

**Course Code:**

PELC253

**1. Course Title:**

Digital Sculpting (with ZBrush)

**2. Academic Session:**

2017-2018

**3. Level:**

SCQF 11

**4. Credits:**

15

**5. Lead School/Board of Studies:**

School of Simulation and Visualisation

**6. Course Contact:**

Dr. Sandy Louchart

**7. Course Aims:**

This course is a course on digital sculpting, and is suitable for students with an interest in digital sculpting and/or 3D modelling.

The course will provide an overview of a range of techniques and practices through which a digital sculpture can be produced and distributed. The main focus of the course is on:

- Introducing students to fundamental principles of Digital Sculpting.
- Introducing and reviewing hardware, tools, practices and techniques related to Digital Sculpting production.
- Providing students with experience relevant to commercialisation and creative applications.

**8. Intended Learning Outcomes of Course:**

On successful completion of the course the student will be able to:

1. Demonstrate a critical understanding of a range of specialised principles and concepts of digital sculpting
2. Plan and execute a digital sculpting project through to the preparation of a digital sculpture

3. Use a range of computer-based sculpting techniques to support and enhance digital sculpting work, and undertake critical evaluations of the range of 3D models used and created
4. Critically reflect on the range of digital sculpting techniques, approaches and tools in creative industries

### 9. Indicative Content:

This course is for students who already have an interest in digital sculpting and/or 3D modelling applications. Students will develop knowledge and expertise on a range of principles, techniques and methods for effective digital sculpting and 3D modelling

The course will cover the following, indicative topics:

- Digital requirements for the production of digital sculpting (hardware, software, files, formats)
- Understanding digital images
- Transferring sculpting methods to 3D digital productions
- Understanding the relationship between sculpting techniques, formats, computing and production tools
- Exploring the role of digital sculpting in commercial and contemporary art practices
- Digital sculpting tools (i.e. sculpting brushes, strokes, masks, reference planes etc.)
- Digital sculpting software (e.g. ZBrush, MudBox, Sculptris)
- Digital production pipeline
- 3D Layering
- Rendering and lighting for digital distribution
- Introduction to post-processing and digital display

### 10. Description of Summative Assessment:

For this course, students must submit:

- Coursework 1 weighting: 30% (assessing LO1 and LO4)

A 1000 word critical reflection on the project, its inspirations, production pipeline, techniques, methods and its place in own practice.

- Coursework 2 weighting: 70% (assessing LO1-4)

A highly detailed, complex, textured and well rendered digital sculpture ready for digital distribution and display

Students will be given a range of choices and options for subjects, to allow them to situate the projects within their own disciplines and domains.

Coursework: 100%

#### 10.1 Please describe the Summative Assessment arrangements:

No	Assessment Method	Description of Assessment Method	Weight %	Submission week (assignments) or length (exam)
1	Individual Journal	Critical Reflection	30	Week 8
2	Individual Assignment	Digital Sculpture model	70	Week 10

### 11. Formative Assessment:

Individual and cohort feedback is available during tutorials in order to provide formative assessment. Individual written work can be formatively reviewed by submission of draft text or work in progress. Specific sessions are schedule for assessing student work progress at key stages of the course (Week 2 and 7).

**11.1 Please describe the Formative Assessment arrangements:**

Feedback on work in progress is provided through tutorial sessions.

**12. Collaborative:**

Yes

No

**12.1 Teaching Institutions:**

7T

**13. Requirements of Entry:**

None

**14. Co-requisites:**

None

**15. Associated Programmes:**

None

**16. When Taught:**

Stage 2

**17. Timetable:**

Timetable will be available in the induction week.

**18. Available to Visiting Students:**

Yes

No

**19. Distance Learning:**

Yes

No

**20. Placement:**

Yes

No

**21. Learning and Teaching Methods:**

Method

Formal Contact Hours

Notional Learning Hours  
(Including formal contact hours)

Lecture		
Studio		
Seminar/Presentation	12	20
Tutorial	8	20
Workshop		
Laboratory work		
Project work		50
Professional Practice		
E-Learning / Distance Learning		
Placement		
Examination		
Essay		
Private Study		60
Other (please specify below)		
<b>TOTAL</b>	<b>20</b>	<b>150</b>

**22. Description of "Other" Teaching and Learning Methods:**

N/A

**23. Additional Relevant Information:**

3D computer graphics are an inherently visual medium, involving working with visual display units. As such, this course may not be suitable for some visually impaired students. Students for whom this is a concern may contact the course tutor for further discussion.

**24. Indicative Bibliography:**

1. 3DTotal Publishing. , 2015. *Anatomy for 3D artists* - 3dtotal Publishing - ISBN-10: 1909414247
2. Kelle, E., 2012. *Introducing ZBrush (Serious Skills)*. -Sybex; 3rd Revised ed. edition - ISBN-10: 1118244826
3. Johnston, O., Thomas, F., 1997. *The Illusion of Life: Disney Animation*. Hyperion; 1st Hyperion Ed edition. ISBN-10: 0786860707
4. Mongeon, B., 2015. *3D Technology in Fine Art and Craft: Exploring 3D Printing, Scanning, Sculpting and Milling*. Focal Press; Pap/Psc edition - ISBN-10: 1138844330
5. Spencer, S., 2010. *ZBrush Digital Sculpting: Human Anatomy*. Sybex; Pap/DVD edition. ISBN-10: 0470450266
6. Linda.com, 2017. Available at: <<https://www.lynda.com>> [Accessed 8 March 2017]

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