

MASTER SYLLABI

7/1/03

MINNESOTA SCHOOL OF BUSINESS
GLOBE COLLEGE
TECHNICAL COURSE SYLLABUS

COURSE NUMBER: **GD310**

COURSE TITLE: GAME DEVELOPMENT USING
DIRECTX II

COURSE LENGTH: 12 WEEKS

CREDIT HOURS: 3

PREREQUISITES: GD250

CONTACT HOURS: 50 (LECTURE 10/ LAB 40)

TEXT: BEGINNING DIRECT3D GAME PROGRAMMING, W. Engel & A. Geava, Prima Publishing
ISBN: 0-7615-3191-2

COURSE DESCRIPTION: The course will give students an advanced view of the use of DirectX 8.0 & Direct3d in games programming. The language used will be C++, but it will be applicable to many other programming languages.

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

1. Utilize the DirectX common architecture model background image.
2. Create programs using the common files framework of DirectX.
3. Learn to manipulate COM devices in DirectX.
4. Modify and control textures in Direct3d.
5. Utilize Direct3d transformation & lighting pipeline.
6. Create and use X files and Quake3 models.
7. Implement collision detecting techniques, react to one or prevent one.
8. Learn to port OpenGL (right handed coordinate system) to DirectX (left handed coordinate system).
9. Create realistic movement in a game.

COURSE OUTLINE:

	Topics & Class Activities	Required Reading
Week 1	Overview of DirectX, COM and HAL Texture mapping, geometry and shading	
Week 2	DirectX Common Architecture Parts of Appendix C: Common Files Framework	
Week 3	DirectX animation, pipelines Lighting and buffering Coding and Enhancements	
Week 4	Texture Mapping, fundamentals Texture coordinates, addressing modes Texture Wrapping and filtering	
Week 5	Multiple Textures, Color operations Environmental mapping, Bump mapping Dot Product texture blending	

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	Topics & Class Activities	Required Reading
Week 6	Working with X files, building worlds Using X files, Extending X files	
Week 7	Quake 3 model files The .md3 Format and related files	
Week 8	2D Collision Detection	
Week 9	3D Collision Detection	
Week 10	Projects	
Week 11	Projects	
Week 12	Presentation of Project	

INSTRUCTIONAL METHODS: Class sessions will consist of instructor lectures, demonstrations, hands-on exercises, and assigned projects. Students will be assigned reading from required texts and instructor provided handouts.

Students should expect homework assignments and to spend approximately 3 hours in unsupervised lab.

EVALUATION METHODS:

All Projects and Assignments are due on the date specified. Any late submissions will not be marked.

Written projects / reports	300
Classroom exercises	200
Final Project / Exam	300
Participation	<u>200</u>
	1000 Points

GRADING:

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