Instructor: David Luebke

Meeting Time: 3:30-4:45 Tue/Thu (class) + 9-11 PM Wed (studio)

Location: This class will take place in two primary locations:
- Wilson 306 (classroom & principal lab)
- Digital Media Lab, Clemons Library (secondary lab & epicenter of digital media on Grounds)

Goals: In order of importance, this course is about:
- Learning to work in groups that span disciplinary boundaries
- Learning new tools, techniques, and media
- Learning the mechanics of making short video segments showcasing computer graphics

Group projects: Most of the coursework and most of your grade will involve group projects done in teams of five students. All group members will receive the same grade for projects they work on together, without exception. Because working in interdisciplinary groups is the entire point of the course, we have an unusual twist on the honor code: you are not allowed to work alone. To be specific, at least one other member of your group must be present when you are working on the project. Even though you may have individual access to powerful machines, at home or in your department, you cannot use them for course projects unless working with another group member. There are two exceptions at this time:
- Creating music may require specialized equipment. I encourage team members working on soundtrack and audio to work in proximity to your groupmates whenever possible, but recognize that this is not always practical.
- Rendering can take a very long time, even overnight. Team members are allowed to run a purely mechanical process of rendering frames alone, or on their home machines.

If you encounter another situation that you feel requires special consideration, bring it to me for a decision.

Remember that many of your fellow group members come from very different disciplines, and thus bring different talents, different jargon, different work habits, different ideas of how to evaluate success, and different opinions about what really matters. Strive to be tolerant and polite in your dealings with your group, especially when tensions rise and tempers flare. You are all in the same boat and are all ultimately working towards the same goal.

Lab/studio: The bulk of the class periods will not be spent in lecture, but as lab/studio time. Coordinating the schedules of five group members can be nearly impossible, so our three class meetings per week offer a valuable chance to work together with everybody in the same room. It also gives me an opportunity to offer advice or assistance, and to gauge how well the work of the group is progressing. Therefore class meetings, including the 9-11 PM studio times, are mandatory, and after three unexcused absences, each additional absence will lower your final class letter grade by one third (e.g., from a B+ to a B, or an A- to a B+). Missing meetings is simply not fair to your team members.

Where to work: The Wilson 306 classroom has high-end 3D-capable Macintosh computers with good graphics cards, Apple Superdrives for storage, and all course software loaded. We have reserved this classroom for several hours each week; I will post and maintain a schedule. This is the primary labs you should try to use. For after-hours lab time, I am arranging for everybody to get key cards to the classroom, though we may need to establish some rules about when and how late students can work. Understand that our class is one of several using Wilson 306, and the only one for which special arrangements are being made for after-hours use. Please do not abuse this privilege; remember that we are using these labs by the good grace of the maintainers. Our use of these rooms outside class time depends on our good behavior! Don’t risk harming the entire class by violating the rules and strictures of the classroom.
We will also make use of the Digital Media Lab in Clemons Library this semester. The DML has top-of-the-line computers with all the software we will use, and more besides; furthermore the DML is staffed with knowledgeable and friendly people who can help you with your projects. Other resources unique to the DML include some high-end audio equipment and software, digital cameras available for checkout, a “greenscreen” for color-keyed compositing, and so forth. Though we share the DML with other classes and students working with digital media, the DML staff are enthusiastic about this course and very willing to help us out. For example, our “workshops” on Maya, Final Cut, and Shake are run by DML staff.

Course work and grading:

I always reserve the right to change the assignment structure, but this is my current plan:

Project 1 (4 wks): a 30-second commercial selling some product or service. All CG, no live action.
Project 2 (4 wks): a video piece, 120 seconds max, with definite narrative structure. All CG.
Project 3 (6 wks): a video piece showcasing computer graphics. Length, content, and topic unrestricted.

Accompanying “the making of” documentary.

20% First group project (due Oct 5): 30 second commercial. Checkpoints:
   20% Week 1, due Sep 9: concept, initial storyboards + script, production schedule
   20% Week 2, due Sep 16: final storyboards, shot list, story reel, proof-of-concept 3D models
   20% Week 3, due Sep 28: models finished, animation underway, rough render, audio finished
   40% Week 4, due Oct 5: animation finished, render + post-production, final video

10% Individual assignment (due Oct 12): Master an advanced aspect of Maya, Shake, or Renderman.
   10% Day 2, due Oct 7: select topic, identify tutorials
   90% Day 7, due Oct 12: final video demonstrating mastery

15% Second group project (due Oct 26): 10-15 second experiment. Checkpoints:
   10% Day 2, due Oct 14: concept, storyboard or concept/character sketches
   30% Day 7, due Oct 19: non-advanced models finished, audio ready (if necessary)
   60% Day 14, due Oct 26: final video

35% Final group project (due Dec 7). Checkpoints:
   20% Weeks 1-2, due Nov 9: storyboards + script, production schedule, story reel, live-action raw footage
   20% Weeks 3-4, due Nov 23: models + audio finished, animation well underway, end-to-end rough render
   10% Weeks 5-6, due Dec 7: render, post-production, final video
   10% due Dec 9: in-class viewing and presentation, juried review, discussion

5% Final group project, epilogue (due Dec 15 during finals week)
   “Directors Cut” – last chance to clean up video
   “Grand Debut” – public showing
   “The Making Of” – documentary for DVD special edition

15% Instructor evaluation, based primarily on peer evaluations.

