COURSE SYLLABUS
DSN353: Level Design II

Course Description
This course is to focus the skill set by taking a step by step through the process of planning, construction, and refining and original level that has been designed for this course. This course will cover the unique learning experience by providing a design experience focusing utilizing the industry standard Unreal 4 Engine. After creating a concept for the game, the program will work through the blueprint, blocking in, building, lighting, scripting, and polishing of a game level.

General Course Information

Number of Units/Weeks	4/10
#Hours Lecture/#Hours Laboratory/#Hours Homework	30/20/80
Prerequisite(s)	COM293
Co-requisites (s)	None
Course Developer(s)	Travis Vasquez, M.S.
Date Approved / Last Review	June 2011 / August 2017

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

- Construct a Work Flow process
- Employ project & file management
- Integrate the BSP Brushes to a level design
- Compose use of Materials and Mapping systems
- Plan and organize the use of the Blueprint editor
- Establish a mood and theme with lighting
- Demonstrate the use of Particle Systems
- Experiment with the Blueprint Editor

Instructional Methods Employed in this Course

- Work in Computer Graphics with UE4, properly utilizing materials, lighting, and Static meshes, Kismet, and Matinee
- Utilize Unreal and Blueprint in the UE4 framework
- Apply the basic techniques and concepts to any software package to accomplish your Computer Graphics needs
- Gain confidence in the understanding of concept to completion
- Ability to understand the level design game flow process and why it’s important

Information Resources for this Course

Textbook (Optional)

Shah, R. (2014). Master the Art of Unreal Engine 4 Blueprints. UK: Kitatus Studio. ISBN: 978 - 1501054297

Shah, R. (2014). Master the Art of Unreal Engine Blueprints. UK: Kitatus Studios.
ISBN: 978 - 1500313784
Shah, R. (2015). Master the Art of Unreal Engine 4 Blueprints Creating a 3D Point and Click Adventure. UK: Kitatus Studio.
ISBN: 978 – 1506119045

Other Materials

Autodesk 3DS Max
Adobe Photoshop

Web Site Readings

https://www.unrealengine.com

https://docs.unrealengine.com/latest/INT/

https://wiki.unrealengine.com/Videos

Table/Topics & Assignments

Types of Assignments:

Lecture -
Considered Lecture Hours
Classroom Discussion -
Considered Lecture Hours
In Class Critique -
Considered Lecture Hours
Delivering Oral Presentations -
Considered Lecture Hours
In Class (IC) Exercise -
Considered Lecture Hours
Reading -
Considered Homework (HW), work done outside of class WebClass lesson (non-online courses) - Considered Homework (HW), work done outside of class
Lab Work -
Considered Lab Hours Quiz, Midterm or Final -
Considered Lecture Hours

Week 1						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 1A	Introduction to Unreal Engine and why it's an industry favorite.	2	--	--	--	
LEC 1B	A tour of the UDK	--	1	--	--	
IC EX 1A	In Class Exercise	--	1	--	20	End of Class
HW 1A	Pulling and pushing updates to your project.	--	--	4	25	Week 2
Total Week 1		3	2	4	45	

Week 2						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 2A	Unreal Engine tools	2	--	--	--	
IC EX 2A	In Class Exercise	1	2	--	20	End of Class
HW 1A	White Box Design the level (Maze) in UE4	--	--	6	25	Week 3
Total Week 2		3	2	6	45	

Week 3						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 3A	BSP Brushes, the Builder Brush, and CSG	2	--	--	--	
IC EX 3A	In Class exercise	1	2	--	20	End of Class
HW 3A	Make the character run, jump, and crouch in your Maze	--	--	5	25	Week 4
Total Week 3		3	2	5	45	

Week 4						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 4A	Collisions, Triggers, and Power Ups	2	--	--	--	
IC EX 4A	In Class Exercise	1	2	--	20	End of Class
HW 4A	Collisions, Triggers, and Power Ups	--	--	4	25	Week 5
Total Week 4		3	2	4	45	

