

MET 408

Computer Illustration and Animation

Western Illinois University
Department of Engineering Technology
Fall Semester 2009

Instructor: Joe Keitel

Class Time: Monday, 5:00pm - 8:30pm

Location: Room 108A, WIU-QC Caxton Engineering Building, Moline, IL

Office Hours: Monday, 4:30pm – 5:00pm and 8:30pm – 9:00pm

Phone (cell): 563-299-3944

Class Prerequisite: MET 407 or permission of instructor

Catalog Description: MET 408 – Application of computer techniques used to create technical illustrations and animations for manuals, documents, assembly instructions, and demonstrations using digital models, rendering, and animation methods.

Textbook: *Introducing Maya 2008*, author: *Derakhshani, Dariush*, PDF format provided

Objectives: Upon completion of the course, students will be able to:

- Identify the various sections and commands of Autodesk Maya software.
- Understand the concepts, challenges and constraints behind design illustration and animation decisions.
- Correctly apply modeling, editing, shading, lighting and animation commands in order to successfully produce basic illustration and animation designs.
- Identify other illustration and animation design systems; distinguish differences and similarities between the competing software.
- Develop skills, which will enable the learning of other illustration and animation systems.

Evaluation:

- **Attendance & Participation (375 points: 11.3%):** Each student is expected to complete several reading or research assignments prior to the class period. Class discussions, quizzes, exams, presentations or written reports could be used to evaluate the fulfillment of this task.
- **Assignments (1650 points: 50.0%):** Approximately 12-13 projects will be assigned during the semester. Each week's work is worth 120 - 180 points. Projects that span multiple class periods are worth the sum of the weeks' points. Due dates will be set for each given assignment, but are usually the beginning of the next class period.
- **Quizzes (400 points: 12.1%):** Four quizzes will be given during the semester. Each quiz will consist of 10-20 questions worth 5-10 points each (100 points per quiz).
- **Mid-Term & Final Exam (200 points & 300 points: 6.1% & 9.1%: 15.2% total):** The mid-term and final exam will consist 30-50 questions worth 5-20 points each.

- **Semester Personal Project (375 points: 11.4%):** The semester personal project will be an object of the student's choice. Degree of difficulty and quality of object and animation will determine points earned. Bonus (extra credit) points available for extra effort/results of project.
- **Extra Credit:** Several extra credit assignments will be presented during the semester. Students are NOT required to fulfill these activities, but each assignment completed correctly could help raise a final grade. A grade of '80' or higher is required to receive the extra assignment credit.

Grading Information: All assignments, tests and projects will be graded according to the following scale:

- 100% - 90% = A (2957 – 3300 points)
- 89% - 80% = B (2627 – 2956 points)
- 79% - 70% = C (2297 – 2626 points)
- 69% - 60% = D (1967 – 2296 points)
- Less than 60% = F (1966 or less points)

Course Policies: It is expected that students will behave properly in class. Students who disrupt class, or deface equipment or property will be removed from the classroom and penalized in the current assignment/project, and in extreme cases with a failing final grade. Cheating will result in **FAILING** the course automatically.

Attendance: Do NOT miss classes, attendance and participation are required. Lectures and demonstrations will occur varying times during the class period. However, attendance for the entire session is not always necessary if the required assignments/project has been completed and turned in. Attendance will be recorded and may affect your final grade. Any absences **MUST** be accompanied by documented proof of necessity for full credit. Notification prior to absence will result in partial credit. Each undocumented/no notification absence will result in a 1% penalty applied to the final course grade.

Students Rights and Responsibilities: It is essential that all students know what is required of them in order to complete a course satisfactorily. To that end, the Office of the Provost and Academic Vice President recommends that students become familiar with the guideline concerning their rights and responsibilities. The guidelines are available online at: www.wiu.edu/provost/student.

Students with Disabilities: In accordance with University policy and the Americans with Disabilities Act (ADA), students who require special accommodations due to a disability, or any other medical reason, are encouraged to discuss this matter with the instructor.

