Medical Instrumentation 2 (MPHY0011)

**Description**

The purpose of this module is to introduce some aspects of medical instrumentation including micro controllers, control theory and noise and interference in bio signals. Furthermore, students will be introduced to specific considerations involved in designing electronic circuits that are used for medical applications, including safety of medical electronic devices. Students will be able to:

1. Modify and run programs on a microcontroller (Arduino);
2. Understand negative and positive feedback systems and their applications in biomedical engineering;
3. Identify noise and interference in biomedical signals;
4. Design strategies to remove noise/interference from the signals;
5. Identify and test for electrical safety hazards in a given medical electrical/electronic device;
6. Design to eliminate/reduce electrical safety hazards in medical instruments;

**Key information**

- **Year**: 2020/21
- **Credit value**: 15 (150 study hours)
- **Delivery**: UG L5, Campus-based
- **Reading List**: View on UCL website
- **Tutor**: Dr Prabhav Nadipi Reddy
- **Term**: Term 1
- **Timetable**: View on UCL website

**Assessment**

- Practical examination (departmentally managed): 50.0%
- Written examination (main exam period): 50.0%

**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 March 2020. Please note that aspects of the module may be subject to change. UCL will make best efforts to inform applicants of major changes.