



Digital Gaming and Simulation
GAME 2334 - Project Development II
Course Syllabus

Semester with Course Reference Number (CRN)	Spring 2016 CRN: 92156
Instructor contact information (phone number and email address)	Dr. Reni Abraham (713) 718 – 2067 reni.abraham@hccs.edu (use QuickMail through Eagle Online for class related items)
Office Location and Hours	West Loop campus, room C256 Office hours are by appointment.
Course Location/Times	West Loop campus, room C121 3:00PM – 5:30PM
Course Semester Credit Hours (SCH) (lecture, lab) If applicable	Credit Hours: 3 Lecture Hours: 2 Laboratory Hours: 4 External Hours: 0
Total Course Contact Hours	96.00
Course Length (number of weeks)	16 weeks
Type of Instruction	Lecture/Lab
Course Description:	Continuation of an original modification based on a current game engine with an emphasis on new content and radical changes in game play over the base game experience. Includes creation of original levels, characters, and content for a real-time multiplayer game applying skills learned in pervious classes.
Course Prerequisite(s)	PREREQUISITE(S): <ul style="list-style-type: none"> • GAME 1304, GAME 1306, and GAME 1378 for all • GAME 1374 for Artist • GAME 2319 and GAME 2342 for Programmers CO-REQUISITE(S): <ul style="list-style-type: none"> • GAME 2325 for Artist • GAME 2302 for Programmers
Academic	1. Define and identify terminologies used in the gaming and simulation industry.

Discipline/CTE Program Learning Outcomes	<ol style="list-style-type: none"> 2. Demonstrate the use of appropriate tools to develop the assets. 3. Create documentation for game or simulation. 4. Develop assets for game or simulation.
Course Student Learning Outcomes (SLO): 4 to 7	<ol style="list-style-type: none"> 1. Explain the fundamentals of project management and version control 2. Develop a game or simulation based on a design plan 3. Participate in a post-mortem discussion of the project. 4. Jointly develop the design document and estimated time schedules for the team project 5. Texas Skill Standards Board (TSSB) -Programmers- 1:Develop Computer Games or Simulation 6. Texas Skill Standards Board (TSSB) -Programmers- 2: Develop Human/Computer Interactions for Games or Simulations 7. Texas Skill Standards Board (TSSB) -Programmers- 3: Implement Network Connectivity for Games or Simulations 8. Texas Skill Standards Board (TSSB) -Programmers- 4: Verify System Quality for Games or Simulations 9. Texas Skill Standards Board (TSSB) -Programmers- 5: Develop Documentation for Games or Simulations 10. Texas Skill Standards Board (TSSB) -Artists- A:Develop Concept Art Assets 11. Texas Skill Standards Board (TSSB) -Artists- B: Create User Interface 12. Texas Skill Standards Board (TSSB) -Artists- C: Create Models 13. Texas Skill Standards Board (TSSB) -Artists- D: Create Textures 14. Texas Skill Standards Board (TSSB) -Artists- E: Create Character Rigging and Animation 15. Texas Skill Standards Board (TSSB) -Artists- F: Create Special Effects 16. Texas Skill Standards Board (TSSB) -Artists- G: Create lighting
Learning Objectives (Numbering system should be linked to SLO - e.g., 1.1, 1.2, 1.3, etc.)	<p>Explain the fundamentals of project management and version control</p> <ol style="list-style-type: none"> 1. Demonstrate the understanding of project management and version control. <p>Develop a game or simulation based on a design plan</p> <ol style="list-style-type: none"> 1. Create a game or simulation based on a design document. <p>Participate in a post-mortem discussion of the project.</p> <ol style="list-style-type: none"> 1. Conduct a post-mortem discussion of a project. <p>Jointly develop the design document and estimated time schedules for the team project</p> <ol style="list-style-type: none"> 1. Work with a team in the development process. <p>Texas Skill Standards Board (TSSB) -Programmers- 1:Develop Computer Games or Simulation</p> <ol style="list-style-type: none"> 1.1 Program computer graphics for games or simulations. 1.2 Program rules for games or simulations. 1.3 Program computer physics for games or simulations. 1.4 Program computer animation for games or simulations. 1.5 Program artificial intelligence for games or simulations. 1.6 Program input/output for games or simulations. <p>Texas Skill Standards Board (TSSB) -Programmers- 2: Develop Human/Computer Interactions for Games or Simulations</p> <ol style="list-style-type: none"> 2.1 Create user interface for games or simulations. 2.2 Program input interface for games or simulations. 2.3 Program sensory feedback for games or simulations. 2.4 Evaluate user interface for games or simulations. <p>Texas Skill Standards Board (TSSB) -Programmers- 3: Implement Network Connectivity for Games or Simulations</p> <ol style="list-style-type: none"> 3.1 Program network protocols for games or simulations. 3.2 Program multiplayer functionality for games or simulations. 3.3 Program login process for games or simulations. 3.4 Program clients/server communications for games or simulations.

