



# COLLEGE OF IMAGING ARTS & SCIENCES

## -----TOPIC OUTLINE FORM-----

Shell courses have very flexible course outlines that allow instructors to develop a specific focus and content for their particular Topic offered within the Shell.

In order for a new Topic within a Shell course to be scheduled, a completed, approved digital version of this form must be submitted to the Scheduling Officer by the scheduling deadline date for the term in which the topic will be offered. **No late submissions will be accepted.**

### Procedure for proposing a new Topic:

1. Faculty proposing to offer a new Topic will complete this form and forward electronically to the Program Chairperson or Graduate Director for electronic approval.
2. The Program Chairperson or Graduate Director then secures the electronic approval of the school's Administrative Chair.
3. The Administrative Chair electronically forwards the form to the CIAS Curriculum Committee Chair (CIAS CCC) for review.
4. If electronically approved by the chair of the CIAS CCC this form will be forwarded electronically to the CIAS Scheduling Officer for processing. The Scheduling Officer will send an electronic copy to the to the school's representative on the appropriate CIAS College Curriculum Committee.

**COURSE # and TITLE: TOPIC:** CIAS-DDDD-517-**Experimental Workshop: Real Time Characters**

**Proposing faculty:** Shaun Foster **Date:** 9/24/2015

**School:** Design **Program:** 3DDD

**1st term offered** 2155 **Online**  **Repeat for Credit**  **# Times**

### 1.0 Course Designations and Approval

Required course approval	Electronic Signature	Approval Granted Date
Program Chair/Graduate Director	Marla Schweppe	9/29/15
School Administrative Chair	Peter Byrne	9/29/15
College Curriculum Committee Chair	Robin Cass	10.9.15

### 2.0 Course information:

<b>Topic title:</b>	Real Time Characters
<b>Topic proposed by:</b>	Shaun Foster
<b>Effective term scheduled:</b>	2155

*In the sections that follow, please use sub-numbering as appropriate (eg. 3.1, 3.2, etc.)*

### 3.0 Goals of the TOPIC:

- 3.1 Students will design characters for import into the Unreal 4, real time game engine
- 3.2 Analyze state-machines for character controls and implementation
- 3.3 Choose appropriate shading models for the characters
- 3.4 Test and evaluate effectiveness of their designs and those of their peers.

### 4.0 Course description (course title includes topic)

**Course number:** DDDD-517

**Name of Course & Topic – Long Title:** **Experimental Workshop: Real Time Characters**

**Name of Course & Topic – Short Title** (33 characters): **EW: Real Time Characters**

The course focuses on implementing, advanced, newly developing ideas in three-dimensional computer graphics. The specific topic varies and is determined by the instructor. A specific course

outline is provided each time the course is taught. Potential topics include the creation of interactive installations, game asset design, digital performances, cyber fashion, network art, locative media, scientific visualization, information visualization, event design, projection design, or any new area in digital design. This course has a subtopic and may be repeated with different subtopics; subtopics cannot be repeated

This course will explore some of the interactive and visual design possibilities available when implementing a character within a game engine. This will include rigging, state machines, shading, and some physics assets as well as design of an environment, which should relate to the character.

**5.0 Possible resources** (texts, references, computer packages, etc.)

- 5.0 Unreal 4
- 5.1 Maya
- 5.2 Substance Designer
- 5.3 Motion Builder
- 5.4 Digital Tutors
- 5.5 YouTube – Epic Games Tutorials Channel
- 5.6 Reference appropriate to the subtopic

**6.0 Topics (outline):**

- 6.0 Elements and terms related to the emerging content area
- 6.1 Tools for working in the emerging area (real time characters)
- 6.2 Developing projects using the tools in the emerging area

**7.0 Intended course learning outcomes and associated assessment methods of those outcomes**

(please include as many Course Learning Outcomes as appropriate, one outcome and assessment method per row).

Course Learning Outcome	Assessment Method
7.1 Define elements required for the development of real time characters	Discussion
7.2 Apply knowledge gained to develop real time characters	Project/critique
7.3 Present and defend the design of real time characters in game environments	Project/critique
7.4 Explain the requirements for real time characters	Project/critique

**8.0 Program outcomes and/or goals supported by this course**

- 8.1 Demonstrate ability to design and create characters for games
- 8.2 Create characters specifically for a real time environments
- 8.3 Apply rigging, state machines, shading and physics attributes to characters
- 8.4 Present functioning characters within a game engine
- 8.5 Integrate characters into appropriate environmental elements

**10.0 Required Resources** - Identify all resources needed to effectively teach this class and what students will need to complete the assignments. (Please provide detailed list of equipment, software, computer lab, data storage/retrieval requirements, special classroom, studio, shop, wet lab, work space or media requirements)

- 10.1 The studio needs computers equipped with high-end 3D software and other support software as appropriate
- 10.2 Classroom needs the same software and hardware for the instructor and a projection system with sound.

**Approval request date:** This is the date that the college curriculum committee forwards this course to the appropriate optional course designation curriculum committee for review. The chair of the college curriculum committee is responsible to fill in this date.

**Approval granted date:** This is the date the optional course designation curriculum committee approves a course for the requested optional course designation. The chair of the appropriate optional course designation curriculum committee is responsible to fill in this date.