ARTV 2471 3D Lighting and Surfacing

Section Number and Synonym

Course Time and Location

Semester

Instructor’s Name -

Office Hours -

Office Location and Number -

Phone, Email, Website, etc. -

Arranging Conferences/Appointments -

**Course Description**

Lighting, shading, and texture painting for 3D models using digital painting techniques. Emphasizes lighting, shading, and texture creation of limited resolution to increase system performance for digital games and simulation training models.

Course Prerequisites

Prerequisites: ARTV 1445 and ARTV 1472

**Course Rationale/Objectives-**

This course is aimed at the game art major that is interested in pursuing a career in game development.  Design principles are reinforced through project-based assignments. Students are provided an opportunity to obtain real life experiences. Practicing professionals may upgrade their job skills.

Upon successful completion of the course, the student will be able to analyze, define and recreate real-world lighting and surfaces digitally.  Students will be able to use different light types, global illumination, layered surfaces, procedurals, and image mapping.  Skills learned include lighting techniques for subjects and their environment, surface channel texturing, and UV-mapping.   Students will also be able to design and manipulate lighting to create mood and emotion, as well as direct the viewer’s focus.

**Student Learning Outcomes**

Course Student Learning Outcomes

Explain the fundamentals of color and lighting theory; identify core concepts of 3D texturing such as transparency, specularity, reflectivity, and lumnescence; develop effective materials for models while conserving resources; and create surface shaders, tile textures, and displacement and bump maps that convey desired style and mood.

Discipline/Program Student Learning Outcomes

1. Identify and apply principles of design and modeling

2. Independently solve modeling problems.

3. Produce and integrate art assets based on current industry trends and practices.

4. Design art assets that reflect personality, atmosphere and emotional tone.

5. Collaborate within a team environment.

SCANS competencies (for workforce courses)

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.

1 - RESOURCES

1. 1.1 Manages Time

3 - INFORMATION

1. 3.1 - Acquires and Evaluates Information
2. 3.2 - Organizes and Maintains Information
3. 3.3 - Uses Computers to Process Information

4 - SYSTEMS

1. 4.1 - Understands Systems
2. 4.2 - Monitors and Corrects Performance
3. 4.3 - Improves and Designs Systems

5 - TECHNOLOGY

1. 5.1 - Selects Technology
2. 5.2 - Applies Technology to Task
3. 5.3 - Maintains and Troubleshoots Technology

6 - BASIC SKILLS

1. 6.1 - Reading
2. 6.2 - Writing
3. 6.3 - Arithmetic
4. 6.4 - Mathematics
5. 6.5 - Listening
6. 6.6 - Speaking

7 - THINKING SKILLS

1. 7.1 - Creative Thinking
2. 7.2 - Decision Making
3. 7.3 - Problem Solving
4. 7.4 - Mental Visualization
5. 7.5 - Knowing How to Learn
6. 7.6 - Reasoning

8 - PERSONAL QUALITIES

1. 8.1 - Responsibility
2. 8.2 - Self-Esteem
3. 8.3 - Sociability
4. 8.4 - Self-Management

8.5 - Integrity/Honesty

**Required Texts/Materials**

**Instructional Methodology**

**Grading System -**

**Passing Grade Policy -** 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.

### Course Policies

**Attendance/Participation -**

Attendance is mandatory. In a 16-week course, students only have 96 contact hours with their instructor. This is roughly equivalent to two 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. Consistently late arrivals can add up. If you know you will need to arrive consistently late or leave consistently early, or if you know you will have to miss a large portion of the class, you should withdraw yourself and register again during a time when you can commit yourself to the work.

**Lab Participation**

Working with 3-D software can take a great deal of time and it may be necessary for students 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.

**Withdrawal** - It is the responsibility of each student to ensure that his or her name is removed from the roll should he or she decide to withdraw from the class. The instructor does, however, reserve the right to drop a student should he or she feel it is necessary. If a student decides to withdraw, he or she should also verify that the withdrawal is submitted before the Final Withdrawal Date. The student is also strongly encouraged to retain their copy of the withdrawal form for their records.

Students who enroll for the third or subsequent time in a course taken since Fall, 2002, may be charged a higher tuition rate, for that course. State law permits students to withdraw from no more than six courses during their entire undergraduate career at Texas public colleges or universities. With certain exceptions, all course withdrawals automatically count towards this limit. Details regarding this policy can be found in the ACC college catalog.

