MASTER SYLLABI

7/1/03

MINNESOTA SCHOOL OF BUSINESS
GLOBE COLLEGE
TECHNICAL COURSE SYLLABUS

COURSE NUMBER: **GD155**
COURSE TITLE: ANIMATION FOR GAME DEVELOPMENT I
COURSE LENGTH: 12 WEEKS
CREDIT HOURS: 3
PREREQUISITES: NT105
CONTACT HOURS: 50 (LECTURE 10/ LAB 40)

TEXT: 3DS MAX 4 GROUND RULES, Michael Todd Peterson, 2001, Delmar Learning,
ISBN: 0-7668-3783-1

3DS MAX ™ 4 BIBLE, Kelly L. Murdock, 2001, John Wiley & Sons.
ISBN: 0-7645-3584-6

COURSE DESCRIPTION: This is an introduction to 3ds max. The areas of study include exploration of the user interface, viewports, objects, file management, modeling with 2d splines and shapes, meshes, patches, compound objects, and NURBS. The course will also cover lights and cameras.

OBJECTIVES: Upon completion of this course, the student will be able to:

1. Indicate an understanding of the 3D Studio Max interface.
2. Create sophisticated 3d models using NURBS, splines, patches, and meshes.
3. Simulate realistic materials and textures using the Material Editor.
4. Utilize the Modifier Stack and the power it offers in production.
5. Create basic animations with key frames.
6. Indicate an understanding of creating and controlling particle systems.
7. Utilize the theory of composition and how to create composition through camera placement.
8. Identify the properties of lights and the aesthetics of three point lighting and shadows.
9. Utilize Active Shade and rendering to disk.
10. Apply skills gained in the course to effectively present prototype game artwork.

COURSE OUTLINE:

Topics & Class Activities	Required Reading
Week 1	
3ds max user interface	3ds max 4 Ground Rules
3ds max concepts	Chapters 1 & 2
Layout of 3ds max user interface	Pages 1-66
Viewports	
Accessing Commands	
Week 2	
Quick Start	3ds max 4 Ground Rules
Modeling the Bridge	Chapter 3
Cameras and Lighting	Pages 67-105
Materials	
Animating a Fighter Jet	3DS MAX ™ 4 BIBLE
Creating an animation path	Part I
Rendering the final animation	Pages 1-33

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Topics & Class Activities	Required Reading
Week 3	
Modeling Basics	3ds max 4 Ground Rules
Modeling Basics	Chapters 4 & 5
Modifiers and Stack View	Pages 107-162
Transforming Objects	3DS MAX ™ 4 BIBLE Chapter 8 Pages 231-396
Week 4	
Editable Mesh and Editable Poly	3ds max 4 Ground Rules
Definition of editable mesh	Chapter 6
Polygon Reduction	Pages 163-200
Working with Meshes	3DS MAX ™ 4 BIBLE Chapter 12 Pages 373-396
Week 5	
Splines and compound objects	3ds max 4 Ground Rules
Creating Splines	Chapter 7
Compound Objects	Pages 201-239
Using 2d Splines and Shapes	3DS MAX ™ 4 BIBLE
Compound Objects	Chapters 11 & 14
Boolean Objects	Pages 333-372, 415-462
Week 6	
Surface Modeling Techniques	3ds max 4 Ground Rules
Working with patches	Chapter 8
NURBS surfaces	Pages 241-276
Creating patches	3ds max 4 Bible
Working with NURBS	Chapters 13 & 15 Pages 397-413, 463-485
Week 7	
Lights and Cameras	3ds max 4 Ground Rules
Introduction to Materials	Chapters 9-11
Mapping Materials	Pages 277-382
Week 8	
Rendering	3ds max 4 Ground Rules
Rendering a simple scene	Chapters 12
Active Shade	Pages 383-419
Environments and Atmospheric Effects	3DS MAX ™ 4 BIBLE
Using Render Effects and Elements	Chapters 34 & 35
Depth of Field	Pages 947-997

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Topics & Class Activities	Required Reading
Week 9	
Introduction to Animation Time in 3ds max Track View	3ds max 4 Ground Rules Chapters 13 & 14 Pages 421-490
Week 10	
Introduction to Character Animation Bones and Skeletons	3ds max 4 Ground Rules Chapter 15 Pages 491-529
Working with Bones	3DS MAX ™ 4 BIBLE Chapters 31 Pages 347-394
Week 11	
Introduction to Special FX Volumetric Lights	3ds max 4 Ground Rules Chapter 16 Pages 531-570
Particle Systems Space Warps	3DS MAX ™ 4 BIBLE Chapters 23 & 24 Pages 387-746
Week 12	
Presentation of Design Renderings Presentation of Prototype Game Artwork Final Exam	

INSTRUCTIONAL METHODS: Class sessions will consist of instructor lectures, demonstrations, critique sessions, process and planning exercises, and assignments. Students will be assigned reading from required texts and instructor provided handouts. Classes will consist of 10 hours of lecture. Students should expect research, writing and presentation assignments.

EVALUATION METHODS:

Grades are an indicator of overall performance, achievement and participation. Students are responsible for completing all course requirements on time to receive credit. Final projects will be presented during finals week.

Written projects / reports	300
Testing	200
Final Project	300
Attendance and Participation	200

The final grade for the course is based on an accumulation of points in each of the above areas and weighted accordingly. A total of 1000 points are possible. These points are based on the following percentages:

100-90%	A	
89-80%	B	
79-70%	C	
69-60%	D	
59% and lower		N/C

SUPPLIES REQUIRED:

Notebook
Presentation Materials (3-ring binders)
Pens or pencils