MODULE SPECIFICATION TEMPLATE

**SECTION 1: MODULE SPECIFICATIONS**

1. **Title of the module**

EL641 Digital Visual Effects and Post-Production.

1. **School which will be responsible for management of the module**

Engineering and Digital Arts

1. **Start date of the module**

September 2013

1. **The cohort of students (onwards) to which the module will be applicable**

Students entering Stage 3 in 2013/14 onwards

1. **The number of students expected to take the module**

30

1. **Modules to be withdrawn on the introduction of this proposed module and consultation with other relevant Schools and Faculties regarding the withdrawal**

EL635 (which this module replaces)

1. **Level of the module**

H

1. **The number of credits which the module represents**

30

1. **Which term(s) the module is to be taught in (or other teaching pattern)**

Autumn

1. **Prerequisite and co-requisite modules**

EL532 Virtual Worlds and 3D Modelling

EL533 Digital Film-Making

1. **The programme(s) of study to which the module contributes**

BA Digital Arts

BA Digital Arts with a Year in Industry

1. **The intended subject specific learning outcomes and, as appropriate, their relationship to programme learning outcomes**

On successful completion of the module, students will:

1. Understand the key principles and techniques of live-action cinematography, and how these can be emulated within a digital environment.
2. Be able to shoot and prepare live-action footage suitable for subsequent digital effects work.
3. Be able to develop and execute various digital alterations and additions to raw video footage, in order to create ‘photorealistic’ digital composite shots.
4. Be familiar with and proficient in the use of a range of industry-standard off-the-shelf 3-D and compositing applications.
5. Be able to timetable and incorporate individual tasks into a cross-platform digital workflow.
6. Have a clear understanding of typical production pipelines for digital visual effects and film/television post-production.

These outcomes are related to the programme learning outcomes in the appropriate curriculum maps as follows:

DA/DAwInd: A3,A5,A7,A10, B7, C3,C5

1. **The intended generic learning outcomes and, as appropriate, their relationship to programme learning outcomes**

Students will learn to use ICT, and will develop core key skills, such as learning effectively, critical thinking and time management.

These outcomes are related to the program learning outcomes in the appropriate curriculum maps as follows:

DA/DAwInd:: D2, D4- D7

1. **A synopsis of the curriculum**

This module is a very practical module where short video clips integrating live video footage, 3D animations and special effects are developed. Each technical workshop session includes hands-on training in visual effects and compositing software. Theoretical lectures include camerawork, real-world and digital lighting techniques, primary and secondary colour grading, digital cinema and visual effects production pipelines**.**

Theoretical Lectures

Camerawork: framing, composition, and movement through space in real-world and digital environments.

Lighting: real-world and digital lighting techniques

Colour: primary and secondary grading

Industry structure: digital cinema and visual effects production pipelines.

Technical Lectures

Pre-production: Design, Layout and Storyboard Animatics

Design of an 8 second sequence using a static photographic plate, design two 3d elements- vehicle (with motion) & a building structure. Design approval (Photoshop PSD) will lead directly into the pipeline to model and texture the elements.

Production of an 8 second Animatic using after effects. Animatic should clearly demonstrate accurate positioning of 3d elements in the Photographic plate.

Model building. Texture building. Creation of render layers for building such as beauty pass, shadows & ambient occlusion.

Model vehicle & rig using attributes and motion curves. Utilise graph editor where appropriate. Texture painting assets with Mudbox and Photoshop. Produce bump maps/normals where appropriate.

Fluid and dynamic simulation cross-platform to establish feasible VFX pipeline.

Shooting live action plates of crowd scenes, individuals and cloud tank to create smoke atmospherics- Element shoot.

Match-moving cameras and digital objects to seamlessly integrate cgi assets into a live-action environment.

Render out layers and passes with mental ray including Z-depth pass for depth of field.

Composite layers in after effects adding motion graphics and appropriate Visual effect breakdowns of shot. Motion graphics to include manipulation of Vector files and use of Ray-trace 3D rendering. Compositing to include mask layers and Rotoscoping.

Final composite production in H264 mpeg4 resolution.

