Course titles and numbers   <u>VIST 305-501</u> – Visual Studies Studio II. (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 405. 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 through out 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

<u>VIST 305</u>: Theory and practice of visual communication employing digital and conventional media; development of artistic concepts, proposal development and related implementation techniques; introduction to digital painting, 3D modeling, animatics and post production. Prerequisites: VIST 206; upper level classification in visualization.

Learning Outcomes
- Define the fundamental aspects of the artistic (interpretive) and technical (applied) issues surrounding 3D computer graphics and its relationship to the context of the viewer.
- Locate additional sources of information outside the classroom that can be applied to the technical and aesthetic problems within 3D computer graphics.
- Apply artistic and technical principals and methodologies in the creation of 3D digital media.

- Implement self-imposed time-management skills.
- Distinguish between computer graphics techniques required to produce visual style characteristics varying between symbolic, abstract, and realistic representations of objects, environments, motion, materials, and lighting effects.
- Produce 3D computer graphics works that are visually cohesive in representations of objects, environments, motion, materials, and lighting effects.
- Critique one's own work and the work of others within the context of defined project expectations.

Instructor Information for VIST 305-501

Lead 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

Additional 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

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

Recommended Information Resources

STORY DEVELOPMENT
- *Ideas for the Animated Short: Finding and Building Stories* by Karen Sullivan, et al. Published by Taylor & Francis (2013). ISBN-13: 9780240818726. http://www.barnesandnoble.com/w/ideas-for-the-animated-short-karen-sullivan/1116874419?ean=9780240818726
- *The Writer's Journey: Mythic Structure for Writers, 3rd Edition* by Christopher Vogler (2007) Published by Michael Wiese Productions (2007). ISBN-13: 9781932907360. http://www.barnesandnoble.com/w/writers-journey-christopher-vogler/1100497088?ean=9781932907360
- *Film Directing Shot by Shot: Visualizing from Concept to Screen* by Steven D. Katz. Published by Michael Wiese Productions (1991). ISBN-13: 9780941188104. http://www.barnesandnoble.com/w/film-directing-shot-by-shot-steve-katz/1111981470?ean=9780941188104

ASSET DEVELOPMENT
- *The World History of Animation* by Stephen Cavalier. Published by University of California Press (2011). ISBN-13: 978-0520261129. http://www.barnesandnoble.com/w/world-history-of-animation-stephen-cavalier/1102230225?ean=9780520261129
- *The Animator's Survival Kit, 2nd Edition* by Richard Williams. Published by Faber and Faber. (2009). http://search.barnesandnoble.com/Animators-Survival-Kit/Richard-Williams/e/9780571238347?itm=1&usri=Animators+Survival+Kit
- Gnomon Workshop video tutorials available through the Texas A&M University Library.

ANIMATION, LIGHTING, and EFFECTS

- *The Visual Story, 2ⁿᵈ Edition* by Bruce Block. Published byTaylor and Francis, Inc. (2007). ISBN 0240807790. http://www.barnesandnoble.com/w/the-visual-story-bruce-block/1111451710?ean=9780080551692
- *Walt Disney Animation Studios The Archive Series: Layout & Background* by Disney Press (2011). ISBN 9781423138662. http://www.barnesandnoble.com/w/walt-disney-animation-studios-the-archive-series-disney-press/1030008500?ean=9781423138662

SCRIPTING/PROGRAMMING
- *Learning Python: Powerful Object-Oriented Programming* by Mark Lutz. Published by O'Reilly (2009). http://www.barnesandnoble.com/w/learning-python-mark-lutz/1100193238?ean=9780596158064&itm=1&usri=learning+python
- *Mathematics for Computer Graphics* by John Vince. Published by Spring London (2010). ISBN-13: 9781849960229. http://www.barnesandnoble.com/w/mathematics-for-computer-graphics-john-a-vince/1100825668?ean=9781849960229

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)
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  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)

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

	Thurs. 10/27	
10	Tues. 11/1	*Due: Blocking Animation*
	Thurs. 11/3	
11	Tues. 11/8	*Due: Master Lighting*
	Thurs. 11/10	
12	Tues. 11/15	*Due: Blocking Effects Animation; Rough Animation*
	Thurs. 11/17	
13	Tues. 11/22	*Due: Test comps for all shots*
	Thurs. 11/24	No Class: Thanksgiving Holiday
14	Tues. 12/29	*Due: Hit list*
	Thurs. 12/1	
15	Tues. 12/6	*DUE: Final Project (Last day of Class)*
	Thurs. 12/8	
12pm	Mon. 12/12	Last opportunity to turn in updated work for grade.

Americans with Disabilities Act (ADA)

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

Academic Integrity
For additional information please visit: 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.