

Academic Session	Date Description Last Updated
2018/19	13-09-2018

Module Convenor:

Name	Office	Phone	Email
Catherine Holloway	3.03 66-72 GS	020 3108 7990	c.holloway@ucl.ac.uk

Module aims and objectives:

The module has the following aims:

- 1) To enable students to design assistive technologies for people unable to use mainstream technologies
- 2) To enable students to design technologies which aid accessibility for people unable to use mainstream technologies
- 3) To equip students with the techniques necessary to work with people who have disabilities to design technology which they can use to conduct specific tasks.

Module description:

This module focuses on the design of technologies for people who have a disability; this can be through the process of creating assistive technologies, how we get assistive technologies to people and train them in use or making mainstream technologies and places more inclusive.

Projects can focus on any part of the design cycle, for example, an ethnographic study to elicit user requirements, physical prototype design, testing of an existing solution via the design of an experiment. It can even be a critical analysis of designs in a particular area, or the testing of a new method. However, you must work with disabled people within any project.

It is a project-based module where students will work with disabled people to develop technology which bridges the gap between the capabilities of the person and those required to conduct a task. Students will work on projects with disabled people to design for the extreme market of disability.

The module is complemented by guest talks and tech demos by: disabled people and experts within the field of HCI, disability and development, smart cities and clinicians. As the majority of disabled people live in resource-poor settings a number of the case studies will be taken from the Global South

Each week will have a class activity, these allow you to develop your project ideas starting with reviewing and sharing relevant literature through to design methods and experiment or physical prototype design.

Module learning outcomes:knowledge and understanding of:

- 1) the history of accessibility and assistive technology, including the seminal works in this area within HCI.
- 2) the difficulties faced by disabled people in accessing the built and digital environments, and the role of accessibility, inclusive (universal design) and assistive technology in overcoming these difficulties
- 3) Specific knowledge on the topic of accessibility and assistive technology including developing a community of practice, engaging vulnerable groups in research, working with interdisciplinary teams and experts in the design process, ethics.

Intellectual (thinking) skills:

- 1) Critically select appropriate user-centred design methods to gather requirements, design or evaluate technologies which aid disabled people
- 2) Ground your research and thinking in appropriate theories of human computer interaction (including disability innovation and participatory design), technology abandonment, citizen science)
- 3) Critically select appropriate techniques for a given study

Practical Skills:

- 1) Practical application of user centred design and evaluation methods
- 2) Study design
- 3) Prototype design
- 4) Evaluation methods including both quantitative and qualitative
- 5) Dissemination of findings to experts and lay people

Transferable skills:

- 1) Critical analysis of previous literature and synthesis of an argument/hypothesis
- 2) Group work
- 3) Individual work
- 4) Design of technologies for a wide spectrum of abilities and needs
- 5) Presentation skills

Module schedule: Spring Term. Monday & Tuesday Mornings
(TBC)

Week	Topic
1	Disability Innovation (part 1): Technology abandonment and user-centred design
2	Disability Innovation (part 2): Future Living
3	Disability Innovation (part 3): Global perspectives
4	Design sessions with disabled people (practical session)
5	In the wild testing (practical session)
6	Technology show and tell (practical session)
7	Human-city Interactions
8	Open source design and makerspace accessibility
9	Communicating research findings & building a community of practice
10	Presentations

Assessment method:

Project Report – 3000 words – 100%

Pass conditions: Pass at 50%

Note: Module descriptions may be subject to minor alterations due to lecturer availability & changes to regulations.