**Missed or Late Work** – Assignments are due based on Instruction set deadlines. If turned in after that, the project is considered late and will result loss of points towards that assignment**.**

**Incomplete** - An instructor may award a grade of “I” (Incomplete) if a student was unable to complete all of the objectives for the passing grade in a course. An incomplete grade cannot be carried beyond the established date in the following semester. The completion date is determined by the instructor but may not be later than the final deadline for withdrawal in the subsequent semester.

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.

**Scholastic Dishonesty** - A student attending ACC assumes responsibility for conduct compatible with the mission of the college as an educational institution. Students have the responsibility to submit coursework that is the result of their own thought, research, or self-expression. Students must follow all instructions given by faculty or designated college representatives when taking examinations, placement assessments, tests, quizzes, and evaluations. Actions constituting scholastic dishonesty include, but are not limited to, plagiarism, cheating, fabrication, collusion, and falsifying documents. Penalties for scholastic dishonesty will depend upon the nature of the violation and may range from lowering a grade on one assignment to an “F” in the course and/or expulsion from the college. See the Student Standards of Conduct and Disciplinary Process and other policies at <http://www.austincc.edu/current/needtoknow>

**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.

**Student Rights and Responsibilities -** Students at the college have the rights accorded by the U.S. Constitution to freedom of speech, peaceful assembly, petition, and association. These rights carry with them the responsibility to accord the same rights to others in the college community and not to interfere with or disrupt the educational process. Opportunity for students to examine and question pertinent data and assumptions of a given discipline, guided by the evidence of scholarly research, is appropriate in a learning environment. This concept is accompanied by an equally demanding concept of responsibility on the part of the student. As willing partners in learning, students must comply with college rules and procedures.

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

**Statement on Students with Disabilities** - Each ACC campus offers support services for students with documented disabilities. Students with disabilities who need classroom, academic or other accommodations must request them through the Office for Students with Disabilities (OSD). Students are encouraged to request accommodations when they register for courses or at least three weeks before the start of the semester, otherwise the provision of accommodations may be delayed.

Students who have received approval for accommodations from OSD for this course must provide the instructor with the ‘Notice of Approved Accommodations’ from OSD before accommodations will be provided. Arrangements for academic accommodations can only be made after the instructor receives the ‘Notice of Approved Accommodations’ from the student.

Students with approved accommodations are encouraged to submit the ‘Notice of Approved Accommodations’ to the instructor at the beginning of the semester because a reasonable amount of time may be needed to prepare and arrange for the accommodations.

Additional information about the Office for Students with Disabilities is available at<http://www.austincc.edu/support/osd/>

**Safety Statement** - Austin Community College is committed to providing a safe and healthy environment for study and work. You are expected to learn and comply with ACC environmental, health and safety procedures and agree to follow ACC safety policies. Additional information on these can be found at http://www.austincc.edu/ehs. Because some health and safety circumstances are beyond our control, we ask that you become familiar with the Emergency Procedures poster and Campus Safety Plan map in each classroom. Additional information about emergency procedures and how to sign up for ACC Emergency Alerts to be notified in the event of a serious emergency can be found at http://www.austincc.edu/emergency/.

Please note, you are expected to conduct yourself professionally with respect and courtesy to all. Anyone who thoughtlessly or intentionally jeopardizes the health or safety of another individual will be dismissed from the day’s activity, may be withdrawn from the class, and/or barred from attending future activities.

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**Use of ACC Email Communication** - All College e-mail communication to students will be sent solely to the student’s ACC email account, with the expectation that such communications will be read in a timely fashion. ACC will send important information and will notify you of any college related emergencies using this account. Students should only expect to receive email communication from their instructor using this account. Likewise, students should use their ACC email account when communicating with instructors and staff. Instructions for activating an ACC email account can be found at<http://www.austincc.edu/accmail/index.php>.

**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.

**Student And Instructional Services**  ACC strives to provide exemplary support to its students and offers a broad variety of opportunities and  services. Information on these services and support systems is available at:<http://www.austincc.edu/s4/>  Links to many student services and other information can be found at:<http://www.austincc.edu/current/>  ACC Learning Labs provide free tutoring services to all ACC students currently enrolled in the course to be  tutored. The tutor schedule for each Learning Lab may be found at:  [http://www.autincc.edu/tutor/students/tutoring.php](http://www.austincc.edu/tutor/students/tutoring.php)  For help setting up your ACCeID, ACC Gmail, or ACC Blackboard, see a Learning Lab Technician at  any ACC Learning Lab.

**Course Outline/Calendar -**