COURSE OUTLINE: VGA303 - TEXTURING & SHADERS

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Approved: Bob Chapman, Chair, Health

Course Code: Title	VGA303: TEXTURING AND SHADERS
Program Number: Name	4008: GAME - ART
Department:	VIDEO GAME ART
Semesters/Terms:	21F
Course Description:	Textures and shaders give life to art in the game. Students will learn how to create efficient textures and shaders for game assets. Students will also learn both normal and parallax mapping techniques.
Total Credits:	4
Hours/Week:	4
Total Hours:	60
Prerequisites:	VGA203
Corequisites:	There are no co-requisites for this course.
Vocational Learning Outcomes (VLO's) addressed in this course: **Please refer to program web page for a complete listing of program outcomes where applicable.**	**4008 - GAME - ART** VLO 3 Identify and relate concepts from a range of industry roles, including programing, design and art to support the development of games. VLO 4 Contribute as an individual and a member of a game development team to the effective completion of a game development project. VLO 5 Develop strategies for ongoing personal and professional development to enhance work performance in the games industry. VLO 6 Perform all work in compliance with relevant statutes, regulations, legislation, industry standards and codes of ethics. VLO 7 Use game concepts to support the ongoing iteration, creation, design and development of games. VLO 8 Apply game design elements to support the ongoing iteration and creation of unique gaming environments, levels, characters, assets and props. VLO 9 Support the development of evolving and iterative game design documents that align with standard industry expectations and/or company practices.
Essential Employability Skills (EES) addressed in this course:	EES 1 Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience. EES 2 Respond to written, spoken, or visual messages in a manner that ensures effective communication. EES 4 Apply a systematic approach to solve problems. EES 5 Use a variety of thinking skills to anticipate and solve problems. EES 6 Locate, select, organize, and document information using appropriate technology and information systems.

In response to public health requirements pertaining to the COVID19 pandemic, course delivery and assessment traditionally delivered in-class, may occur remotely either in whole or in part in the 2021-2022 academic year.

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	EES 7 Analyze, evaluate, and apply relevant information from a variety of sources.
	EES 8 Show respect for the diverse opinions, values, belief systems, and contributions of others.
	EES 9 Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals.
	EES 10 Manage the use of time and other resources to complete projects.
	EES 11 Take responsibility for ones own actions, decisions, and consequences.

Course Evaluation:

Passing Grade: 50%, D

A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
Design and produce convincing 3D game textures and shaders.	* 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. * Become familiar with tools and functions found in a game engine for creating and editing textures and shaders.
Course Outcome 2	**Learning Objectives for Course Outcome 2**
Design and create visually appropriate 2D game assets for textures and shaders.	* Use traditional and digital art skills to create convincing textures. * Understand how to efficiently import, manage and package 2D assets inside a game engine.
Course Outcome 3	**Learning Objectives for Course Outcome 3**
Create textures and shaders for a game using a 3D game engine.	* Demonstrate the ability to use a 3d game engine to create and manage textures and shaders. * Use a game engine to create appropriate shaders for 3D assets. * Understand how to efficiently import, manage and package 3D assets inside a game engine.
Course Outcome 4	**Learning Objectives for Course Outcome 4**
Learn how to use and apply lights in a game engine to enhance game textures and shaders.	* Demonstrate the ability to place and use all various light types in a game engine. * Understand the core difference between light types and when it is best to use each. * Effectively light a game asset in a game scene with both textures and shaders applied.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Assignments / Projects	100%

Date:

August 9, 2021

Addendum:

Please refer to the course outline addendum on the Learning Management System for further

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information.