

Digital Arts

FALL 2004

Course: ART 113
Instructor: val valgardson
Time: MW 6-8:30
Room: 212 Buckman Hall

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Course Description:

This course will focus on the use of electronic imaging as a tool for art making. It is assumed that students will have little or no experience with digital art, though students should have basic computer skills.

The technical aspects of the class will include an in-depth introduction to the tools and techniques of digital image making with an emphasis on the 3-D modeling editing software. We will explore a variety of ways of creating "electronic" images. In addition we will explore a variety of image presentation and output options including digital printmaking, imaging for the World Wide Web, and mixed media.

Art making is at the core of this class and students will be encouraged to develop personal expression through the use of digital imaging, I encourage students to challenge their creativity and to make meaningful work that strikes a balance between form, content, and technique. Students are expected to complete each assignment throughout the semester in addition to creating proposals and completing a final project of their choice. Students will also be expected to present work and participate in critiques.

Recommended sites:

<http://www.coala.uniovi.es/~jandro/noname/>

<http://www.blender.org/>

<http://www.blender3d.com/>

<http://www.elysiun.com/index.php>

<http://www.good-tutorials.com/>

<http://cinepaint.sourceforge.net/>

<http://www.rendermania.com/>

<http://www.acm.org/tog/resources/RTNews/html/>
<http://www.3delight.com/index.htm>
<http://www.ypoart.com/>
<http://www.wings3d.com/>
<http://www.gimp.org/>
<http://www.renderman.org/>
<http://www.3dvirtualight.com/>
<http://www.radgametools.com/default.htm>
<http://www.divx.com/>
<http://www.virtualdub.org/>

words to google (surf and link)

raytracing
scanline rendering
renderman (pixar)
HDRI
3D Modeling
compositing

some texts for in-depth reading.

Evening, Martin: Adobe Photoshop 7.0 for Photographers, (Focal Press) 2002

Milburn, Ken: Digital Photography Bible, (Foster City, CA: IDG Books-Now Hungry Minds) 2000

Zakia, Richard: Perception and Imaging, (Focal Press, Second Edition) 2002

Advanced RenderMan: Creating CGI for Motion Pictures_ by
Tony Apodaca and Larry Gritz (Morgan-Kaufmann, 1999)

Selected texts (provided by the instructor)

Assignments:

There will be several visual assignments and a final project. All assignments will be graded based on creativity, content, technical proficiency, and your ability to discuss and defend your work.

Grading:

Assignments 70%
Final project 30%

Attendance:

Attendance is mandatory. Three unexcused absences and your grade will go down one letter; six unexcused absences and you will be dismissed from the class. If I do not hear from you on the class period either before or after, you are absent and I will assume the absence was unexcused. Communication via in person or through email is your best solution to avoid this happening. Do not be late for class. Repeated tardiness will also result in the lowering of your grade.

Fees:

There is a \$100 lab fee, which covers use of the digital labs.

Lab Use:

There are several labs available for student use. Take note of the posted lab hours and budget your work time wisely.

Software:

Other than PhotoShop the software we are using is opensource and can be freely downloaded.

Materials:

Material will vary depending on the nature of your project.

- 100 pack data cd-r or other data storage
- Analog 35mm camera with film (both slide and negative)
- Digital Cameras are optional. You will be able to check out one of several cameras when needed.

Output for the printer:

8.5x11 \$ 3.00 per print, 11x17 \$ 6.00 per print Larger \$12.00 per print

Off-campus output (\$30 -\$300/print depending on size and medium)

Additional Requirements:

Throughout the semester there will be artist lectures that you will be encouraged to attend.