	<p>Texas Skill Standards Board (TSSB) -Programmers- 4: Verify System Quality for Games or Simulations</p> <ul style="list-style-type: none"> 4.1 Write unit tests for games or simulations. 4.2 Test computer system integration and portability for games or simulations. 4.3 Validate multi hardware/software compatibility for games or simulations. 4.4 Test computer system performance for games or simulations. 4.5 Validate computer system security for games or simulations. <p>Texas Skill Standards Board (TSSB) -Programmers- 5: Develop Documentation for Games or Simulations</p> <ul style="list-style-type: none"> 5.2 Create tutorials/demos/user guides for games or simulations. 5.3 Create programming interface guides for games or simulations. 5.4 Create in-code documentation for games or simulations. 5.5 Create change lists for games or simulations. 5.1 Create technical design document for games or simulations. <p>Texas Skill Standards Board (TSSB) -Artists- A:Develop Concept Art Assets</p> <ul style="list-style-type: none"> A.1 Develop preliminary drawings of primary objects or characters. A.2 Develop preliminary drawings of level environments. A.3 Develop preliminary drawings of secondary objects or characters. A.4 Develop Storyboards. A.5 Collect concept assets. <p>Texas Skill Standards Board (TSSB) -Artists- B: Create User Interface</p> <ul style="list-style-type: none"> B.1 Design game interface hierarchy. B.2 Create art assets for game interface. <p>Texas Skill Standards Board (TSSB) -Artists- C: Create Models</p> <ul style="list-style-type: none"> C.1 Create objects or character game geometry. C.2 Create game geometry for level environments. C.4 Create game placeholder geometry. C.5 Create LODs (Level of Detail) of game objects or characters. C.6 Create tools and technical character art. C.3 Create game geometry for secondary game objects <p>Texas Skill Standards Board (TSSB) -Artists- D: Create Textures</p> <ul style="list-style-type: none"> D.1 Create UV maps. D.2 Create texture sheets for game objects or characters. D.3 Create texture sheets for level environments. D.5 Setup materials and shaders. <p>Texas Skill Standards Board (TSSB) -Artists- E: Create Character Rigging and Animation</p> <ul style="list-style-type: none"> E.1 Create and implement a character rig for the game engine. E.6 Perform Motion Capture post production. E.7 Create Animation for "real time" cinematics (cut scenes). E.8 Create tools and technical character art. <p>Texas Skill Standards Board (TSSB) -Artists- F: Create Special Effects</p> <ul style="list-style-type: none"> F.4 Create particle animation. F.7 Create tools and technical character art. <p>Texas Skill Standards Board (TSSB) -Artists- G: Create lighting</p> <ul style="list-style-type: none"> G.1 Create environmental lighting. G.2 Create and apply light maps.
<p>SCANS and/or Core Curriculum Competencies: If applicable</p>	<p>SCANS</p> <p>Explain the fundamentals of project management and version control</p> <p>Develop a game or simulation based on a design plan</p> <p>Participate in a post-mortem discussion of the project.</p> <p>Jointly develop the design document and estimated time schedules for the team project</p> <p>Texas Skill Standards Board (TSSB) -Programmers- 1:Develop Computer Games or Simulation</p> <p>Texas Skill Standards Board (TSSB) -Programmers- 2: Develop</p>

