ARTV-1445 | 3D Modeling & Rendering 1

Syllabus

instructor  Sara R Farr
office hours  Walk-in Office Hours:  Mon/Wed: 1:00p – 4:00P
            By Appt Office Hours:  Friday:  9:00A – 11:30A
office location  NRG Bldg 3000 GDI Office Pod
class info  3:00P – 5:40P  Tuesday & Thursday, Rm 3134
e-mail  sfarr@austincc.edu
phone  512-223-4802
department site  http://www.viscom.austincc.edu/
instructor site  http://www.austincc.edu/sfarr/online/3dmr-1/

Course Description
A studio course in the theory and technique of three-dimensional (3D) modeling utilizing appropriate software. Topics include the creation and modification of 3D geometric shapes; and rendering techniques; and use of camera light sources, texture, and surface mapping.

Prerequisites & Preferred Foundation
There are no prerequisites for this class. Suggested foundation classes include: ARTS-1316 (Drawing I), ARTS-2326 (Sculpture I), and ARTS-2356 (Photography I).

Course Rationale
This course is aimed at the 3D animation certificate student or the Visual Communication major who is interested in pursuing a career in digital 3D imaging and animation. This is a beginning class that introduces students to the 3D environment and tools.

This course is a pre-requisite for ARTV-1441 3D Animation I, ARTV-2445 3D Modeling & Rendering II, ARTV-1472 3D Lighting & Surfacing and GAME-1470 Video Game Art 1. Its purpose is to familiarize the students with the 3D interface, and to build a working knowledge of the basic tools used in modeling and rendering.

Student Objectives and Outcomes
During the term of the course, students will learn to work within virtual 3-D space and build volumetric objects including: vertices, splines, polygons, primitive shapes and
SubPatch geometry. Students will use these tools to build complex objects then learn the basic 3-D rendering tools and techniques including: surface channels, procedural textures, image mapping, light types and settings, camera settings and use, as well as a variety of rendering options, including ray-tracing. Students will also learn the importance of file naming, backup and management.

**Instructional Methodology**
This course is a 4 credit hour, 16-week Lecture-Lab course in basic techniques for three-dimensional (3D) modeling and imaging. Each class takes up approximately 4 of those hours, and meets once a week. During each class, the instructor will present new information (lecture), lead critiques, and supervise assigned work (lab). Solutions to individual student problems are demonstrated for the entire group. The instructor’s ability to evaluate students’ progress is founded on observing their productivity in class as well as the quality of their work.

**Attendance and Class Participation**
Attendance is mandatory. In an 16-week course, students only have 86 contact hours with their instructor. This is roughly equivalent to 2 weeks on production in an industry studio. The level of a student’s day-to-day class participation is evaluated and will be reflected in their final grade.

**Absences**
If for any reason you’re unable to come to class, you will be counted as absent. There is no distinction between an excused or unexcused absence. You are counted absent if:
- you are not in class
- you leave the class early
- you get to class extremely late
Excessive absences will lower your final grade. If you decide to withdraw from the course, IT IS YOUR RESPONSIBILITY TO OFFICIALLY WITHDRAW YOURSELF FROM THE CLASS THROUGH ADMISSIONS AND RECORDS.

**Six-Withdrawals Limit**
State law permits students to withdraw from no more than six courses during their entire undergraduate career at Texas public colleges or universities. All course withdrawals automatically count toward the limit unless:
- Student withdraws from all courses;
- Student or course is exempt from the rule; or
- Student receives an exception authorized by college officials.
Students who reach their withdrawal limit must remain on the class roll unless they request and receive approval for a withdrawal exception. (Students who officially exit a course during either the schedule change period or before the official college reporting date are considered to have “dropped” the course. They do so by submitting the official request to Admissions and Records. “Dropped” courses are not considered withdrawals and are not posted on the student transcript.)

**Arriving Late**
Don’t be late. It’s unprofessional to keep others waiting. A continual pattern of late attendance will count against your final grade.
Leaving Early
Don’t request to leave a class early. If you must leave early, it will be counted as an absence.

Late Assignments
Assignments are due at the beginning of class periods. If turned in after that, the project is late. I will lower a project one letter grade for each class day that it is late. You can not make up in-class work, such as quizzes or reading assignments.

