# Module Specification

## Module Summary Information

| 1 | Module Title | Visual Effects Tools |
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| 2 | Module Credits | 20 |
| 3 | Module Level | 5 |
| 4 | Module Code | DIG5123 |

| 5 | Module Overview |
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This module provides knowledge and experience of designing and developing bespoke add-ons and extensions to industry standard software. You will learn to programme scripts to make visual effects and games production more efficient and extend the capabilities of existing software. The development and implementation of bespoke visual effects tools is a key part of the competitiveness of games and visual effects companies, allowing them to make themselves more efficient and capable than their competitors.

The module will also look at motion capture and working with motion capture data using motion capture tools and scripting.

This module will equip you with a unique and valuable set of skills, which will allow you to expand your production capabilities in a wide variety of ways such as: low level manipulation of animation and modelling data; designing production pipeline tools and using procedural approaches for modelling, animation and scene layout.

This module also explores a number of concepts, ideas and tools that will open up new topics and methods which can be utilised and investigated in your dissertation and production projects in the final year.

| 6 | Indicative Content |
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**Programing Concepts**
Variables, lists, operators, conditional statements, loops, strings, functions, classes

**Python for Visual Effects**
Scripting for Python and Nuke, Automating Python and Nuke, Working with data, Creating UI, Python and VFX production pipeline, capturing requirement, tool design.

**Motion Capture**
Motion capture technologies, motion capture pipeline, running a motion capture session, cleaning up motion capture data, editing; blending and applying constraints to motion capture performances.

| 7 | Module Learning Outcomes |
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| | **On successful completion of the module, students will be able to:** |
| 1 | Use an industry standard programming or scripting language to extend the capabilities of existing software tools. |
| 2 | Examine the requirements of a given tool or scenario, design implement and test a solution. |
| 3 | Apply captured and manipulated motion data, to a character rig. |

| 8 | Module Assessment | | | |
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| **Learning Outcome** | | | | |
| | | Coursework | Exam | In-Person |
| 1-3 | | X | | |

| 9 | Breakdown Learning and Teaching Activities | |
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| **Learning Activities** | | **Hours** |
| **Scheduled Learning (SL)** includes lectures, practical classes and workshops, peer group learning, Graduate+, as specified in timetable | | 48 |
| **Directed Learning (DL)** includes placements, work-based learning, external visits, on-line activity, Graduate+, peer learning, as directed on VLE | | 48 |
| **Private Study (PS)** includes preparation for exams | | 104 |
| **Total Study Hours:** | | 200 |