	<p>Human/Computer Interactions for Games or Simulations Texas Skill Standards Board (TSSB) -Programmers- 3: Implement Network Connectivity for Games or Simulations Texas Skill Standards Board (TSSB) -Programmers- 4: Verify System Quality for Games or Simulations Texas Skill Standards Board (TSSB) -Programmers- 5: Develop Documentation for Games or Simulations Texas Skill Standards Board (TSSB) -Artists- A:Develop Concept Art Assets Texas Skill Standards Board (TSSB) -Artists- B: Create User Interface Texas Skill Standards Board (TSSB) -Artists- C: Create Models Texas Skill Standards Board (TSSB) -Artists- D: Create Textures Texas Skill Standards Board (TSSB) -Artists- E: Create Character Rigging and Animation Texas Skill Standards Board (TSSB) -Artists- F: Create Special Effects Texas Skill Standards Board (TSSB) -Artists- G: Create lighting</p>
<p>Instructional Methods</p>	<p>Web-enhanced (49% or less) Face to Face</p>
<p>Student Assignments</p>	<p>Explain the fundamentals of project management and version control Projects</p> <p>Develop a game or simulation based on a design plan Projects Portfolios Lab Exercises Homework Exercises</p> <p>Participate in a post-mortem discussion of the project. Lab Exercises</p> <p>Jointly develop the design document and estimated time schedules for the team project Presentations Projects Portfolios Lab Exercises Homework Exercises</p> <p>Texas Skill Standards Board (TSSB) -Programmers- 1:Develop Computer Games or Simulation Projects</p> <p>Texas Skill Standards Board (TSSB) -Programmers- 2: Develop Human/Computer Interactions for Games or Simulations Projects</p> <p>Texas Skill Standards Board (TSSB) -Programmers- 3: Implement Network Connectivity for Games or Simulations Projects</p> <p>Texas Skill Standards Board (TSSB) -Programmers- 4: Verify System Quality for Games or Simulations Projects</p> <p>Texas Skill Standards Board (TSSB) -Programmers- 5: Develop Documentation for Games or Simulations Projects</p> <p>Texas Skill Standards Board (TSSB) -Artists- A:Develop Concept Art Assets Projects</p> <p>Texas Skill Standards Board (TSSB) -Artists- B: Create User Interface Projects</p> <p>Texas Skill Standards Board (TSSB) -Artists- C: Create Models Projects</p> <p>Texas Skill Standards Board (TSSB) -Artists- D: Create Textures</p>

	<p>Projects Texas Skill Standards Board (TSSB) -Artists- E: Create Character Rigging and Animation Projects Texas Skill Standards Board (TSSB) -Artists- F: Create Special Effects Projects Texas Skill Standards Board (TSSB) -Artists- G: Create lighting Projects</p>
<p>Student Assessment(s)</p>	<p>Explain the fundamentals of project management and version control In-class discussions Develop a game or simulation based on a design plan Various assigned readings from textbooks Presentations In-class discussions Reading and then writing about seminal texts and theories Group and/or individual projects Participate in a post-mortem discussion of the project. In-class discussions Group and/or individual projects Jointly develop the design document and estimated time schedules for the team project Portfolios Presentations In-class discussions Reading and then writing about seminal texts and theories Group and/or individual projects Texas Skill Standards Board (TSSB) -Programmers- 1:Develop Computer Games or Simulation Presentations In-class discussions Group and/or individual projects Texas Skill Standards Board (TSSB) -Programmers- 2: Develop Human/Computer Interactions for Games or Simulations In-class discussions Group and/or individual projects Texas Skill Standards Board (TSSB) -Programmers- 3: Implement Network Connectivity for Games or Simulations Group and/or individual projects In-class discussions Texas Skill Standards Board (TSSB) -Programmers- 4: Verify System Quality for Games or Simulations In-class discussions Group and/or individual projects Texas Skill Standards Board (TSSB) -Programmers- 5: Develop Documentation for Games or Simulations Group and/or individual projects In-class discussions Texas Skill Standards Board (TSSB) -Artists- A:Develop Concept Art Assets In-class discussions Group and/or individual projects Texas Skill Standards Board (TSSB) -Artists- B: Create User Interface In-class discussions Group and/or individual projects Texas Skill Standards Board (TSSB) -Artists- C: Create Models Group and/or individual projects In-class discussions</p>

