Course titles and numbers  VIST 405-501 – Visual Studies Studio III. (1-5). Credit 3.

Term  Spring 2016

Meeting times and location  TR 2:20-3:10 in ARCC 307; TR 3:10-4:50 in ARCC 306B.

Course Description Specific to the Vertical Studio

The purpose of the vertical studio is to facilitate and encourage the development of skills, knowledge, and interpersonal communication required for the use of computer graphics in the studio environment of animation and visual effects. This is a group project-problem-based learning experience.

Development of both hard and soft skills is the expected outcome. This course will be co-located with VIST 206 and VIST 305. Students from multiple class years are included to provide opportunities for less experienced students to learn from those who are more experienced and for the more experienced students to practice mentoring and leadership skills. Specific performance requirements and expectations vary according to the level in which each student is enrolled. Peer assessment plays an important role in course performance evaluation.

The semester is divided into two sections. The first section focuses on skills development. The second section focuses on animation production.

Technology plays a vital role in animation and visual effects production. There are no specific software packages required for the projects and exercises in this course. However, access to and ability to employ certain kinds of software is required. All required kinds of software will be available through the Visualization Laboratory, available through student licensing agreements with software publishers, or available as open-source software.

The products produced in this course consist of Projects, which are major grades, and Exercises, which are minor grades. Participation is highly important and is measured three ways: participation in class activities, participation in review sessions, and participation as a contributor to your team. Reviews will be held regularly throughout the semester and offer the opportunity for students to show work in progress to both the instructors and their fellow team members.

Official Course Description

VIST 405: Theory and practice in the art and science of the visual image; scientific and mathematical principles as process; information theory and sensorial design; interactivity and user integration; integration of real and virtual environments including lighting design and material definition.

Learning Outcomes

• Analyze project goals to determine resources, techniques, and time required.
• Generate a development plan that includes requirements of resources, techniques, and time that is based upon analysis of project goals.
• Design and implement original techniques or processes for the generation of computer graphics imagery that augments or extends the capacity of commercial software.
• Use digital media to create original virtual experiences that are evocative of real objects, actions, environments, and situations.
• Evaluate one's own work and the work of others within the context of defined project expectations.
Instructor Information for VIST 405-501

Lead Instructor: Tim McLaughlin, Associate Professor and Department Head
Telephone number: (979) 845-3465
Email address: timm[at]viz.tamu.edu
Office hours: Upon request.
Office location: Langford Architecture Center, Building C, Room 106

Additional Instructor: Barbara Klein, Lecturer
Email address: bklein[at]arch.tamu.edu
Office hours: 2:00-4:00PM MW (By appointment only)
Office location: Langford Architecture Center, Building A, Room 324

Graduate Teaching Assistant: Mallory Kohut, Graduate Assistant
Telephone number: (832)771-0216
Email address: malkoh[at]tamu.edu

Recommended Information Resources

STORY DEVELOPMENT

ASSET DEVELOPMENT
• Gnomon Workshop video tutorials available through the Texas A&M University Library.

ANIMATION, LIGHTING, and EFFECTS
Technical Requirements

Successful completion of the projects for this course will require access to graphical computing workstations, software for 2D painting and 3D animation, and connectivity with the internet. The 3D animation software must, minimally, have the following components:

- Modeling of 3D geometry as polygons, NURBS, or sub-division surfaces.
- Forward and inverse kinematics.
- Key-framing, including the manipulation of interpolation method used between key-frames.
- Indirect node connections for translation, rotation, and scale.
- Deformation of surfaces driven via the transformation of connected nodes.
- Permit the use of scripting as a substitute for interactive commands. Scripted commands must be able to be saved to file, edited, and re-loaded from the interface.
- Capacity for particle animation/simulation.
- Rendering of cast shadows and motion blur.
- Rendered image output.

It is possible that the construction of practical models will require use of the College of Architecture’s Wood Shop and/or Automated Fabrication & Design Lab. Details about the tools available and how to access those resources can be found here: http://www.arch.tamu.edu/inside/services/woodshop/, and here: http://fablab.arch.tamu.edu/.

Photography of practical models will likely require access to the Visualization Laboratory’s stage(s) and use of lighting and camera equipment. A safety training course is required and will be coordinated by the instructors and teaching assistant.

Grading Policy

Students will be assessed based upon the quality of their work relative to their class level and their interpersonal skills. Assessment criteria for group projects will include individual technical and artistic contributions, participation, peer assessment, and overall project success. Assessment criteria for individual projects will be based upon technical and artistic merit relative to the given criteria.

The specific definition and requirements for each project will be provided in written form in class. Each project will be given a number grade between 0 (lowest) and 100 (highest). The number grade is based upon a combination of the aesthetic, technical, and communication/presentation expertise. Iterative improvement is essential to successful development and completion of ideas therefore participation in regular
reviews of work is required.

