

MODULE SPECIFICATION

1. **Title of the module:** Advanced 3D for Visual Effects
2. **School or partner institution which will be responsible for management of the module:** Escape Studios, Pearson College London
3. **The level of the module (e.g. Level 4, Level 5, Level 6 or Level 7):** Level 7
4. **The number of credits and the ECTS value which the module represents:** 30 credits (15 ECTS)
5. **Which term(s) the module is to be taught in (or other teaching pattern):** Autumn or Spring
6. **Prerequisite and co-requisite modules:** Visual Effects
7. **The programmes of study to which the module contributes:** MA Visual Effects Production (3D)
8. **The intended subject specific learning outcomes**
On successfully completing the module students be able to...
 - 8.1 demonstrate systematic knowledge and understanding of the advanced theory and concepts of creating photo-realistic simulated 3D graphic elements for use in a complex visual effects shot.
 - 8.2 critically evaluate and select advanced tools and techniques to create photo-realistic simulated CG elements for use in a complex visual effects production pipeline.
 - 8.3 use advanced production software tools and techniques to create complex 3D assets and/or tools for use in a live action production shot.
 - 8.4 use advanced production software tools and techniques to produce a variety of complex photo-real simulated 3D elements for use in a live action production shot.
9. **The intended generic learning outcomes.**
On successfully completing the module students will be able to:
 - 9.1 manage time and resources to complete tasks to a given deadline
 - 9.2 communicate creative and technical information to a variety of audiences.
10. **A synopsis of the curriculum**
Procedural modelling and animation techniques
Particle based system.
Simulation techniques for hair, fur and fluids.
Advanced lighting and rendering of simulations and advanced visual effects elements.
Scripting and expressions.
11. **Reading List (Indicative list, current at time of publication. Reading lists will be published annually)**
Computer Graphics: Principles and Practice: Principles and Practices, J.F. Hughes, A. Van Dam, J.D. Foley and S.K. Feiner, Pearson Education
Mathematics for computer graphics, John Vince, Springer Science & Business Media.
Fluid simulation for computer graphics, Bridson, Robert, CRC Press.
Autodesk User Guide [<http://download.autodesk.com/global/docs/>]
Introducing Autodesk Maya (Autodesk Official Training Guides), Dariush Derakhshani, John Wiley & Sons
The Magic of Houdini, William Cunningham, Thomson Course Technology
Houdini on the Spot: Power User Tips and Techniques, Craig Zerouni, Taylor & Francis
Simultaneous Music, Animation, and Sound with Houdini, Andrew Lowell, e-book, (<http://www.andrew-lowell-productions.com/andrew-lowell-productions/resources.html>)

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12. Learning and Teaching methods

Students undertake direct instruction from tutors in theory and practice in the context of the discipline, supported by directed reading and study. Practice and practical work in a studio environment is supervised by tutors and supported by studio assistants. Additional materials and support is provided through the VLE.

Tutor-led studio sessions: 135 hours

Studio assistant supported practice: 45 hours

Directed study: 120 hours

13. Assessment methods.

Coursework 50%

This is a practical project involving the creation and integration of a 2D and 2.5D assets into a visual effects shot (LO 8.1, 8.2, 8.3, 9.1)

Production logbook (3000 words) 40% (LO 8.1, 8.2, 9.1)

Individual presentation (15 minutes) 10% (LO 8.1, 8.2, 9.2)

14. *Map of Module Learning Outcomes (sections 8 & 9) to Learning and Teaching Methods (section 12) and methods of Assessment (section 13)*

Module learning outcome		8.1	8.2	8.3	8.4	9.1	9.2
Learning/ teaching method	Hours allocated						
Tutor-led studio sessions	135	30	45	30	30		
Studio assistant supported practice	45		15	15	15		
Directed Study	120	60				30	30
Assessment method							
Coursework		✓	✓	✓	✓	✓	
Logbook		✓	✓	✓	✓	✓	
Presentation		✓	✓				✓

15. **The Collaborative Partner 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 Collaborative Partner’s disability/dyslexia student support service, and specialist support will be provided where needed.**

16. **Campus(es) or Centre(s) where module will be delivered:**

Escape Studios.

17. **Partner College/Validated Institution:**

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Escape Studios, Pearson College London

18. University School responsible for the programme:

Engineering & Digital Arts

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Revision record – all revisions must be recorded in the grid and full details of the change retained in the appropriate committee records.

Date approved	Major/minor revision	Start date of the delivery of revised version	Section revised	Impacts PLOs (Q6&7 cover sheet)