



# SDES9316 Wearable and Bio-Sensing Interactions

Term T3, 2019

## Course Information

Units of Credit: 6

## Course Overview

### Course Description

This course focuses on the design, development and evaluation of wearable and biometric (body-sensing) interactions for artistic, wellness, rehabilitation, or educational applications. Students extend their knowledge of interaction design and apply this to the development of a prototype design that analyses and responds intelligently to data collected via analogue and digital biosensors.

The course provides students with an introduction to the theory and practice of wearable and health related digital technology. The past five years have seen tremendous growth in the area of wearable and biometric technologies, and this growth is set to continue. This course provides students with an introduction to design and engineering issues and approaches for addressing the functional and aesthetic requirements these new forms of interactions present.

### Course Learning Outcomes

On completion of this course, the student should be able to:

1. Describe and apply key theories, issues and frameworks from the field of human-computer interaction and media arts, to the evaluation of body-focused interactive designs.
2. Develop and refine an interactive prototype, service or environment through an iterative process of research, development, testing and evaluation.
3. Combine wearables and bio-sensing to build a resolved, functioning, body-sensing interactive artefact, service or environment.

### Teaching and Learning in this Course

This courses uses a variety of teaching approaches:

#### Blended/online

- Turnitin - originality checking
- Moodle - learning management system

## Assessment

	TITLE	WEIGHTING	ASSESSMENT TYPE
Assessment Task 1	Ideas - Research and Conceptualisation	20%	Formal Presentation and Paper
Assessment Task 2	Projects – Investigative Development	30%	Project Proposal
Assessment Task 3	Product – Realisation and Prototyping	50%	Project

## References for this Course

Hartman, K. (2014). *Make - Design, prototype, and wear your own interactive garments*. Sebastol, CA: Maker media.

Pailes-Friedman, R. (2016). *Smart Textiles for Designers: Inventing the Future of Fabric*. London, UK: Laurence King

Reas, C. (2010). *Form+code in design, art, and architecture*. New York: New York : Princeton Architectural Press.

Ryan, S. E., & Publishing, E. (2014). *Garments of paradise: wearable discourse in the digital age*. Cambridge, Massachusetts: The MIT Press.

Schwartzman, M. (2011). *See yourself sensing : redefining human perception*. London: London : Black Dog Pub Ltd.

Seymour, S. (2009). *Fashionable technology : the intersection of design, fashion, science, and technology*. Wien ; New York: Springer.

Seymour, S. (2010). *Functional aesthetics : visions in fashionable technology*. New York: Springer.

Bohnacker, H. (2012). *Generative design : visualize, program, and create with processing*. New York: New York : Princeton Architectural Press.