COURSE SYLLABUS
DSN263: Shader Materials

Course Description

The student will apply the concepts and skills from previous classes to create animated scenes. The main focus will be on 2D texturing for a 3D program and image layout needed to create realistic interactive environments. The student will learn the process of layout and texture creation and implement it in a 3D animation scene. On completion of this class, the student will have created a scene incorporating various textures.

General Course Information

Number of Units/Weeks	4/10
#Hours Lecture/#Hours Laboratory/#Hours HW	30/20/80
Prerequisite(s)	DSN 253
Co-requisites (s)	None
Course Developer(s)	Travis Vasquez, M.S.
Date Approved / Last Review	March 2010 / August 2016

Learning Outcomes

- Students will create textures
- Students will create 3D models props, buildings, foliage, etc. Design modular scenes
- Students will implement shaders and materials

Instructional Methods Employed in this Course

- Lecture
- Reading
- Exercises
- Research
- Labs
- Projects
- Build on prior learning of students to enhance richness of class activities

Information Resources for this Course

Textbook

Ahearn, Luke. 3D Game Textures. Jordan Hill, Oxford UK: Elsevier,2016.
ISBN: 978-1138920064

Other Materials

Autodesk 3DS Max
Adobe Photoshop

Web Site Readings

www.tutorialized.com
www.3dstudiomaxtutorials.com
www.cgtutorials.com
www.area.autodesk.com
www.highend3d.com

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 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	Game Art Education	3	1			
LAB 1A	Project 1		3	1	100	Week 2
HW 1A	Read Chapter 1 (31 pages)			3		Week 2
HW 1B	Final Project Proposal			4		Week 5
HW 1C	Weapon Modeling (Gun)			4		Week 5
HW 1C	Weapon Concept			2	25	Week 2
Total Week 1		3	4	14	125	
Week 2						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 2A	Computer Graphic Technology	3	1			
LAB 2A	Project 2			2	100	Week 3
HW 2A	Read Chapter 2 (41 pages)			3		Week 3
HW 2B	Week Three Update			2	25	Lab 2
Total Week 2		3	1	7	125	
Week 3						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 3A	Shaders and Materials	3	1			
LAB 3A	Project 3		3	3	100	Week 4
HW 3A	Read Chapter 3 (35 pages)			3		Week 4
HW 3B	Week Four Update			2	25	Week 4
Total Week 3		3	4	8	125	
Week 4						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**

LEC 4A	Texture Creation	3	1			
LAB 4A	Project 4: Lighting			4	50	Week 5
HW 4A	Read Chapter 4 (49 pages)			4		Week 5
Total Week 4		3	1	8	50	

Week 5

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 5A	Alt Texture Resources	3	1			
LAB 5A	Project 5		3	2	50	Week 6
LASA I	Weapon Modeling (Gun)				100	Week 5
HW 5A	Read Chapter 5 (25 pages)			2		Week 6
HW 5C	Concept Document				50	Week 5
Total Week 5		3	4	6	200	

Week 6

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 6A	Camera Textures	3	1			
LAB 6A	Project 6			3	50	Week 7
HW 6A	Read Chapter 6 (61 pages)			3		Week 7
Total Week 6		3	1	6	50	

Week 7

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 7A	Outdoor Setting	3	**1**			
LAB 7A	Project 7: Landscape		3		50	Week 8
HW 7A	Read Chapter 7 (53 pages) by Project/Final			5		Week 8

HW 7B	Week Eight Review				25	Week 8
Total Week 7		3	4	5	75	
Week 8						
Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 8A	Game Effects	3	1			
LAB 8A	Project 7			2	50	Week 9
HW 8A	Read Chapter 8 (27 pages) Evaluated by Project/Final			2		Week 9
HW 8B	Week Nine Review				25	Week 9
Total Week 8		3	1	4	75	
Week 9						
Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 9A	Normal Maps and Multi Pass Shaders	3	1			
HW 9A	Read Chapter 9 (30 pages) Evaluated by Project/Final			2		Week 10
Total Week 9		3	4	2		
Week 10						
Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 10A	Environment Group Project		3	20	175	
Total Week 10		1	3	20	175	