	<p>Texas Skill Standards Board (TSSB) -Artists- D: Create Textures In-class discussions Group and/or individual projects</p> <p>Texas Skill Standards Board (TSSB) -Artists- E: Create Character Rigging and Animation In-class discussions Group and/or individual projects</p> <p>Texas Skill Standards Board (TSSB) -Artists- F: Create Special Effects In-class discussions Group and/or individual projects</p> <p>Texas Skill Standards Board (TSSB) -Artists- G: Create lighting In-class discussions Group and/or individual projects</p>
<p>Instructor's Requirements</p>	<ul style="list-style-type: none"> • NO late assignments will be give any credit, even if you are absent, unless previous arrangements were made with the instructor. <p>Manage your personal life (work, playing games, etc.) wisely.</p>
<p>Program/Discipline Requirements: If applicable</p>	<ul style="list-style-type: none"> • Students are expected to be on time for class. • If a student is absent for any reason, it is the student's responsibility to find out what was covered in class. • Students are not expected to buy their own software. The open lab has all the software needed for the students to complete the work. It is the responsibility of the students to use class time wisely and if work is not completed they are expected to go to open lab and complete the work. • TURN OFF cell phones or place phones on vibrate, away from the desk. • NO surfing the web unless for class work. • At NO time should a student be playing games (PC or portable device) during class time unless required by the instructor. • Students will be expected to turn in all work with profession quality. • Students will be expected to be self-motivated and enthusiastic about the work to be completed. • Students will be expected to be encouraging and professional at all times. • If there is a presentation requirement, students will be expected to be in professional attire for all presentations. • Students are expected to respect constructive comments from peers. <p>TITLE IX OF THE EDUCATION AMENDMENTS OF 1972, 20 U.S.C. A§ 1681 ET. SEQ.</p> <p>Title IX of the Education Amendments of 1972 requires that institutions have policies and procedures that protect students' rights with regard to sex/gender discrimination. Information regarding these rights are on the HCC website under Students-Anti-discrimination. Students who are pregnant and require accommodations should contact any of the ADA Counselors for assistance.</p> <p>It is important that every student understands and conforms to respectful behavior while at HCC. Sexual misconduct is not condoned and will be addressed promptly. Know your rights and how to avoid these difficult situations.</p> <p>Log in to: www.edurisksolutions.org . Sign in using your HCC student e-mail account, then go to the button at the top right that says Login and enter your student number.</p>

HCC Grading Scale:

A = 100- 90	4 points per semester hour
B = 89 - 80:	3 points per semester hour
C = 79 - 70:	2 points per semester hour
D = 69 - 60:	1 point per semester hour
59 and below = F	0 points per semester hour
FX (Failure due to non-attendance)	0 points per semester hour
IP (In Progress)	0 points per semester hour
W (Withdrawn)	0 points per semester hour
I (Incomplete)	0 points per semester hour
AUD (Audit)	0 points per semester hour

IP (In Progress) is given only in certain developmental courses. The student must re-enroll to receive credit. COM (Completed) is given in non-credit and continuing education courses.

FINAL GRADE OF FX: Students who stop attending class and do not withdraw themselves prior to the withdrawal deadline may either be dropped by their professor for excessive absences or be assigned the final grade of "FX" at the end of the semester. Students who stop attending classes will receive a grade of "FX", compared to an earned grade of "F" which is due to poor performance. Logging into a DE course without active participation is seen as non-attending. Please note that HCC will not disperse financial aid funding for students who have never attended class.

Students who receive financial aid but fail to attend class will be reported to the Department of Education and may have to pay back their aid. A grade of "FX" is treated exactly the same as a grade of "F" in terms of GPA, probation, suspension, and satisfactory academic progress.

To compute grade point average (GPA), divide the total grade points by the total number of semester hours attempted. The grades "IP," "COM" and "I" do not affect GPA.

Instructor Grading Criteria

Items	Percent
Tutorials ONE and TWO	10%
Project ONE	30%
Project TWO	50%
FINAL PRESENTATION FINAL CRITIQUE	10%
TOTAL	100%

Students with all assignments submitted, all quizzes taken, and with no more than TWO absences would be eligible for a 2% curve at the end of the semester.

