

**PELLISSIPPI STATE COMMUNITY COLLEGE
MASTER SYLLABUS**

**3D MODELING & ANIMATION
VPT 2165**

Class Hours: 3.0

Credit Hours: 3.0

Laboratory Hours: 0.0

Revised: Fall 2017

Catalog Course Description

A study of advanced three-dimensional design and animation. Virtual modeling techniques and the basics of 3D motion will be emphasized.

Prerequisites

None

Co-requisites

None

Textbook(s) and Other Course Materials: Required Textbook

McQuilkin, Kent. Cinema 4D: The Artist's Project Sourcebook, 3rd Edition.
Waltham, MA. Focal. 2011 ISBN# 978-0240814506

Resources: Built-in CINEMA 4D Help System located within software

Week/Unit/Topic Basis

Week	Topic
1	Getting started; introductions and expectations. Introduction to 3D animation and a look at its history and uses. A first look at the CINEMA 4D interface.
2	A look at the menus, windows and layout options with the software and an overview of the 3D scene environment and process. Interface Tutorial: Saving and Loading 3D scenes.
3	Creating 3D models and an introduction to 3D modeling basics. Modeling Tutorial 01: Parametric Modeling
4	Higher level modeling techniques and refining models using components level modeling techniques. Modeling Tutorial 02
5	Creating models using procedural techniques. Modeling Tutorial 03

- 6 Detailed look at texturing and shading within CINEMA 4D. Texturing Tutorial
- 7 (MIDTERM) Introduction to 3D lights and cameras.
- 8 Exploration of the animation techniques within CINEMA 4D. Introduction of key frame animation workflow. Animation Tutorial 01
- 9 Advanced animation using f-curves and motion layers. Animation Tutorial 02
- 10 Introduction of procedural and dynamic animation workflows used for motion graphics and visual effects. Animation Tutorial 03
- 11 Getting 3D scenes exported for viewing using multiple rendering techniques and settings. Rendering Tutorials 01 and 02
- 12 Rendering final compositions using advanced render features and integration into industry standard compositing software. Post Production Tutorial
- 13 Animation Project Work Days.
- 14 Animation Project Work Days.
- 15 Final and Animation Project reviews and critiques.

Course Goals

NOTE: Roman numerals after course objectives reference goals of the VPT program.

The course will

- A. Guide students to develop a basic knowledge of the 3D animation process. I, II, III, IV
- B. Introduce students to 3D modeling principles for creating animation for multiple outputs. I, II, III
- C. Develop students' knowledge of CINEMA 4D for the creation of animation that can be used for multimedia productions. II, II, IV, VI
- D. Introduce students to the rendering process of outputting 3D scenes into standard 2D mediums. I, III
- E. Introduce students to emerging technologies and standard pipelines for the fields of animation and visual effects. II, III
- F. Introduce students to industry standard compositing and visual effects

software. II, III, IV, VI

Expected Student Learning Outcomes

NOTE: Capital letters after Expected Student Learning Outcomes reference the course goals listed above.

The student will

1. Create animations that communicate the desired message to the intended audiences across multiple mediums. A, D
2. Use a wide variety of industry-standard equipment, techniques, software, hardware and materials to produce the appropriate content. C
3. Demonstrate proficiency in the fundamental principles of 3D modeling. B, D
4. Demonstrate proficiency in the fundamentals of texturing, lighting and rendering 3D scenes. A, B, C, D, E
5. Produce a motion graphics sequence using assets created within the 3D software. E
6. Effectively work through the entire 3D pipeline to complete an animated sequence. A, B, C, D, E

Evaluation

Testing Procedures: 20% of grade

Midterm= cumulative

Final exam= cumulative

Laboratory Expectations: 80% of grade

30% Three major assignments covering major disciplines of the 3D animation and motion graphics pipelines.

20% Final Project. Conceptualize and produce an animated sequence demonstrating a proficiency in all the major disciplines of 3D animation.

30% Class Participation

Field Work: None

Other Evaluation Methods: None

Grading Scale

A=90% to 100%
B=80% to 89%
C=70% to 79%
D=60% to 69%
F= Below 60%

Policies

Attendance Policy

Pellissippi State expects students to attend all scheduled instructional activities. As a minimum, students in all courses (excluding distance learning courses) must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. Individual departments/programs/disciplines, with the approval of the vice president of Academic Affairs, may have requirements that are more stringent. In very specific circumstances, an appeal of the policy may be addressed to the head of the department in which the course was taken. If further action is warranted, the appeal may be addressed to the vice president of Academic Affairs.

VPT Program Attendance: The VPT program believes a more stringent requirement is realistic because of the contractual commitment made by the College with local area employers. Therefore, to successfully complete VPT courses, students must attend at least **85% of classes**. To be considered in attendance, students are expected to be in class at the scheduled starting time for that class. Students will be considered tardy from that time until 10 minutes after the scheduled starting time. Three such tardies shall constitute an absence. Students arriving any time after 10 minutes beyond the scheduled starting time for a class will be considered absent.

Academic Dishonesty

Academic misconduct committed either directly or indirectly by an individual or group is subject to disciplinary action. Prohibited activities include but are not limited to the following practices:

- Cheating, including but not limited to unauthorized assistance from material, people, or devices when taking a test, quiz, or examination; writing papers or reports; solving problems; or completing academic assignments.
- Plagiarism, including but not limited to paraphrasing, summarizing, or directly quoting published or unpublished work of another person, including online or computerized services, without proper documentation of the original source.
- Purchasing or otherwise obtaining prewritten essays, research papers, or materials prepared by another person or agency that sells term papers or other academic materials to be presented as one's own work.
- Taking an exam for another student.

- Providing others with information and/or answers regarding exams, quizzes, homework or other classroom assignments unless explicitly authorized by the instructor.
- Any of the above occurring within the Web or distance learning environment.

Please see the Pellissippi State Policies and Procedures Manual, Policy 04:02:00 Academic/Classroom Conduct and Disciplinary Sanctions for the complete policy.

Accommodations for disabilities

Students that need accommodations because of a disability, have emergency medical information to share, or need special arrangements in case the building must be evacuated should inform the instructor immediately, privately after class or in her or his office. Students must present a current accommodation plan from a staff member in Disability Services (DS) in order to receive accommodations in this course. [Disability Services](http://www.pstcc.edu/sswd/) (<http://www.pstcc.edu/sswd/>) may be contacted via [Disability Services email](#) or by visiting Alexander 130.

Other Policies

Any act of misuse, vandalism, malicious or unwarranted damage or destruction, defacing, disfiguring, or unauthorized use of property/equipment belonging to Pellissippi State is subject to disciplinary sanction.