

COMP0145 Research Methods and Making Skills

Note: Whilst every effort is made to keep the syllabus and assessment records correct, the precise details must be checked with the lecturer (s).

Academic session	2019 - 20
Module	Research Methods and Making Skills
Code	COMP0145
Module Delivery	tbc
Related deliveries	None
Prior deliveries	Tbc
Level	Postgraduate
FHEQ Level	L7
FHEQ credits	15
Term	Term 1
Module leader	Catherine Holloway
Contributors	Youngjun Cho
Module administrator	Youngjun Cho

Aims

This module will equip students with the basics of: qualitative research methods, quantitative research methods, basic coding and making skills.

The module is designed to be aligned with the 30 credit Future Global Technologies for Disability and Development module and will be a split of practical workshops and lab sessions in the Institute of Making as well as more formal seminars and computer lab sessions.

Learning Outcomes

1. Making Skills

Students will be able to:

- Create prototypes using a range of methods and materials
- Know where to find more information on material properties to inform design choices
- Use making as a design tool

2. Research Skills

Students will be able to:

- Choose an appropriate study design and statistical test

- Describe biases and errors in data types
- Design co-design workshops, semi-structured interview plans and questionnaires
- Use thematic analysis to code the interviews and questionnaires
- Visualise quantitative data sets for exploratory and explanatory purposes

3. Computing Skills

Students will be able to:

- Understand variables, looping and structures of basic scripting
- Create simple Python and Arduino programs of basic scripting
- Create physical computing prototypes with Arduino (or similar) platforms

4. Transferable Skills

Students will be able to:

- Deliver concise, informative presentations
- Develop clear project plans
- Develop self-reflection
- Communicate in a cross-disciplinary team
- Communicate and advocate with disabled people

Availability and prerequisites

Students will be expected to complete the online introductory course before joining in Term 1.

The module will be restricted to this programme for 2019 – 2020.

Content

Making & Computing 101

- Paper & Cardboard prototyping
- Materials and their properties
- 3D printing
- Laser Cutting
- Microcontroller programming (Arduino & Python)

Co-design Methods

- Data Collection in the wild (using Arduino or similar)

- Interviews & Questionnaires
- Thematic analysis framework
- Co-design workshops
- Participatory Photography

Statistics & Data Visualisation (All through Python & R)

- Types of data
- Parametric methods
- Non-parametric methods
- Knowing what type of test to use when
- Bias and error reporting
- Creating meaningful visualisations

Delivery

The module is delivered through a mixture of classroom-based lectures, seminars and laboratory/studio time.

Assessment

Method of Assessment	Weight %
Exam (2 Hours)	70
Portfolio	30