

Preliminary Syllabus: Architecture 407, Spring 2004

Updated 10 December 2003

We do not teach AutoCAD 2D or form•Z / RenderZone in this class. You should take Architecture 207ab instead. We assume previous experience in any 3D modeling program.

Assignments come out on Friday's and are usually one or week in duration. Late assignments will not be accepted; turn in what you have on the due date at the beginning of class (9:00 AM).

An e-mail account is required for this course; check it every day. If you normally use a different e-mail provider (like hotmail), set up your USC account (including learn.usc.edu) to automatically forward your e-mail for you to that account. Go on-line and verify that your account is working. Call 740-5555 if you have problems accessing your account.

You are also responsible for purchasing at least two PC formatted Zip disks, the book **3D Studio MAX Fundamentals**, Michael Todd Peterson, New Riders, the Course Reader, and later in the semester, slide film. We will be using 3D Studio MAX, version ? .

Week 1

1/16 Watt 7

Introduction to Architecture 407

Introduction, description of programs, Reader, Blackboard

Description of projects; choose a project

Examples from previous semester: images and animations

Introduction to 3D Studio MAX

(3D Studio MAX and MediaPlayer with projector)

Modeling: parametric modeling, stack, meshes, extrude, revolve, loft, boolean operations

Rendering: making simple materials, accessing the default material library, applying textures, UVW

Viewing: zoom, save renderings

Other tools: snap, grid, tool options, move, rotate

Homework 1: Introduction to 3D Studio MAX and Picking the Project

Buy **3D Studio MAX Fundamentals** book

Week 2

1/23 WPH B36

Discussion: form/modeling

Introduction to 3D Studio MAX modeling and editing

Modeling: parametric modeling, stack, meshes (tessellation), extrude, revolve, loft

Rendering: make, view, and save renderings (resolution), simple lights, perspectives

Other tools: snap, grid, tool options, move, rotate, freezing/turning off objects

Library elements: definition, copy, instance, reference

Homework 1, part 1 due

3D Studio MAX Fundamentals: (chapters to be announced)

Week 3

1/30 WPH B36

Discussion: color/texture and lights
3D Studio MAX Rendering
Lights: types, volume light, shadow casting, fire
Materials: assigning; colors, texture hierarchies, mapping, material library,
background image (spherical), UVW, multi/sub-object, bitmapped images.
Show previous student examples

Homework 1, part 2 due

Homework 2: rendered model (3D Studio MAX)

3D Studio MAX Fundamentals: (chapters to be announced)

Week 4

2/6 WPH B36

Discussion: color/texture
3D Studio MAX Rendering and Lights
Make own material library.
Make own bitmapped images in Photoshop.
Materials review: assigning; colors, texture hierarchies, mapping, material library,
background image (spherical), UVW, multi/sub-object
Lights review: types, volume light, shadow casting, fire

Homework 2, part 1 due**3D Studio MAX Fundamentals:** (chapters to be announced)

Week 5

2/13 WPH B36

Discussion: 3D Studio MAX modeling, editing, rendering
show previous student work
talk about box modeling, modifiers, space warps, particle systems
work on tutorials: alien, tree, apple, glass with ice, fountain

Bring Reader to class!**Homework 2, part 2 due**

No new homework assignment.

Work on improving your model and textures; fix material library if necessary.

Reader: 3D Studio Tutorials*Modeling made easy: trees**Box alien**Creating a realistic apple using only procedural textures**Glass with ice cubes**Fountain*

Week 6

2/20 WPH B36

Discussion: time/animation
3D Studio MAX animation
motion path and key frame animation
introduction to track view
solar animation

Homework 3: animation (3D Studio MAX)

3D Studio MAX Fundamentals: (chapters to be announced)

Week 7

2/27 WPH B36

Discussion: time/animation
3D Studio MAX animation
review motion path and key frame animation
track view, object visibility, transparency, color
space warps, particle systems, fog, combustion
animated colors (and textures)

Bring Reader to class!**Homework 3, part 1 due****3D Studio MAX Fundamentals:** (chapters to be announced)

Week 8

3/5 WPH B36

Discussion: digital synthesis
capturing images and sound
Premiere
introduction, rolling titles, linking files, saving project and movie files
adding sound, volume control
still images, animated special effects on still images (Clip ... Effects menu)
overlay of text and images & images and animation using transparency command
running time faster, slower, backwards

Homework 4: making a movie (Premiere)

Homework 3, part 2 due

Week 9

3/12 WPH B36

Focused in-class individual assistance.
Premiere troubleshooting.

Homework 4, part 1 due**Bring homework 4 files to class!**

SPRING BREAK

Required Field Trip

Go to Westec at the Los Angeles Convention Center for an hour or two. This will replace a later class. Information will be given out in class.

Week 10

3/26 WPH B36

In class work day.

Homework 4, part 2 due**Think about your final project! Work on improving your model.**

Week 11

4/2

WPH B36

Lecture: animation, QTVR, vrmf
Discussion about student final projects
Show examples of final projects

Final Project handed out

AFA Library: *Envisioning Cyberspace*, pages 133 - 141

Final exam handout

Week 12

4/9

WPH B36

Lecture: modeling, color theory, rendering
(*slides, Photoshop, 3D Studio MAX, formZ, projector*)

Final Project (part 1) due

On computer: Color Theory Program

Reader: *Gautum Shenoy's study guide and comparison of rendering algorithms*

Reader: *Color Specification Systems and Reaching for the Rainbow*

Reader: *Architectural Tours through Texture Space*

Reader: *Digital Materials and Virtual Weathering*

Reader: *Pollock's Order in Chaos*

Final project, part 2, in progress

Week 13

4/16

TBA

Field trip

Final project, part 2, in progress

Week 14

4/23

Watt 7

Lecture: stereoscopic imaging
(*slides, screen, formZ files, Cyberscope*)

Final project, part 2, in progress

Week 15

4/30

Watt 7

Discussion: in class presentations
(*Macintosh or PC with projector, MoviePlayer, Photoshop*)
final exam review

Final Project (part 2) due

Final project, part 3, in progress

Final Exam Week

5/7

TBA

Final Exam

The exam will go from 8 am – 10 am.

Final Project (part 3) due before this date