1. **Indicative Reading List**

The VES Handbook of Visual Effects: Industry Standard VFX Practices and Procedures by Jeffrey A. Okun and Susan Zwerman (15 Jul 2010) ISBN-13: 978-0240812427

The Art and Science of Digital Compositing: Techniques for Visual Effects, Animation and Motion Graphics (The Morgan Kaufmann Series in Computer Graphics) by Brinkmann (24 May 2008) ISBN-13: 978-0123706386

Compositing Visual Effects: Essentials for the Aspiring Artist by Steve Wright (11 Aug 2011) ISBN-13: 978-0240817811

Adobe After Effects CS6 Digital Classroom (Wiley Desktop Editions) by Jerron Smith and AGI Creative Team (29 Jun 2012) ISBN-13: 978-1118142790

Adobe Photoshop CS6 Classroom in a Book (Classroom in a Book (Adobe)) by Adobe Creative Team (22 May 2012) ISBN-13: 978-0321827333

Autodesk 3ds Max 2013 Bible by Kelly L. Murdock (14 Sep 2012) ISBN-13: 978-1118328323

The Visual Effects Producer: Understanding the Art and Business of VFX by Charles Finance and Susan Zwerman (9 Oct 2009) ISBN-13: 978-0240812632

VFX Artistry: A Visual Tour of How the Studios Create Their Magic by Spencer Drate and Judith Salavetz (14 Dec 2009) ISBN-13: 978-0240811628

1. **Learning and Teaching Methods, including the nature and number of contact hours and the total study hours which will be expected of students, and how these relate to achievement of the intended learning outcomes**

There will be 30 contact hours, comprising 10 hours of lectures, and 20 hours of practical workshops which together deliver all the learning outcomes. Lectures will alternately focus on theoretical/conceptual issues relating to digital compositing, and on specific technical processes. Workshops will focus on task-based practical assignments in which, through weekly practical tasks, students explore how to source video footage suitable for subsequent digital manipulation, and to use relevant software to manipulate and augment this footage in order to create photorealist digital composites. Students will be expected to complete assignments on their own following guided sessions in the workshops and will submit a portfolio of their work for assessment. The total student workload will be 300 hours.

1. **Assessment methods and how these relate to testing achievement of the intended learning outcomes**

Assessment for this module is by 100% coursework. Students will submit a complete portfolio of work produced during the term at the end of week 12, which will be assessed for each of the learning outcomes. The assessment and evaluation strategy has been devised to ensure that participants develop the required knowledge about fundamental concepts relating to special effects and skills to which these topics relate.

1. **Implications for learning resources, including staff, library, IT and space**

Same resources required as the EL635 module it replaces.

1. **The School recognises and has embedded the expectations of current disability equality legislation, and supports students with a declared disability or special educational need in its teaching. Within this module we will make reasonable adjustments wherever necessary, including additional or substitute materials, teaching modes or assessment methods for students who have declared and discussed their learning support needs. Arrangements for students with declared disabilities will be made on an individual basis, in consultation with the University’s disability/dyslexia support service, and specialist support will be provided where needed.**
2. **Campus(es) where module will be delivered**[[1]](#footnote-1)

Canterbury Campus

**SECTION 2: MODULE IS PART OF A PROGRAMME OF STUDY IN A UNIVERSITY SCHOOL**

**Statement by the School Director of Learning and Teaching/School Director of Graduate Studies (as appropriate):** "I confirm I have been consulted on the above module proposal and have given advice on the correct procedures and required content of module proposals"

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| ................................................................  Director of Learning and Teaching/Director of Graduate Studies (delete as applicable)  …………………………………………………  Print Name | ..............................................  Date |

**Statement by the Head of School:** "I confirm that the School has approved the introduction of the module and, where the module is proposed by School staff, will be responsible for its resourcing"

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| .................................................................  Head of School  …………………………………………………….  Print Name | ..............................................  Date |

Module Specification Template  
Last updated November 2011

1. Required for information purposes only. Changes of campus will not require re-approval of the module specification. [↑](#footnote-ref-1)