Time Management
One of the biggest challenges that designers face on the job is managing time while working on multiple deadlines. If you miss a deadline while on the job, you face the potential of losing your reputation, or worse yet, losing the client. Strive to create the correct work/life balance in order to get your work done. Plan ahead, and accordingly. Do not turn in mediocre work just because you ran out of time. Both your learning and work will suffer.

Supplies
During the semester, you will be required to have a pencil or pen, and a 3-ring notebook with paper and pockets (in which to keep notes, exercises, projects and information sheets).

You will also need to provide a temporary backup of your coursework (Flash Drive or External hard drive), and at least one blank DV-R to provide a permanent backup of both your working files and final output files.

Required Textbooks:
-- The Art of 3-D Computer Animation and Imaging by Isaac Victor Kerlow
  • ISBN-10: 0470084901

Recommended Textbooks:
-- Visual QuicksStart Guide: 3DS Max 6 For Windows by Michele Matossian
  • ISBN:073571391X

Instructional Resources
Autodesk 3D Studio Max [version 2011]: an industry standard software package used to create 3D imaging and animation for multi-media, interactive-media, game development, broadcast production, commercial television, and film.

Helpful Websites
http://www.austincc.edu/sfarr/links.html
Student Evaluation
This course strengthens the student’s 3D animation skills through a series of exercises, each with assigned objectives and criteria. All exercises are graded using four scales (Focus, Principles, Craftsmanship, & Creativity). Each scale awards 4-0 points based on the student’s effort to meet the exercise criteria (Superior – Unacceptable), for a total of 16 possible points per exercise.

Evaluation Scales:

Focus – *(criteria established in assignment)* ability to follow directions, work hard in & out of class, make an effort to meet exercise objectives, and complete the work on time.
- 4 – On time and meets or exceeds all criteria.
- 3 – On time with one criterion missing.
- 2 – On time with two criteria missing.
- 1 – On time with one criterion missing.
- 0 – Late or has inappropriate solution to the problem, incomplete

Design Principles – *(criteria established in assignment)* ability to understand and demonstrate the use of the elements & principles of design, as well as the 3D modeling principles.
- Elements of Design (line, shape, form, space, value, color, texture)
- Principles of Design (contrast, unity; dominance, balance; pattern, movement, rhythm)
- Modeling Principles (reference, proportion, exaggeration, weight, detail, functionality)
- 4 – Superior understanding and application of the design principles
- 3 – Good ability to utilize the principles of the design principles
- 2 – Several errors in regards to the application and understanding of the design principles
- 1 – Large number of errors in application and understanding of the design principles
- 0 – No regard to application and understanding of the design principles

Craftsmanship & Technique – *Craftsmanship* is aptitude, skill, and manual dexterity in use of media and tools – knowledge of interface & keyboard shortcuts, correct use of tools without the aid of notes, correct use of vocabulary. *Technique* is the manner and
skill in which the student uses the tools to achieve the chosen effect – efficient use of geometry [no duplicate, hidden, or wasted geometry], proper use of surfaces [no Default surfaces; correct settings or textures in the appropriate surface channel], & well-organized files with properly placed pivots, labeled layers, and file type extensions.

4 – Great skill in manipulation of tools and technique used to express creative idea.
3 – Proficiency in manipulation of tools and technique used to express creative idea.
2 – Some degree of skill in manipulation of tools and technique used to express creative idea.
1 – Less than average ability or skill in manipulation of tools and technique used to express creative idea.
0 – Little or no apparent skill in manipulation of tools and technique used to express creative idea.

Creativity, Inventiveness, and Independence – (criteria established in assignment) ability to find unique solutions to assignment, elaborate on assigned theme, transfer concepts/techniques from previous exercises, work through problems/difficulties, originality of style & idea, and the ability to work independently.

