Introduction to Digital Visual Effects

Module Code: GAV4009-B
Academic Year: 2018-19
Credit Rating: 20
School: Department of Media Design and Technology
Subject Area: Games, Animation and Visual Effects
FHEQ Level: FHEQ Level 4

Pre-requisites: Introduction to Digital Visual Effects 2017-18
Co-requisites:

Contact Hours

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Lectures</td>
<td>12</td>
</tr>
<tr>
<td>Laboratory</td>
<td>24</td>
</tr>
<tr>
<td>Directed Study</td>
<td>164</td>
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Availability Periods

<table>
<thead>
<tr>
<th>Occurrence</th>
<th>Location/Period</th>
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<tbody>
<tr>
<td>BDA</td>
<td>University of Bradford / Semester 2 (Feb - May)</td>
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Module Aims

The module will explore the core techniques and tools of digital post production and visual effects so that students will start to be able to create realistic images and effects.

The module will cover the breadth of the visual effects pipeline both 2D and 3D

Students will create and render both dynamic and fluid simulations.

The students will develop the necessary digital compositing techniques to bring all assets together seamlessly.

Outline Syllabus

- The Foundry: Nuke X
- Side Effects Software: Houdini
Photographic capture methods and lighting,
Chroma Key Footage Acquisition,
Fluid dynamics,
Destruction pipelines,
Volumetric simulations,
lens effects,
Rotoscoping,
On Set data collection,
Matchmoving and Tracking (2D/3D),
Multi-pass rendering,
Software-based chroma keying,
3D matte painting

Module Learning Outcomes

On successful completion of this module, students will be able to...

1. Demonstrate knowledge of the process of creating photorealistic images.
2. Understand the range of current post-production and visual effects techniques;
3. Deconstruct and choose appropriate tools in the creation of visual effects and post-production sequences.
4. Create high quality photorealistic computer graphics using industry-standard visual effects software;
5. Use industry standard compositing software to combine rendered visual effects with live action footage.
6. Complete a brief to a deadline;
7. Critically evaluate and reflect upon the application of academic studies to working practice;

Learning, Teaching and Assessment Strategy

Delivery will be through a series of lectures and directed reading to provide the theoretical background of visual effects techniques and technologies (LO 1.1, 1.2, 1.3), and lab-based tutorials to develop practical skills (LO 1.1, 1.2, 1.3, 2.1, 2.2).

The remainder of the time is spent on coursework (LO 3.1, 3.2). A project (LO 1.1, 1.2, 1.3, 2.1, 2.2) accompanied by a Showreel presentation (LO 3.1, 3.2) tests all learning outcomes.

Supplementary assessment is to repair deficiency in the original submission.

Mode of Assessment

<table>
<thead>
<tr>
<th>Type</th>
<th>Method</th>
<th>Description</th>
<th>Length</th>
<th>Weighting</th>
<th>Final Assess'</th>
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</thead>
<tbody>
<tr>
<td>Formative</td>
<td>Presentation</td>
<td>Students will present their initial ideas to modules tutors for feedback and</td>
<td>15 minutes</td>
<td>%</td>
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### Summative Presentation
An in-class presentation to showcase your work and discuss the production pipeline along with a video breakdown of your shot. Time: 5 minutes in length with 5 minutes questions and answers.

<table>
<thead>
<tr>
<th>Summative</th>
<th>Presentation</th>
<th>10 minutes</th>
<th>20%</th>
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### Summative Presentation
Produce and deliver a presentation that clearly outlines the proposed approach and treatment of the brief. Time: 5 minutes in length with 5 minutes question and answers.

<table>
<thead>
<tr>
<th>Summative</th>
<th>Presentation</th>
<th>10 minutes</th>
<th>10%</th>
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### Summative Coursework
A project to produce a photorealistic set of images incorporating computer generated effects

<table>
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<tr>
<th>Summative</th>
<th>Coursework</th>
<th>2 minutes</th>
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### Legacy Code (if applicable)

### Reading List
To view Reading List, please go to [rebus:list](#).