Instructional Materials	<ul style="list-style-type: none"> • External Hard Drive. • Flash drive will be useful too. • <u>Sketch book</u> • <u>Pencil and or pen</u> <ul style="list-style-type: none"> • Reference Materials for Unity 3D: Download 5.3.1: https://unity3d.com/get-unity Tutorial: https://unity3d.com/learn/tutorials Documentation: http://docs.unity3d.com/Manual/index.html
HCC Policy Statement:	
Access Student Services Policies on their Web site:	http://www.hccs.edu/district/students/disability-services/student-resources
EGLS3 -- Evaluation for Greater Learning Student Survey System	<p>At Houston Community College, professors believe that thoughtful student feedback is necessary to improve teaching and learning. During a designated time near the end of the term, you will be asked to answer a short online survey of research-based questions related to instruction. The anonymous results of the survey will be made available to your professors and department chairs for continual improvement of instruction. Look for the survey as part of the Houston Community College Student System online near the end of the term.</p>

HCC 16-week Calendar

JANUARY 2016

Date	Day	Event
<input type="checkbox"/> Jan 15	Friday	Spring 2016 Reg 16 WK: Last Day for 100% refund
<input type="checkbox"/> Jan 15	Friday	Spring 2016 Reg 16: Last Day for Drop/Add/Swap/Registration Ends (in-person)
<input type="checkbox"/> Jan 18	Monday	Spring 2016 Reg 16 WK Coleman: Offices Closed- Martin Luther King, Jr. Observance
<input type="checkbox"/> Jan 18	Monday	Spring 2016 Reg 16 WK: Offices Closed- Martin Luther King, Jr. Observance
<input type="checkbox"/> Jan 18	Monday	Spring 2016 Reg 16 WK: Last Day for Drop/Add/Swap/ Registration Ends (online only)
<input type="checkbox"/> Jan 19	Tuesday	Spring 2016 Reg 16-Wk Classes Begin
<input type="checkbox"/> Jan 26	Tuesday	Spring 2016 Reg 16 WK Coleman: Official Day of Record

FEBRUARY 2016

Date	Day	Event
<input type="checkbox"/> Feb 1	Monday	Spring 2016 Reg 16 WK: Official Day of Record
<input type="checkbox"/> Feb 4	Thursday	Spring 2016 Reg 16 WK: Last Day for 70% refund
<input type="checkbox"/> Feb 10	Wednesday	Spring 2016 Reg 16 WK: Last Day for 25% refund
<input type="checkbox"/> Feb 12	Friday	Spring 2016 Reg 16 WK: Priority Deadline for Spring Completion of Degrees or Certificates
<input type="checkbox"/> Feb 15	Monday	Spring 2016 Reg 16 WK: Office Closed- President's Day

MARCH 2016

Date	Day	Event
<input type="checkbox"/> Mar 14	Monday	Spring 2016 Reg 16 WK: Office Closed- Spring Break
<input type="checkbox"/> Mar 25	Friday	Spring 2016 Reg 16 WK: Office Closed- Spring Holiday

APRIL 2016

Date	Day	Event
<input type="checkbox"/> Apr 5	Tuesday	Spring 2016 Reg 16 WK: Last day to withdraw

MAY 2016

Date	Day	Event
<input type="checkbox"/> May 15	Sunday	Spring 2016 Reg 16 WK: Semester Ends

Final Exam Schedule

Tuesday, May 10, 2016 at 3:00pm - 5:00pm

Tentative Course
Calendar

Week		Topic	
1	Jan. 19, 21	Introduction Tutorial One	
2	Jan. 26, 28	Tutorial Two	
3	Feb. 2, 4	Project ONE	
4	Feb. 9, 11		
5	Feb. 16, 18		
6	Feb. 23, 25		
7	Mar. 1, 3		
8	Mar. 8, 10		
8	Mar. 8, 10		Project TWO
	Mar. 15, 17	Spring Break HOLIDAY: Mar. 12 - 19, 2016	
9	Mar. 22, 24	Project TWO contd.	
10	Mar. 29, 31		
11	Apr. 5, 7		
12	Apr. 12, 14		
13	Apr. 19, 21		
14	Apr. 26, 28		
			PRESENTATION: In-Class RUN Through
15	May 3, 5		<p>GAMING SHOWCASE Thursday, May 5, 2015, 6:00pm-8:00pm ATTENDANCE MANDATORY!!! Professional Attire!!</p> <p>PRESENTATION: Arrive to class Before 3:00pm. DO NOT BE LATE!! LATENESS or ABSENCE = ZERO grade for presentation</p>
16	May 10	<p>FINAL CRITIQUE: Tuesday, May 10, 2016 at 3:00pm - 5:00pm Attendance is Mandatory!! Lateness or Absence = ZERO grade for Final Critique</p>	