4 – Superior degree of originality throughout; very unique solution; theme has been elaborated on to a high degree; ability to take initiative in assignment that augments what is learned; self-initiated; complex solution.
3 – Above average degree of originality throughout; theme is present with some elaboration; shows ability to work and think independently; May have sought additional material to accomplish assignment idea.
2 – Above average degree of originality throughout; theme is present with little elaboration; some initiative in working and independent thinking.
1 – Below average originality; theme is not fully developed; little initiative in working and independent thinking.
0 – Lack of originality; theme is very trite, weak, stereotypical, copied or traced; very little or no initiative; student waits to be told what to do

Grades
Students will be given 4 grades during the semester. These grades provide students with the opportunity to evaluate their standing in the class. Students can contact the instructor during the office hours listed at the beginning of this document if they need to discuss their progress, or to seek additional help.

<table>
<thead>
<tr>
<th>Point total ranges:</th>
<th>Passing Grade Policy</th>
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<tbody>
<tr>
<td>A (89.5% and up)</td>
<td>Effective September 2005, D's are not accepted as a passing grade within the Visual Communication Department courses. Students receiving a grade of D must retake the course to receive credit and to progress to the next level course. Students who made a D prior to September 2005 will be allowed to proceed to the next level course.</td>
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<td>B (79.5% to 89.4%)</td>
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<td>C (69.5% to 79.4%)</td>
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<td>D (59.5% to 69.4%)</td>
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<td>F (59.4% or less)</td>
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Classroom Interaction
Throughout the course of the semester, you will be interacting with me and your fellow students in critiques, which will give you feedback on your work. These critiques will be conducted in various ways, from one-on-one interactions to large group environments. In
all instances, classroom behavior should support and enhance learning. Behavior that disrupts the learning process will be dealt with appropriately, which may include having the student leave class for the rest of that day. In serious cases, disruptive behavior may lead to a student being withdrawn from the class. ACC’s policy on student discipline can be found in the Student Handbook, 2008-2009, p. 30.

**Cell Phone Policy**
Students are not allowed to have their cell phone on in classroom during scheduled class times. Students may check messages during their break as long as their phone calls don’t cause the student to return from break late. During an emergency situation, the student should notify the instructor. Instructors will use their discretion to determine an emergency situation. (Students may be able to set phone to vibrate, and leave the classroom to receive an emergency call.) Dept of Visual Communication Policy & Procedure Manual.

**Scholastic Dishonesty**
Acts prohibited by the College for which discipline may be administered include scholastic dishonesty, including but not limited to cheating on an exam or quiz, plagiarizing, and unauthorized collaboration with another in preparing outside work. “Academic work submitted by students shall be the result of their own thought, research or self-expression. For purposes of these regulations, academic work is defined as, but not limited to exams and quizzes, whether taken electronically or on paper; projects, either individual or group; papers; classroom presentations; and homework. When students borrow ideas, wording, or organization from another source, they shall reference that information in an appropriate manner.” (Student Handbook, 2008-2009, p.30)

**Copyright**
The software programs that you in the labs are licensed to the college as the original purchaser and as such are not available for students to duplicate for their personal use. Do not use college equipment to duplicate software for other students or to produce work-for-profit. Do not download, copy or scan copyrighted material for use in your projects.

**Academic Freedom**
Each student is strongly encouraged to participate in class. In any classroom situation that includes discussion and critical thinking, there are bound to be many differing viewpoints. These differences enhance the learning experience and create an atmosphere where students and instructors alike will be encouraged to think and learn. On sensitive and volatile topics, students may sometimes disagree not only with each other but also with the instructor. It is expected that faculty and students will respect the views of others when expressed in classroom discussions.

**Privacy Policy**
The Family educational Rights and privacy Act protects confidentiality of your educational records. Grades cannot be given over the phone, posted, over e-mail, or through a fellow student.

**Student Withdrawal**
If you determine during the semester that you will not be able to successfully fulfill course requirements, you should withdraw yourself. The deadline for withdrawing is Nov.
17th 2011. No withdrawals or reinstatements may be made after that deadline. It is your responsibility, not mine, for withdrawing from this course. Those not fulfilling course requirements and failing to withdraw will receive the grade of “F.” instructor-initiated withdrawal If you are not in compliance with course policies or meeting course objectives in the syllabus I may withdraw you from the course at my discretion.

