SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

COURSE TITLE:	Texturing and Shaders
CODE NO. :	VGA303 **SEMESTER:**
PROGRAM:	Video Game Art
AUTHOR:	Matias Kamula
DATE:	May, 2011 **PREVIOUS OUTLINE DATED:** N/A
APPROVED:	"B.Punch"

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TOTAL CREDITS:	4
PREREQUISITE(S):	Game Art Studio 2
HOURS/WEEK:	4

I.   **COURSE DESCRIPTION:** Textures and lighting techniques give life to the art in the game. Special attention needs to be paid to how lighting influences textures appearance and also how lighting influences the mood, tone, and feel of the game during play. In this course the student will create and apply UV texture maps for 3D surfaces. This would include both normal mapping and parallax mapping.

II.   **LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

Upon successful completion of this course, the student will demonstrate the ability to:

1.   Design model and texture convincing 3D game assets
      Potential Elements of the Performance:
         - Develop an understanding of the capabilities of various platforms and create assets that maximize platform potential
         - Understand and create normal maps to be used on 3D assets
         - Using traditional and digital art skills to create convincing textures

2.   Design and create visually appropriate 2D game assets including concept art, and digital assets
      Potential Elements of the Performance:
         - Develop the ability to critically analyze games with regards to game mechanics pacing, and the direction of art

3.   Create assets for a game using a variety of software application
      Potential Elements of the Performance:
         - Using photoshop to create textures and concepts
         - Demonstrate the ability to use 3ds Max to create textures and shaders
         - Using a game engine to create appropriate shaders for 3D assets
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4.   Demonstrate the ability to produce work within the production and time constraints as set out in project briefing notes while ensuring the accountability of all team members
      Potential Elements of the Performance:
         - Demonstrate the ability to communicate(visually, verbally, and in written form) with other artists, potential employers, art directors and clients for the purposes of game art creation
         - Demonstrate the ability to follow project directions and

limitation as set out by art directos
- Demonstrate the ability to apply effective business practices and time management skills appropriate to his/her position in the game art industry

5. Develop perspective in the role of game artists and art within development team and projects objectives by working effectively as a game artist within a team environment
Potential Elements of the Performance:
- Develop a sensitivity to the relationship between traditional and digital media by employing appropriate uses of each within the game art context

III. TOPICS:

1. Introduction to texture and shaders
2. What is a shader?
3. Components in a shader
4. Normal mapping and parallax mapping
5. Combining multiple textures into a shader
6. Creating multiple shaders for use in a game engine

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

V. EVALUATION PROCESS/GRADING SYSTEM:
Assignments/Projects = 100% of final grade
Assignments/projects will constitute 100% of the student's final grade in this course. A missing assignment is equivalent to course objectives not achieved which results in an "F" (fail) grade for the assignment/project.

The following semester grades will be assigned to students:

Grade	Definition	Grade Point Equivalent
A+	90 – 100%	4.00
A	80 – 89%	
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 – 59%	1.00
F (Fail)	49% and below	0.00
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field /clinical placement or non-graded subject area.	

U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.
NR	Grade not reported to Registrar's office.
W	Student has withdrawn from the course without academic penalty.

VI.   SPECIAL NOTES:

DEDUCTIONS – LATES, EXTENSIONS AND FAILS

Lates:
An assignment/project is considered late if it is not submitted at the time and date specified by the instructor. A late assignment/project will automatically be penalized by a 10% deduction. Late assignments/projects will not be accepted one week past their initial due date. Any assignments/projects not submitted within one week of their initial due date will automatically be assigned a fail grade (F).

Extensions:
The instructor may grant extensions for assignment/projects under exceptional circumstances (e.g. death in the family or serious illness). An extension, when offered, will have a mutually agreed upon deadline that does not extend beyond the conclusion of the current semester.

Fail:
A fail grade (F) is assessed to an assignment/project that has not been executed to a minimum satisfactory "D" grade level or in which the directions have not been followed correctly.

Attendance:
Significant learning takes place in the classroom setting through an interactive learning approach; therefore students are expected to attend all classes and inform the instructor of an anticipated absence. Attendance is mandatory for this course to ensure the course requirements and objectives are met.

A total absence of 3 classes for the semester will be tolerated. After 3 absences penalties will take effect, an additional 10% will be deducted from the final grade for this course per class missed.

i.e. 4 classes missed = 10% deduction form final grade
5 classes missed = 20% deduction from final grade

All in class work is based on the instructor's observation and record of the student's performance in the following areas:

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- ability to follow directions set forth by the instructor

- attitude and conduct - students should be courteous, respectful, teachable, and considerate of the instructor and other students. They should also strive for a creative atmosphere and keep the work place neat.

- participation in class projects and discussions

- attendance and handing in work on time

VII.   COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located on the portal form part of this course outline.