Week 5						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 5A	Textures, UV's, Materials and Lighting oh my.	1	--	--	--	
IC EX 5A	In Class Exercise	2	1	--	25	End of Class
LAB 5A	Week Five Progression Presentation #1	--	1	--	50	Week 5
HW 5A	Environment will look alive.	--	--	4	20	Week 5
Total Week 5		3	2	4	95	

Week 6						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 6A	HUD, UI, and Menus	1	--	--	--	
IC EX 6A	In Class Exercise	2	1	--	20	End of Class
LAB 6A	Week Six Progression Presentation #2	--	1	--	50	Week 6
HW 6A	Player to select multiple level	--	--	4	25	Week 7
Total Week 6		3	2	4	95	

Week 7						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 7A	Cascade Particle Systems	1	--	--	--	
IC EX 7A	In Class Exercise	1	2	--	20	End of Class
LAB 7A	Week Seven Progression Presentation #3	--	1	--	50	Week 7
HW 7A	Create and implement a unique Particle System	--	--	4	25	Week 8
Total Week 7		3	2	4	95	

Week 8						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 8A	Basics of AI	1	--	--	--	
IC EX 8A	In Class Exercise	2	1	--	20	End of Class
LAB 8A	Week Eight Progression Presentation #4	--	2	--	50	Week 9

HW 8A	Enemy kills player reload level	--	--	4	25	
Total Week 8		3	2	4	95	

Week 9

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 9A	Audio and Sounds	1	--	--	--	
IC EX 9A	In Class Exercise	2	--	--	20	End of Class
LAB 9A	Week Nine Progression Presentation #5	--	2	--	50	Week 9
HW 9A	Create and implement different sound ques based on the theme	--	--	5	25	Week 10
Total Week 9		3	2	5	95	

Week 10

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
EXAM 10A	Final Project and Presentation	3	2	40	350	Week 10
Total Week 10		3	2	40	350	

Course Hours Summary

Week	Topic	LEC Hours	LAB Hours	HW Hours
1	A tour of the UDK	3	2	4
2	Unreal Engine tools	3	2	6
3	BSP Brushes, The Builder Brush, and CSG Materials, Textures, and UV Mapping	3	2	5
4	Collisions, Triggers, and Power Ups	3	2	4
5	Textures, UV's, Materials and Lighting oh my.	3	2	4
6	HUD, UI, and Menus	3	2	4
7	Cascade Particle Systems	3	2	4
8	Basics of AI	3	2	4
9	Audio and Sounds	3	2	5
10	Final Project and Presentation	3	2	40
Total		30	20	80

Table/Point Breakdown

Week	Assignment	Possible Points	Percent of Grade
1	IC EX 1A, In Class Exercise	20	2%
1	HW 1A , Homework	25	2.5%
2	IC EX 2A, In Class Exercise	20	2%
2	HW 2A , Homework	25	2.5%
3	IC EX 3A, In Class Exercise	20	2%
3	HW 3A , Homework	25	2.5%
4	IC EX 4A, In Class Exercise	20	2%
4	HW 4A , Homework	25	2.5%
5	IC EX 5A, In Class Exercise	20	2%
5	HW 5A , Homework	25	2.5%
5	LAB 5A, Progression Presentation #1	50	5%
6	IC EX 6A, In Class Exercise	20	2%
6	HW 6A , Homework	25	2.5%
6	LAB 6A, Progression Presentation #2	50	5%
7	IC EX 7A, In Class Exercise	20	2%
7	HW 7A , Homework	25	2.5%
7	LAB 7A, Progression Presentation #3	50	5%
8	IC EX 8A, In Class Exercise	20	2%
8	HW 8A , Homework	25	2.5%
8	LAB 8A, Progression Presentation #4	50	5%
9	IC EX 9A, In Class Exercise	20	2%
9	HW 9A , Homework	25	2.5%
9	LAB 9A, Progression Presentation #5	50	5%
10	EXAM 10A, Final Project and Presentation	350	35%
Total		1000	100%

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.