computer labs, and the computers in the atriums.

Any student who feels he/she may need an accommodation based on the documentation of a disability should contact the Office of Learning Support Services privately to discuss his/her specific issues. Please contact the OLSS at (419) 334-8400 X 208 or visit 100 Roy Klay Hall (Building A) to coordinate reasonable accommodations.

If you have a documented disability and are receiving academic accommodations through the Office of Learning Support Services, please schedule a meeting with your instructor in a timely manner so that we may discuss how these services will be arranged.

Tutoring services are available to students beginning the second week of every quarter. Students requesting tutoring services should obtain a tutor request form from the OLSS in 100 Roy Klay Hall (Building A) or online at the Terra website. Please note that instructor verification and acceptance of the Student Learner Agreement is necessary for all tutoring requests. All requests should be submitted to 100 Roy Klay Hall (Building A).

General Education Learning Outcomes:

1. **Communicate effectively**
2. **Evaluate arguments in a logical fashion**—Competence in analysis and logical argument are explicit learning goals for most general education programs, although these skills go by a variety of names (e.g., critical thinking, analysis, logical thinking, etc.). **Students will be able to demonstrate competence in problem solving in communication, mathematics, and in team settings.**
3. **Demonstrate an understanding of cultural differences and the knowledge of how to work effectively in a global and diverse culture and society.**
4. **Employ the methods of inquiry characteristic of natural sciences, social sciences, mathematics, and the arts and humanities**; general education introduces students to methods of inquiry in several fields of study and thereby prepares students to integrate information from different disciplines.
5. **Engage in our democratic society**—one of the overarching goals of general education is to prepare students to be active and informed citizens; the development of a disposition to participate in and contribute to our democracy is of equal importance to the goal of having the skills to do so intelligently.

Learning Outcomes 1-3 will be measured for all students through the CAAP assessment (Writing, Mathematics, and Critical Thinking) and through the e-portfolio (Writing and Cultural Diversity). Outcomes 1 and 2 will also be assessed through course and program assessment for applied degree

programs.

Learning Outcomes 1-5 will be assessed in specific courses included in the Transfer Module.