Course Hours Summary

Week	Topic	LEC Hours	LAB Hours	HW Hours
1	Game Art Education	3	3	8.6
2	Computer Graphic Technology	3	1	6.8
3	Shaders and Materials	3	3	6.9
4	Texture Creation	3	1	7.3
5	Alt Texture Resources	3	3	7.9
6	Camera Textures	3	1	7.75
7	Outdoor Setting	3	3	8.95
8	Game Effects	3	1	6.4
9	Normal Maps and Multi Pass Shaders	3	3	7.4
10	Final Project Presentation	3	1	27
Total		30	20	95

Table/Point Breakdown

Week	Assignment	Possible Points	Percent of Grade
1	LAB 1A, Project 1	100	10%
1	HW 1B, Week Two Update	25	2.5%
1	HW 1C, Weapon Concept	25	2.5%
2	LAB 2A, Project 2	100	10%
2	HW 2B, Week Three Update	25	2.5%
3	LAB 3A, Project 3	100	10%
3	HW 3B, Week Four Update	25	2.5%
4	LAB 4A, Project 4	50	5%
5	HW 5B Concept Document Proposal	50	5%
5	LASA I: Weapon Modeling	100	10%
5	LAB 5A, Project 5	50	5%
6	LAB 6A, Project 6	50	5%
6	HW 6B, Progress Presentation	25	2.5%
7	LAB 7A, Project 7	50	5%
7	HW 7B, Progress Presentation	25	2.5%
8	HW 8B, Progress Presentation	25	2.5%
10	LASA II: Environment Group Project	175	17.5%
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:
The Coleman University guidelines for the assignment of grades to total points earned is as follows:

Percent	Letter Grade	Grade Points
94-100	A	4.0
90-93	A-	3.67
87-89	B+	3.33
84-86	B	3.0
80-83	B-	2.67
77-79	C+	2.33
74-76	C	2.00
70-73	C-	1.67
67-69	D+	1.33
64-66	D	1.00
60-63	D-	0.67
N/A	INC	0
N/A	W	0
60 or above	CR	0
59 or below	NC	0
70 or above	PASS	0

Requirements

Assignments: All assignments (including projects, lab work, quizzes and exams) must be completed as scheduled. The following will apply to late assignments:

- 1-24 hours after due date = 20% off point value
- 25-48 hours after due date = 60% off point value
- 49+ hours after due date = No points given

If an assignment equals less than 5 points, no points will be given for late work. If there are extenuating circumstances, the student must submit a written explanation to the department Senior Instructor. Upon evaluation, points will be given according to the Senior Instructor's discretion.

Attendance: Classes begin and end as indicated in the published schedule. It is required that students be present at the beginning of each class session and stay until class is dismissed, including lab periods. Excessive tardiness, leaving early and/or absences (from either lecture or lab sessions) are causes for dismissal from the course. A student that arrives in class beyond 30 minutes late may be considered absent. A student that leaves over 30 minutes before the end of class may also be considered absent. Excused absences will be determined by the instructors and approved by the Dean of Academics & Director of Student Services. Students may be removed from the course(s) based on the following absence guidelines:

4 Unit Course – Allowed 2 absences per 10-week MOD (3rd absence may be excused by DOA & DOSS)

5 Unit Course – Allowed 2 absences per 5-week MOD (3rd absence may be excused by DOA & DOSS)

8 Unit Course – Allowed 5 absences per 10-week MOD (6th absence may be excused by DOA & DOSS)

Conduct: Students are expected to conduct themselves in a professional manner while on campus. Rules of conduct are outlined in the University Catalog and students are required to adhere to such policies. Students who are in violation of the Student Code of Conduct Policy can be suspended.