Each project’s value in relationship to the composition of the final grade is:
- 25% 5-Second Project (combined grades on exercises * 0.25)
- 25% Final Project Progress (combined assessments on progress check-ins toward final * 0.25)
- 35% Final Project (final project grade * 0.35)
- 5% Participation (faculty assessment * 0.05)
- 10% Peer Assessment (combined peer feedback assessments * 0.1)

100 Total Points Possible

A final letter grade is determined as follows:
- **A** = 90 – 100
- **B** = 80 – 89
- **C** = 70 – 79
- **D** = 60 – 69
- **F** = below 60

**Late Work**
Projects and exercises are due at the beginning of class. Projects and exercises are accepted up to three class periods late, but will be penalized. If turned in on the same day the penalty is a 5% reduction in grade. If turned in after the class period on the day due and by the beginning of the next class meeting the penalty is a 10% reduction in grade. Each class period thereafter is another 10% reduction in grade for a maximum penalty of 30% reduction if turned in at the beginning of the third class period following the due date. Projects and exercises not turned in by the third class period after the due date will be given no credit. The Final Project is due on the due date, but may be turned in with penalty by the deadline marked in the course calendar (see below). Final Projects turned in after the final deadline will be given no credit.

**Extra Credit**
Opportunities for extra credit will be provided periodically during the course of the semester. Each opportunity will be available to all students and have a relationship to the focus of this course.

**Course Topics, Calendar of Activities, Major Assignment Dates**
(All information below is subject to change)

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topics</th>
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<tbody>
<tr>
<td>1</td>
<td>Tues. 8/30</td>
<td>Course introduction</td>
</tr>
<tr>
<td></td>
<td>Thurs. 9/1</td>
<td>Topic: Story and Modeling</td>
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<tr>
<td>2</td>
<td>Tues. 9/6</td>
<td>Topic: Rigging; Due: Modeling</td>
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<tr>
<td></td>
<td>Thurs. 9/8</td>
<td>Topic: Animation; Due: Rigging</td>
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<td>3</td>
<td>Tues. 9/13</td>
<td>Topic: Surfacing; Due: Animation</td>
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<td>Thurs. 9/15</td>
<td>Topic: Lighting; Due: Surfacing</td>
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<td>4</td>
<td>Tues. 9/20</td>
<td>Topic: Effects Animation; Due: Lighting</td>
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<td>Thurs. 9/22</td>
<td>Topic: Rendering; Due: Effects Animation</td>
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<td>5</td>
<td>Tues. 9/27</td>
<td>Due: Rendering</td>
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<td>Thurs. 9/29</td>
<td>Rough review of 5-second projects</td>
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<td>6</td>
<td>Tues. 10/4</td>
<td>Due: 5-Second Project</td>
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<td>Thurs. 10/6</td>
<td>Team formation; Visual Development</td>
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<td>7</td>
<td>Tues. 10/11</td>
<td>Topic: Pipeline and Production; Due: Story Pitch</td>
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<td>Thurs. 10/13</td>
<td>Topics: Assets and Toys; Due: Art Package</td>
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<td>8</td>
<td>Tues. 10/18</td>
<td>Due: Models</td>
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<td>Thurs. 10/20</td>
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<td>9</td>
<td>Tues. 10/25</td>
<td>Due: Surfacing, Rigging, and Rough Layout</td>
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<td>Thurs. 10/27</td>
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<tr>
<td>10</td>
<td>Tues. 11/1</td>
<td>Due: Blocking Animation</td>
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Thurs. 11/3

11
Thurs. 11/10

Tues. 11/8 Due: Master Lighting
Thurs. 11/17

Tues. 11/15 Due: Blocking Effects Animation; Rough Animation

13
Tues. 11/22 Due: Test comps for all shots
Thurs. 11/24 No Class: Thanksgiving Holiday

Tues. 12/29 Due: Hit list

14
Thurs. 12/1

Tues. 12/6 DUE: Final Project (Last day of Class)
Thurs. 12/8

15

12pm Mon. 12/12 Last opportunity to turn in updated work for grade.

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, in Cain Hall, Room B118, or call 845-1637. For additional information visit [http://disability.tamu.edu](http://disability.tamu.edu)

Academic Integrity

For additional information please visit: [http://www.tamu.edu/aggiehonor](http://www.tamu.edu/aggiehonor)

"An Aggie does not lie, cheat, or steal, or tolerate those who do."

Defacement of Property

"It is unlawful for any person to damage or deface any of the buildings, statues, monuments, trees, shrubs, grasses, or flowers on the grounds of any state institutions of higher education (Texas Education Code Section 51.204)"

The words damage or deface refer specifically to any and all actions, whether direct or indirect, that either diminish the value or mar the appearance of the physical environment.