

# *Computer Applications Extra Credit*

## *The “Impossible” Projects*

The purpose of this assignment is to find resources and develop your problem-solving skills. This is about finding out how you can, through perseverance and resourcefulness, find the answer to almost any “impossible” assignment.

You will not be judged on quality of your final renderings, though that should be a source of pride and a sense of accomplishment, but on how well you are able to find answers and complete your task.

Over the course of your career here, and after you leave, you will be faced with demands that you must rise and face. There will be many times when you will be expected to find the answer on your own, without anyone telling you how to accomplish the task. This is the beginning of that process. You must be resourceful, creative and responsible. Your education is up to you, and no one else, but you can help each other as you help yourselves.

Select one of the following “impossible” assignments, and complete them. Create a PowerPoint presentation showing the steps you took to find and utilize the answers to your questions, and solutions to your problems.

You will present these on the final day of class, week 11.

A-1

- Digitally texture and light a scene in any type of interior that reflects an early morning feel. You will use 3DS Max and you will be expected to utilize omni, direct and spot lights. You will have to display at least one 1400X1000 .tif to the class.
- You may use the “Room” project from this class. You will be judged on your texturing, and **lighting skill and rationale for intelligently placing lights** and the success of duplicating the lighting of an interior space in the early morning hours.
- Your presentation must include a demonstration of how this task is to be done and what path you took to learn it. This includes opening your Max file and showing your lighting placement. Describe the learning difficulties you encountered and how you overcame those difficulties. The presentation must be timed to last no longer than 10 minutes. You will show at least one 1400X1000 .tif on the computer and it must be pre-loaded on the local drive prior to the presentation.

## A-2

- Animate a bouncing rubber ball utilizing Maya. The animation must last 30 seconds and the final render must be a 640X480 Quicktime, using the DV/DVC Pro NTSC compression.
- You only need to use a standard primitive sphere. You will be judged on your ability to use the Graph Editor to change the velocity of the sphere to mimic a rubber ball's bounce (**Easy-in/Easy-out**). You may also need to use a lattice deformer to incorporate a squash and stretch aspect to your animation. Be willing to use a real rubber ball to assist you with timing issues.
- Your presentation must include a demonstration of how this task is to be done and what path you took to learn it. Describe the learning difficulties you encountered and how you overcame those difficulties. The presentation must be timed to last no longer than 10 minutes. You will show the QuickTime on the computer and it must be pre-loaded on the local drive prior to the presentation.

## A-3

- Create a Dynamics Simulation using Maya that mimics a pile of boxes hitting the ground and bouncing off of each other and eventually coming to rest. The simulation should reflect real world **timing** and **physics**. Render this simulation using Maya's playblast at 320X240.
- You will have to figure out how to use gravity in the simulation and you will only need to use standard Maya primitives. Then incorporate lighting and texture mapping.
- Your presentation must include a demonstration of how this task is to be done and what path you took to learn it. Describe the learning difficulties you encountered and how you overcame those difficulties. The presentation must be timed to last no longer than 10 minutes. You will show the QuickTime on the computer and it must be pre-loaded on the local drive prior to the presentation.

## A-4

- Task: Create a facial animation using the blend shape function in Maya.
- You will be expected to present the class with a 640X480 QuickTime movie using Sorensen compression that lasts 15 seconds. At some point in the animation the character should shift from happy to angry.
- You will not be expected to model a head yourselves. You may contact an upper level student to use one of their pre-modeled heads, or download one from the internet.
- Your presentation must include a demonstration of how this task is to be done and what path you took to learn it. Describe the learning difficulties you encountered and how you overcame those difficulties. The presentation must be timed to last

no longer than 10 minutes. You will show the QuickTime on the computer and it must be pre-loaded on the local drive prior to the presentation.

### A-3

- Task: Using Pencil test animation, create 3 distinctly different walk cycles. You will draw the animations by hand, and then capture them using a scanner or the animation capture hardware and software. You will then import the image sequences into After Effects, and using the DV/DVC Pro NTSC compression, render a QuickTime movie. The total length should be at least 20 seconds of cycled animation.
- Your presentation must include a demonstration of how this task is to be done and what path you took to learn it. Describe the learning difficulties you encountered and how you overcame those difficulties. The presentation must be timed to last no longer than 10 minutes. You will show the QuickTime on the computer and it must be pre-loaded on the local drive prior to the presentation.

### V-1

- Composite a digital tornado in front of a live action background. The Tornado must be created using Maya's Particle systems. The video, you will shoot yourself utilizing a digital video camera checked out from the Cage on second floor. The composite must be done in Discreet Combustion.
- Your presentation must include a demonstration of how this task is to be done and what path you took to learn it. Describe the learning difficulties you encountered and how you overcame those difficulties. The presentation must be timed to last no longer than 10 minutes. You will show a 720x480 quicktime movie on the computer and it must be pre-loaded on the local drive prior to the presentation

### V-2

- Composite a class member in front of a live action background. The Composite must be done in Discreet Combustion and the video of the group member must be taken in the green screen room utilizing a digital video camera checked out from the Cage on second floor. The background is to be shot out doors.
- You will be judged in your ability to "pull a key" using Combustion and your ability to match the **lighting** in the green screen environment with the **lighting** in the live action background.
- Your presentation must include a demonstration of how this task is to be done and what path you took to learn it. Describe the learning difficulties you encountered and how you overcame those difficulties. The presentation must be timed to last no longer than 10 minutes. You will show a 720x480 quicktime movie on the computer and it must be pre-loaded on the local drive prior to the presentation.