Class Schedule: Digital Arts, ART113, Fall 2004

Week 1

Wednesday Aug 25

1. Introductions, general information, course syllabus, goals
2. Tour and introduction to Labs
3. Presentation of artist's work

Homework:

Read over Photoshop's HELP
Getting Images into Photoshop and ImageReady

Read over Blender's Documentation [http://www.blender.org/modules/documentation/html/Understanding the interface](http://www.blender.org/modules/documentation/html/Understanding%20the%20interface)
II. Modelling, Materials and Lights up to curves and surfacing

Week 2

Monday Aug 30

1. Assignment #1 figure\ground
2. Photoshop, introduction to scanning, file sizes, resolution, image quality
(Bring something to scan)
3. Introduction to Blender
Creating Objects
Primitives (Cube, Sphere, Torus, Cone, Cylinder, Tube, Plane)
 - * Manipulating an object (size, location, rotation)
 - * Points/Vertices
 - * Edges
 - * Polygons/Faces/N-Gons
 - * Normals

homework:

Reading from <http://bid.berkeley.edu/bidclass/readings/benjamin.html>

Read over PhotoShop's Help
Looking at the Work Area
Using Layers
Applying Filters for Special Effects

Read over Blender,
II. Modelling, Materials and Lights read **lighting**

Wednesday Sept. 1

1. Photoshop,
Tools, Image Manipulation, Filters, layers
2. Blender,
 - * Light Types (Point, Spot, Hemi, Area, AO, Raytracing, Radiosity)
 - * Intensity, Brightness, Energy
 - * Falloff & Distance
 - * Clipping (Start,End)
 - * Shape
 - * Shadow Casting
 - o Shadow Maps (Buffer, Samples, Softness)
 - o Cast shadows and not light
 - * Negative Light
 - * Color, Texture, Projection
3. In class work session
4. Slide presentation of artist's work

Homework:

Read over Blender

II. Modelling, Materials and Lights read **materials and textures and textures**

Week 3

Wednesday 8

1. More Photoshop, Layers, Masks
2. Blender Textures
 - * Procedurals
 - * Color
 - * Bump, Normal
 - * Reflection
 - * Alpha
 - * Specular

Homework:

Read over Blender

IV. Rendering

Reading assignment

http://www.stanford.edu/dept/HPS/Baudrillard/Baudrillard_Simulacra.html

Week 4

Monday 13

1. Seminar on reading
2. Blender
 - * Whats Happening
 - * Z-Depth/Buffer
 - * Different Renderers
 - * Ways to Render
 - o Individual or Image Sequences
 - o Movie Files
 - o File Types

Homework:

Read over Blender
V. Advanced Tools

Wednesday 15

In class work individual help

Week 5

Monday 20

1. Assignment #1 due, class critique

Homework:

Read over Blender
V. Advanced Tools read Effects Special Modeling techniques and Volumetric Effects
Reading assignment
<http://www.aber.ac.uk/media/Modules/MC10220/visindex.html>

Wednesday 22

1. Blender
2. Build, particles, wave, dupliverts, dupliframes

Assignment #2, Hybrid Imaging

Homework:

Read over
YafRay
http://www.blender3d.org/cms/YafRay_support.40.0.html
http://www.blender3d.org/cms/YafRay_Export_features.172.0.html
http://www.blender3d.org/cms/YafRay_plugin.377.0.html

Week 6

Monday 27

Blender/yafray/yable

Global illumination, photon maps, DOF

Wednesday 29

1. In class work, individual help

Homework:

Read over Blender

Animation

Week 7

Monday Oct. 4

1. Blender, Animation

IPO, keyframes, path, armature

Homework:

Read over Blender V. Advanced Tools

Sequence Editor

Reading assignment

<http://www.iath.virginia.edu/pmc/current.issue/14.3payne.html>

Wednesday 6

1. In class work, individual help

Week 8

Monday 11

In class work session

Wednesday 13 end of first seven week classes

Assignment #2 due, class critique

Week 9

Wednesday 20
Imaging for the Screen
Assignment #3
Codecs

Week 10

Monday 25
Intro to Adobe Imageready
Preparing images for the web,
Wednesday 27
Preparing images for On-line Exhibition

Week 11

Monday Nov 1
In class work session,
Wednesday 3
In class work session,

Week 12

Monday 8
Getting images on the Web

Exhibition Strategies

Wednesday 10
Assignment #3 due, class critique
Final Projects

Week 13

Monday 15,
Wednesday 17
Final Projects Proposals,
In class work session,

Week 14

Monday 22
Proposal Fine Tuning
In class Work Sessions

Week 15

Monday 29
Wednesday Dec. 1

Proposal Fine Tuning
In class Work Sessions

Week 16

Monday 7

Final Projects Due, class critique