

ORIGINATOR'S SECTION:		
1. College: <input checked="" type="checkbox"/> CoAS <input type="checkbox"/> CoBA <input type="checkbox"/> CoE	Desired Term and Year of Implementation (e.g., Fall 2008): Spring 2008	
2. Course is to be considered for G.E.? (If yes, also fill out appropriate GE form*) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
3. Course will be a variable-topics (generic) course? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (“generic” is a placeholder for topics)		
4. Course abbreviation and Number:* CS 485		
5. Title: (Titles using jargon, slang, copyrighted names, trade names, or any non-essential punctuation may not be used.) Game Programming		
6. Abbreviated Title for Banner: (no more than 25 characters, including spaces) Game Programming		
7. Number of Units: 3		
8. Catalog Description: (Not to exceed 80 words; language should conform to catalog copy. Please consult the catalog for models of style and format; include all necessary information regarding consent for enrollment, pre- and/or corequisites, repeated enrollment, crosslisting, as detailed below. Such information does <u>not</u> count toward the 80-word limit.) Introduction to the concepts of game development and game modeling and programming through developing playable 2D/3D games using a modern game engine. Includes the framework and roles in a team for game development, programming skills of using a game engine like the Torque scripts, and modeling skills of creating 3D models with animation using tools like Blender3D. Prerequisite: CS 311		
9. Why is this course being proposed? To provide an opportunity for students to obtain the knowledge and skills necessary to create 3D multiplayer games.		
10. Mode of Instruction* (See pages 17-23 at http://www.calstate.edu/cim/data-element/APDB-Transaction-DED-SectionV.pdf for definitions of the Course Classification Numbers)		
	Type of Instruction	Number of Credit Units
	Lecture	3
	Activity	
	Lab	
11. Grading Method:* <input checked="" type="checkbox"/> Normal (N) (Allows Letter Grade +/-, and Credit/No Credit) <input type="checkbox"/> Normal Plus Report-in-Progress (NP) (Allows Letter Grade +/-, Credit/No Credit, and Report-in-Progress) <input type="checkbox"/> Credit/No Credit Only (C) <input type="checkbox"/> Credit/No Credit or Report-in-Progress Only (CP)		
12. If the (NP) or (CP) grading system was selected, please explain the need for this grade option.		
13. Course Requires Consent for Enrollment? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Faculty <input type="checkbox"/> Credential Analyst <input type="checkbox"/> Dean <input type="checkbox"/> Program/Department - Director/Chair		
14. Course Can be Taken for Credit More than Once? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, how many times? (including first offering)		
15. Is Course Crosslisted: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, indicate which course and check “yes” in item #22 below.		
16. Prerequisite(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No CS 311		
17. Corequisite(s): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
18. Documentation attached:		

* If Originator is uncertain of this entry, please consult with Program/Department Director/Chair.

20. How often will this course be offered once established?* less than once a year

PROGRAM DIRECTOR/CHAIR - COLLEGE CURRICULUM COMMITTEE SECTION:
(Mandatory information – all items in this section must be completed.)

21. Does this course fulfill a requirement for any major (i.e., core course or elective for a major, majors in other departments, minors in other departments)? Yes No

If yes, please specify:
elective for the BS degree in computer science

22. Does this course impact other discipline(s)? (If there is any uncertainty as to whether a particular discipline is affected, check "yes" and obtain signature.) Yes No

If yes, obtain signature(s). Any objections should be stated in writing and attached to this form.

Discipline	Signature	Date	Support	Oppose
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SIGNATURES : (COLLEGE LEVEL) :

(UNIVERSITY LEVEL)

1. Originator (please print or type name) Xiaoyu Zhang Date 3/6/07

2. Program Director/Chair [Signature] Date 3/6/07

3. College Curriculum Committee [Signature] Date 3/22/07

4. College Dean (or Designee) [Signature] Date 3/22/07

5. UCC Committee Chair _____ Date _____

6. Vice President for Academic Affairs (or Designee) _____ Date _____

7. President (or Designee) _____ Date _____

* If Originator is uncertain of this entry, please consult with Program/Department Director/Chair.