Student Academic Progression (SAP)

Graduate: Student must maintain an accumulative GPA of 3.0 or higher. If a student falls below the GPA requirement at any time during their program, they will be placed on Academic Probation. Once on Academic Probation, the student's accumulative GPA will be reviewed after 4 future mods have been completed (must take punitive graded courses). Failure to meet the 3.0 GPA requirements will result in an Academic

Suspension. A student is not allowed more than 150% of the standard length of the program in which to complete the requirements for graduation.

Undergraduate: Student must maintain an accumulative GPA of 2.0 or higher. If a student falls below the GPA requirement at any time during their program, they will be placed on Academic Probation. Once on Academic Probation, the student's accumulative GPA will be reviewed after 2 future mods have been completed (must take a minimum of 8 credits per mod). Failure to meet the 2.0 GPA requirements will result in an Academic Suspension. A student is not allowed more than 150% of the standard length of the program in which to complete the requirements for graduation.

Suspension and Reinstatement: If a student is suspended (SAP, plagiarism, code of conduct, etc.), the student must sit out one full MOD (currently 10 weeks for undergraduate level and 5 weeks for graduate level). The student will be required to submit a written reinstatement request, which will be reviewed by the Reinstatement Committee. The Reinstatement Committee will approve the request, deny the request, or request a meeting with the student for further consideration.

Grades: All grades listed will count as units attempted:

Letter Grade	Percentage	Grade Points
A	94% - 100%	4.00
A-	90% - 93%	3.67
B+	87% - 89%	3.33
B	84% - 86%	3.00
B-	80% - 83%	2.67
C+	77% - 79%	2.33
C	74% - 76%	2.00
C-	70% - 73%	1.67
D+	67% - 69%	1.33
D	64% - 66%	1.00
D-	60% - 63%	0.67
F	0% - 59%	0.00
INC	N/A	0.00
W	N/A	0.00
CR	N/A	0.00
NC	N/A	0.00
PASS	N/A	0.00

Failed Courses: If a student receives a FAIL grade, they may retake the course. The retake course will be charged at current tuition pricing. The student will be able to *replace* the previous FAIL grade with the grade received on the retake course.

Drop Period & Refund:

Graduate

Sessions Attended	Refund	Grade Received When Dropping Course
0	100%	No Grade
1	100%	No Grade
2	80%	W
3	70%	W
4	60%	W
5	50%	Grade Earned
6	0%	Grade Earned
7	0%	Grade Earned
8	0%	Grade Earned
9	0%	Grade Earned
10	0%	Grade Earned

Undergraduate

Week In MOD	Refund	Grade Received When Dropping Course
No Start	100%	No Grade
1	100%	No Grade
2	80%	W
3	70%	W
4	60%	W
5	50%	Grade Earned
6	0%	Grade Earned
7	0%	Grade Earned
8	0%	Grade Earned
9	0%	Grade Earned
10	0%	Grade Earned

Coleman University Policy on Academic Dishonesty:

Academic dishonesty is cause for dismissal from Coleman University. Presenting another person's ideas, methods, course work, or test answers with the intention that they be taken as one's own is theft of a special kind. It defrauds the originator of the work, the institution, its graduates, its students, and its future students.

The student has full responsibility for the authenticity of all academic work and examinations submitted. A student who appears to have violated this policy must submit to a hearing with the reporting instructor and the associate dean. If it is determined that a violation occurred, the matter will be referred to an Officer of the University with recommendations for an appropriate penalty. The student may be dismissed, suspended, or given another penalty.

Coleman University employs the plagiarism software known as Turnitin. Students are expected to use this tool in an appropriate manner with the sole purpose to support their own academic endeavors at Coleman University. Turnitin account information can not be shared with anyone. Contact your instructor if you have any questions about plagiarism related issues.

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, Ariana Marron, 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.