Computer-Assisted Surgery and Therapy (MPHY0026)

Description

Computer-assisted surgery (CAS) is a growing field in which computer software and hardware technologies are deployed to increase the safety, accuracy, and effectiveness of surgical and other interventional procedures. This module aims to introduce key concepts in CAS from a theoretical and practical perspective. Students completing the module are expected to demonstrate an understanding of the mathematical/computational basis, practical application, and clinical context of topics including image segmentation, image registration, visualisation of anatomical structures, instrument tracking, system calibration and usability.

The course will be assessed 50% by coursework and 50% by an examination lasting 2 hours.

It is a pre-requisite that students have taken a programming module such as MPHY0021, "Research Software Engineering with Python", or MPHY0030 “Programming Foundations for Medical Image Analysis”, and in addition, taken a course in linear algebra.

A video description can be found at the UCL Media Central.

Key information

Year: 2019/20
Credit value: 15 (150 study hours)
Delivery: PGT L7, Campus-based
Reading List: View on UCL website
Tutor: Dr Matt Clarkson
Term: Term 2
Timetable: View on UCL website

Assessment

- Written examination (main exam period): 50%
- Coursework: 50%

Find out more

For more information about the department, programmes, relevant open days and to browse other modules, visit ucl.ac.uk

Disclaimer: All information correct as of August 2019. Please note that aspects of the module may be subject to change. UCL will make best efforts to inform applicants of major changes.
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