CS 485 Game Programming

Course Information

Instructor: Dr. Xiaoyu Zhang
Office: SCI2 239A
Phone: 760-750-4187
E-mail: xiaoyu@csusm.edu

Objectives

Upon conclusion of this course, students will be able to:

- Understand the framework of game development and basic concepts of 3D game modeling and programming
- Create 3D games as a team using a modern game engine like the Torque Game Engine
- Learn the programming of Torque Script to integrate art and models into a game, create game play features, and client-server interactions etc.
- Create 3D models with animation using modeling tools, e.g. Blender3D

Course Description

Learn the concepts of game development and game modeling and program skills by developing playable 2D/3D games using a modern game engine. Understand the framework and roles in a development team for game development. Develop programming skills of using a game engine like the Torque scripts, and modeling skills of creating 3D models with animation using tools like Blender3D.

Prerequisite

CS 311

Attendance

Students are expected to be present and punctual for all scheduled classes and labs.

Textbook

“The Game Programmer’s Guide to Torque: Under the Hood of the Torque Game Engine” *Edward F. Maurina III*, AK Peters, Ltd.; Pap/Cdr edition (March 28, 2006), ISBN-10: 1568812841

Grading:

Grades will be primarily based on a project. You will write a complete, playable game demo in groups. Your final score will be compiled from following parts:

Project:	70%
Individual assignments	20%
Participation	10%

Your letter grade will be based on the following scale:

Total %	≥ 90	$80 \leq \text{and} < 90$	$70 \leq \text{and} < 80$	$60 \leq \text{and} < 70$	< 60
Grade	A	B	C	D	F

The above is an absolute scale. You can guarantee yourself a particular grade by attaining the appropriate overall percentage. No + or - grade will be given.

Policies

1. **Project:** You will implement a semester-long game project. You need to submit a proposal for the game, demonstrate your progress in several checkpoints during the semester, turn in your final product and write a final report. 70% of project scores will be determined by your final submission and report. The rest 30% are determined by the proposal and your performances at the checkpoints. In group projects, assigning grades to individual members is always difficult. The members of a group will get the same score for the final project itself. Team members will also evaluate each other's performance; 25% of final project grade will be based on these peer evaluations.
2. Any discrepancy on grades should be submitted to the instructor within one week from the day that the grades are handed out in class (not the day you receive it).
3. **Academic Honesty:** Students are expected to finish the homework assignments independently. Discussions among students are allowed and encouraged. However, copying others' homework or from any other resource is strictly prohibited. Read carefully the "Academic Honesty" section of your catalog. Any violation on an exam/assignment will result in an F for the exam/assignment and possibly a failing grade for the course and will be reported to student affairs.
4. Students with disabilities who require reasonable accommodations must be approved through the Office of Disabled Student Services (DSS). The office is located in Craven 5205 and can be contacted by phone at 760.750.4906 or 760.750.4909 (TTY).

Schedule

Please note that this schedule is approximate, and subject to change.

- Week 1 Introduction to 3D Game Development, Introduction to Programming
- Week 2 3D Programming Concepts
- Week 3 Game Programming and Gameplay
- Week 4 Network and Common Scripts
- Week 5 Introduction to Textures and Skins
- Week 6 Creating GUI Elements and Structural Material Textures
- Week 7 Terrains and Skyboxes and Introduction to Modeling with MilkShape

- Week 8 Making a Player Model and Making a Vehicle Model
- Week 9 Making Weapons and Items and Making Structures
- Week 10 Making the Game World Environment and Creating and Programming Sound
- Week 11 Game Sound and Music and Creating the Game Mission
- Week 12 The Game Server and The Game Client
- Week 13 and 14 The End Game
- Week 15 final demo