**Incomplete Grades**
An incomplete (I) will be granted to a student in extremely rare circumstances. Generally, to receive a grade of I, a student must have completed all examinations and assignments to date, be passing, and have personal circumstances that prevent course completion that occur after the deadline to withdraw with a grade of W.

**Students With Disabilities**
The Office for Students with Disabilities (OSD) assists students with documented disabilities to access ACC’s educational resources by providing reasonable and appropriate accommodations. To request accommodations, students must submit appropriate diagnostic documentation to the OSD supervisor at their primary campus. Students attending multiple campuses must meet with the OSD supervisor at each campus where accommodations are needed. Accommodations must be requested before each semester they are needed. NOTE: Students are urged to apply for accommodations at least three weeks before the start of each term. (Student Handbook, 2008-2009, pg. 20-21) All requests for accommodations must be presented to the instructor during the first week of class

**Computer Based Participation (Lab Time)**
You will need to use the following programs in lab:
- Industry standard CGI software including: 3D Studio Max, Z-Brush, PhotoShop, & Premiere
- A web browser such as Mozilla or Internet Explorer, for researching and reading online information
- An email account for communicating with the instructor and other class members

Working with 3-D software can take a great deal of time. If the student does not own the software and the hardware required to use it, the student may need to make time to come on campus and work during the open lab hours. Though lab time is not tracked, you are responsible for meeting project deadlines. If you find you are having trouble getting all your work done in class, the classroom is open on Fridays and Saturdays. Lab hours are posted on the door outside the classroom.

**Computer Code of Conduct**
- Do not deliberately access material that can be considered threatening to other students. This material includes pornography and overtly sexist materials, bigotry and overtly racist materials, and materials advocating personal violence.
- Do not use computers if someone is addressing the class —including your professor or students who are presenting.
- Do not use computers or printers for personal use. For instance, don’t check sports scores or your email when you’re supposed to be examining online examples. You may not print anything that is not class related.
- Do not play music out loud in the lab. If you prefer to listen to music while you work, use earphones or earbuds.
- No food or drink in the lab.
If you violate these guidelines, you may be asked to leave the classroom and your participation grade may be negatively affected.

**Other Helpful Websites**
http://www.austincc.edu/marketng/handbook/ (Student Handbook)
http://www.austincc.edu/resources_students/services.php (Student Services)

**SCANS (Secretary’s Commission on Achieving Necessary Skills)**
A high performance workplace requires workers to not only have basic literacy, math, and personal skills, but also specific competencies – including the ability to manage resources, work well with others, research and process information, master complex systems and a variety of technologies. This list summarizes the SCANS skills and competencies addressed in this course.

<table>
<thead>
<tr>
<th>Resources</th>
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<tbody>
<tr>
<td>Manages Time</td>
<td>NA</td>
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<td>NA</td>
<td>NA</td>
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<tr>
<td>Interpersonal</td>
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<td>NA</td>
<td>NA</td>
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<td>Information</td>
<td>NA</td>
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<td>NA</td>
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<tr>
<td>Systems</td>
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<tr>
<td>Understands Systems</td>
<td>NA</td>
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<tr>
<td>Monitors and Corrects Performance</td>
<td>NA</td>
</tr>
<tr>
<td>Improves and Designs Systems Technology</td>
<td>NA</td>
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</tbody>
</table>

- Selects Technology
- Applies Technology to Task
- Maintains and Troubleshoots Technology

**Basic Skills**
- Reading
- Writing
- Arithmetic
- Mathematics
- Listening
- Speaking

**Thinking Skills**
- Creative Thinking
- Decision Making
- Problem Solving
- Mental Visualization
- Knowing How to Learn
- Reasoning

**Personal Qualities**
- Responsibility
- Self-Esteem
- Sociability
- Self-Management
- Integrity/Honesty

Please go to http://www.austincc.edu/mkt/scans.htm#whatisc for a complete definition and explanation of SCANS.
Student Acknowledgement and Agreement
ARTV-1445 3D Modeling & Rendering 1

To ACC,
  I hereby have read, acknowledge and agree to the Syllabus document of “ARTV-1445 3D Modeling & Rendering 1” for the fall of 2011.

____________________________________
Signature

____________________________________
Print Name