COLEMAN UNIVERSITY

San Diego, CA

Course Syllabus

COM273 XNA

Course Description

In this course students will be introduced to the basic components of XNA and the XNA Framework. The student will import both 2D sprites and 3D animations, draw complex terrain, and implement collision detection in multiplayer games. Network support issues will also be addressed. The student will build a framework to be used to develop rich playable games for common console systems.

General Course Information

Number of Units / Weeks	8 / 10
# Hours Lecture / # Hours Laboratory	60 / 40/120
Prerequisite(s)	COM253
Course Developer(s)	John Ramos, MBA & Anthony Le, BS
Date Approved / Last Review	March 2010 / August 2014

Learning Outcomes

Upon successful completion of the course, students will be able to:

- Identify and incorporate best practices for project planning, structure, and design
- Develop a framework of common functionality that can be easily reused in other projects
- Develop game code that solves various gaming problems and accomplishes required game objectives
- Identify code efficiency bottlenecks and retool where appropriate
- Develop an XNA project using various game components, such as 2D/3D graphics and audio

INSTRUCTIONAL METHODS EMPLOYED IN THIS COURSE

A number of instructional/learning methods are employed in this course, including the following:

- Lecture and Reading Assignments
- Hands-on Exercises and Labs
- Practical application of theory and skills in authentic Programming Projects
- Build on prior knowledge and experience of students to enhance richness of class activities

INFORMATION RESOURCES FOR THIS COURSE

Textbook

Lobão, Alexandre S. (2009) Beginning XNA Game Programming. 1st edition. New York: Apress.

Other Materials

Coleman College. The College Writer's Guide. San Diego: Coleman College, 2009.

Microsoft Visual C# 2008 Express Edition
http://www.microsoft.com/express/Downloads/#2008-Visual-CS
Retrieved on April 7, 2010

XNA Game Studio 3.0
http://www.microsoft.com/downloads/details.aspx?FamilyId=7D70D6ED-1EDD-4852-9883-9A33C0AD8FEE&displaylang=en
Retrieved on April 7, 2010

Web Site Readings

Microsoft Corporation. "XNA." 2007. Internet: <http://www.xna.com> April 7, 2010.

Microsoft Corporation. "XNA Creators Club Online." 2010. Internet: <http://creators.xna.com> April 7, 2010.

COURSE OUTLINE

WEEK	*TOPIC*	*READING*	*PROJECT ASSIGNED*
1	Game Planning and XNA Programming Basics 2D Graphics, Audio and Inputs	Chapters 1 & 2	**Read** Chapters 1 – 2 36 pages: 3.6 hours **Evaluation:** Midterm **Design Project:** Look & Feel: 27.8 hrs **Evaluation :** graded, 50 points
2	Creating Your First 2D Game Improving Your First 2D Game	Chapters 3 & 4	**Read** Chapters 3 – 4 76 pages: 7.6 hours **Evaluation:** Projects 1 – 4 & Midterm **Project 1:** RockRain 8 hrs **Evaluation :** graded, 50 points **Project 2:** RockRain Creative 16 hrs **Evaluation :** graded, 50 points
3	Improving Your First 2D Game Basics of Game Networking	Chapters 4 & 5	**Read** Chapter 5 33 pages: 3.3 hours **Evaluation:** Project 5 & Midterm **Project 3:** RockRain Enhanced 16 hrs **Evaluation :** graded, 50 points **Project 4:** RockRain Enhanced Creative 16 hrs **Evaluation :** graded, 50 points