Special Course Cost: To help cover the costs of this course, a special costs of **\$25.00** will be charged to each student. This is payable to Kristin Spain in Knoblauch Hall 135 by **October 1, 2009**. Make checks payable to Western Illinois University.

Late Assignment Policy:

- Any assignment that is turned in one class late will be penalized by the loss of ten (10) percent plus any errors or mistakes.
- Assignments that are submitted two classes late will lose twenty (20) percent in addition to the discounts for errors or mistakes.
- Students who are absent because of a verifiable illness can usually make up missed work, not including tests. It is the students' responsibility to check in with the campus medical center, then make arrangements for make-up work as soon as they come back to class.

Test Schedule: Test schedule is tentatively set as below. The schedule is subject to change and all tests will be announced in advance.

Quiz 1: Thursday, September 14, 2009

Quiz 2: Thursday, October 5, 2009

Mid-Term Exam: Thursday, October 19, 2009

Quiz 3: Thursday, November 9, 2009

Quiz 4: Thursday, November 30, 2009

Final Exam: Thursday, December 14, 2009

Tentative Topic Schedule: **Autodesk Maya: Text = *Introducing Maya 2008***

- Wk 1-Aug 24: Autodesk Maya install, Chap 1 & 2; Maya Interface, definitions
- Wk 2-Aug 31: Chap 3; Getting Started, basic NURBS, basic animation (Solar System)
- Wk 3-Sep 7: NO CLASS – LABOR DAY
- Wk 4-Sep 14: Quiz over weeks 1-3; Chap 4; basic polygonal modeling (human hand)
- Wk 5-Sep 21: Chap 4; Complex polygonal modeling (steam locomotive-start)
- Wk 6-Sep 28: Chap 4; Complex polygonal modeling and editing (steam locomotive)
- Wk 7-Oct 5: Quiz over weeks 4-6; Chap 5; NURBS modeling (Red Rocket car-start)
- Wk 8-Oct 12 Chap 5; NURBS modeling & editing (Red Rocket car)
- Wk 9-Oct 19: MID-TERM EXAM; Steam locomotive and Red Rocket models due
- Wk 10-Oct 26: Chap 7; Shading & Textures (Battle axe, Red Rocket)
- Wk 11-Nov 2: Chap 8; Object Animation (bouncing ball, axe throw)
- Wk 12-Nov 9: Quiz over weeks 9-11; Chap 8-9; (complete axe throw, catapult)
- Wk 13-Nov 16: Chap 12; Advanced animation, dynamics, particles (billiards, locomotive)
- Wk 14-Nov 23: NO CLASS – THANKSGIVING BREAK WEEK
- Wk 15-Nov 30: Quiz over weeks 12-14; Chap 10; Lighting (living room, Red Rocket)
- Wk 16-Dec 7: Chap 11; Cameras & Rendering (living room, Red Rocket)
- Wk 17-Dec 14: FINAL EXAM; semester personal project

Helpful websites and references for Autodesk Maya:

1. Autodesk Maya Services & Support:

<http://usa.autodesk.com/adsk/servlet/index?siteID=123112&id=9571510&linkID=9242256>

2. Autodesk Maya tutorials:

<http://www.learning-maya.com/>

<http://www.free3dtutorials.com/sitemap.php>

http://www.cgtutorials.com/c2/Alias_Maya

<http://www.infinitee-designs.com/Tutorials-Maya-1.htm>

<http://www.highend3d.com/maya/tutorials/>

http://www.cgshelf.com/autodesk_maya.php

There are numerous videos on <http://www.youtube.com>. Search for Maya tutorials, etc. Unihulllecturer, expert_village and 3Deastacademy posters have some very good tutorial videos.

<http://www.3Dbuzz.com> also has an entire series of free Maya tutorial videos available for viewing. They appear to be an excellent outside source for expanding your abilities.

Syllabus subject to change upon notice.