

## CS 446/MDST 375: 3-D ANIMATION AND SPECIAL EFFECTS

### SYLLABUS

**Instructor:** David Luebke

**Meeting Time:** 10:00 – 10:50 MWF (class) + TBA (lab)

**Locations:** MEC 215 (classroom & principal lab), OLS 001 (after-hours lab)

**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 with 3-D animation and special effects

**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.
- Sometimes rendering can take a very long time, even overnight. Team members are allowed to run a purely mechanical process of rendering frames on their home machines.

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

Remember that most 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 gage how well the work of the group is progressing. Therefore class meetings 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:** MEC classrooms 214 and 215 both have brand new computers with nice graphics cards, CD burners for storage, and all course software loaded. We have reserved one classroom or the other for several hours each week; I will post and maintain a schedule soon. These are the primary labs you should try to use. For after-hours lab time, I have arranged for everybody to get keys to the main Computer Science lab, Olsson 001. Pick up your key from Ginny Hilton at the CS front desk (next to the Chair's office, top floor of Olsson).

Understand that our class has second priority in the Olsson lab. Several courses have closed labs scheduled throughout the day (usually ending by 3-4 PM; I will post a schedule soon). When not reserved for another class, the computers in the lab are shared with other groups (particularly CS 340 students) on a first-come first-serve basis. The chief intention of reserving 001 is to provide a place for groups to work late nights and weekends. Please do not abuse this privilege; remember that we have only a handful of CS majors and are using these labs by the good grace of the maintainers. The same applies to the MEC classrooms: our use of these rooms outside class time depends on our good behavior. In particular, the MEC classroom maintainers want students to leave when asked, and to avoid food or drink in the classroom. Don't risk harming the entire class by violating these strictures.

**Course work and grading:**

- 10% A get-to-know-your-tools assignment to be done individually (2 wks).
- 30% First group project (4 wks). Subtasks:
  - 20% Movie exposé and presentation (1 wk)
  - 25% Checkpoint (2 wks)
  - 55% Final video & "the making of"
- 45% Second group project (6 wks). Subtasks:
  - 15% Movie exposé and presentation (1 wk)
  - 15% First checkpoint
  - 20% Second checkpoint
  - 50% Final video & "the making of"
- 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).

**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 submitted a portfolio to demonstrate a skill that will be useful in the course. The resulting portfolios 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 hidebound 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. 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 relatively 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. I also hope to arrange some guest lectures from our students, since several students have interesting and relevant experience to share.

There will be some optional "breakout sessions" which will visit in depth certain aspects of the course – such as algorithmic details of computer graphics technique, or advanced photoshop 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.

The student presentations mentioned above are completely optional and will not affect the final grade, but each group will also be responsible for an "exposé". For this the group will analyze and research a movie, then organize a presentation on "How'd they do that?" for a class meeting. The group will be graded on both the content and presentation of the exposé. 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.