For reasons of fairness, all students must take this course for a grade; pass/fail is not an option. There is no notion of a curve; everybody in this class is capable of an A (or an F, for that matter). Grading is necessarily subjective, but will be based on creativity of concept and technical sophistication of execution: timing, lighting, camera work, composition, shading, animation, editing, etc. Outside experts will help the instructor critique these aspects of the video, and this critique may be offered publicly in class (though the final grades will only be shared with members of each group).
**Peer evaluations:** Students in this class will evaluate the performance, effort, creativity, and contribution of other students. This is uncomfortable for most, but it is an essential part of the grading system. To take this class and receive a grade, you must agree to give a fair, unbiased, impartial, and anonymous evaluation of your project teammates.

**Intellectual property:** To help promote the class, students, and instructor in the future, I will ask each of you to sign a document granting myself, your classmates, and the University the right to copy, show, and distribute your work (with attribution) for academic, scholarly, and other non-commercial purposes.

**Group composition:** As you know, for admission each applicant submits a portfolio to demonstrate a skill that will be useful in the course. The portfolios I have received for this course showcased considerable talent, ranging from home videos, to oil paintings, to mp3s, to Photoshop compositions, to 3-D models, to video games, to full-length scripts for film and theatre. Many students identified more than one skill which they felt they could bring to a group; most indicated that they hoped to learn new skills through the course.

I assign the groups with an eye towards balancing the various skills members bring. Rather than pigeonhole students into roles dictated by the skills they highlighted in their applications, however, I will leave the division of labor entirely up to each group. This is a serious responsibility! Groups that fail to identify and assign tasks and roles early are flirting with disaster. This doesn’t mean that you need to be bound by your early decisions. Most students will undoubtedly take part in many aspects of the production, pitching in when help is needed or picking up a new skill out of interest. In fact, I have observed that adhering too rigidly to roles set at the beginning of a project can turn out to be detrimental to the group’s success, for example if the project ends up requiring everybody to chip in on the modeling or animating (this is one reason I have organized the course to ensure that everybody gets basic exposure to our primary tools). But having a framework of defined roles to fall back on will help ensure things get done and help prevent power struggles over who does what.

**Format:** We will have very few traditional lectures, though we will have some guest lectures; people from around the University and beyond will give talks ranging from lighting and composition, to the animation production process, to the use of animation in architecture, to narrative and structure in film.

We will begin with a few “workshops” introducing video editing with Final Cut Express, 3D modeling and animation with Maya, and compositing with Shake. All students are expected to attend these. If you already have significant experience in the given tool, let me know ahead of time.

There will be some optional “breakout sessions” which will visit in depth certain aspects of the course – such as algorithmic details of computer graphics techniques, or advanced compositing techniques – not interesting or necessary to all students. Again, students in the class may lead some of these; other breakouts may be given by faculty or arranged as short courses through the Digital Media Lab.

Some class meetings will also be given to public showing and critique of student work. Finally, at least one and often two class meetings a week will be devoted to lab/studio for groups to meet and work. I also hope to arrange some guest lectures, breakout sessions, from our students, since several students have interesting and relevant experience to share. Such presentations would be completely optional and would not affect the final grade.

**Content:** I want to show your videos to a broad audience ranging from prospective students and their parents, to other faculty here and elsewhere, to University administrators and donors. For pragmatic reasons, then, your videos must be more-or-less PG rated. If you have valid artistic reasons to explore potentially questionable content, we can talk about it.

**Advice:** Your immediate task for Project 1 is to come up with a concept. Brainstorm, pitch ideas back and forth, discuss formats and ideas and what each of you could bring to the table. Remember Randy Pausch’s advice: Write your ideas down, give them names, and criticize or question the ideas, not their originators. Once you have a concept, establish some roles. Don’t get caught up in role titles like “Director” and “Producer” – there is too much baggage related to prestige and hierarchy here, and you don’t have time to
fool with that. Just figure out very concretely what each of you will do to move the project forward, and
write it down.

Come up with a preliminary production schedule of what will get done when, and keep it up to date. Move
from concept to script and storyboard to “story reel” – a rough but shot-for-shot rendering, no fancy
shading or lighting, crude animation – as soon as possible. The quicker you get to the story reel, the better
your chances of catching mistakes while there is still time to do something about them. Ed Catmull,
founder of Pixar, says that 80% of Hollywood movies fail, while 80% of Pixar’s projects succeed. He
credits their use of a story reel as the biggest reason for this success.

Work hard. Meet early and often, even when not everybody can make it. Remember our odd take on the
honor code: you may work only with another member of your group.

Remember to keep track of what you’re doing for the “making of” documentary! Take some pictures, save
the pizza napkin you sketch on. Your future fan club will thank you for it.

Finally, and most important, have fun!