WEEK	***TOPIC***	***READING***	***PROJECT ASSIGNED***
4	Rock Rain Live!	Chapters 6	**Read** Chapters 6 32 pages: 3.2 hours **Evaluation:** Project 6 & Midterm **Project 5:** Networking 4 hrs **Evaluation :** graded, 50 points **Project 6:** RockRain Live 16 hrs **Evaluation :** graded, 50 points
5	3D Game Programming Basics Rendering Pipeline, Shaders, and Effects	Chapters 8 & 9	**Read** Chapters 8 & 9 40 pages: 4 hours **Evaluation:** Project 7 & Final Midterm Exam
6	Rendering Pipeline, Shaders, and Effects Lights, Camera, Transformations!	Chapters 9 & 10	**Read** Chapter 10 19 pages: 1.9 hours **Evaluation:** Final **Project 7:** 3D Axis & Mesh 4 hrs **Evaluation :** graded, 50 points
7	Particle Effects	SM Lesson 10	**Read** Lesson 10 6 pages: 0.6 hours **Evaluation:** Project 8 & Final **Project 8:** Particle Effects 4 hrs **Evaluation :** graded, 50 points
8	Generating a Terrain Skeletal Animation	Chapters 11 & 12	**Read** Chapters 11 – 12 75 pages: 7.5 hours **Evaluation:** Project 9 & 10 & Final **Project 9:** 3D Terrain 10 hrs **Evaluation :** graded, 50 points

WEEK	*TOPIC*	*READING*	*PROJECT ASSIGNED*
9	Skeletal Animation Creating a Third-Person Shooter Game	Chapters 12 & 13	**Read** Chapters 13 58 pages: 5.8 hours **Evaluation:** Final Project & Final **Project 10:** Skeletal Animation 8 hrs **Evaluation :** graded, 50 points **Final Project:** Third-Person Shooter Game 16 hrs **Evaluation :** graded, 100 points
10	Creating a Third-Person Shooter Game	Chapter 13	Final Exam

Total hours of required reading:	37.5 hours
Total hours chapter/discussion questions:	21 hours
Total hours Projects	145.8 hours – 40 hours lab = 105.8 hours
Total hours of out-of-class activities:	143.3 hours

Your Grades for this Course

Your final grade for this course will be based on an assessment by the Instructor of your performance on a number of course activities, which may include objective tests, classroom exercises, laboratory demonstrations, project papers, or other types of activities. The chart below indicates in what activities you will engage, how many possible points can be earned for each activity, and the percentage of your final grade that will be accounted for by each activity.
Students in this course should be graded following Coleman University assessment practices and policies. A point system is used in the University to indicate student performance on various required activities or projects. For this course, it is recommended that points be distributed as follows:

Coleman University Grade Assignment Policy:

Percent	Letter Grade	Grade Points
94-100	A	4

90-93	A-	3.67
87-89	B+	3.33
84-86	B	3
80-83	B-	2.67
77-79	C+	2.33
74-76	C	2
70-73	C-	1.67
67-69	D+	1.33
64-66	D	1
60-63	D-	0.67
N/A	INC	0
N/A	W	0
60 or above	CR	0
59 or below	NC	0
N/A	I	0
N/A	W	0
N/A	AU	0
N/A	TR	0
N/A	WV	0

Legend	
CR = Credit	NC = No Credit
I = Incomplete	W = Course Withdrawal
AU = Audit	TR = Transfer Credit
WV = Waiver	

Academic Accommodation / Adjustment Policy:

In accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA), Coleman University offers accommodations to students with documented physical, psychological, and/or cognitive disabilities. Coleman University will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to offer equal educational opportunities to qualified disabled individuals.

To qualify for an academic accommodation under ADA, the student must provide adequate documentation of a disability. Students seeking academic accommodations should contact the campus ADA Coordinator at 858-966-3953 or via email at ada@coleman.edu. The ADA Coordinator will review the documentation provided and verify ADA coverage. Students covered under ADA must meet with the ADA Coordinator at the beginning of every term to

determine the appropriate academic accommodations. Failing to meet with the ADA Coordinator at the beginning of every term may impact the availability of accommodations.

After the academic accommodations have been determined, the students' instructors will be notified by the ADA Coordinator. If any problems or concerns regarding the provision of accommodations occur, the student must inform the ADA Coordinator. If the student feels accommodation is not being made appropriately, the student may follow the published Student Grievance Procedures.