Materials and Engineering for Orthopaedic Medical Devices (MPHY0023)

**Description**

**Summary:**
The purpose of this module is to describe the problems presented in orthopaedics from an engineering and materials perspective, and discuss available solutions and current research.

**Aim:**
1. To be familiar with orthopaedic treatments for various diseases;
2. To be able to describe the properties of bone and biomaterials;
3. To be able to describe in detail biocompatibility and tissue engineering (in the context of orthopaedics);
4. To understand in detail the problems associated with hip implants;
5. To have an understanding of biomechanical aspects of the hip and knee joints;
6. To be familiar with a number of lower limb orthotic devices and current research related to prosthetic limbs;
7. To be able to describe the purpose and principles of gait analysis;
8. To be familiar with medical device regulations associated with orthopaedic medical devices;

**Key information**

- **Year**: 2018/19
- **Credit value**: 15 (150 study hours)
- **Delivery**: PGT L7, Campus-based
- **Reading List**: [View on UCL website](#)
- **Tutor**: Dr Lynsey Duffell
- **Term**: Term 1
- **Timetable**: [View on UCL website](#)

**Assessment**

- Written examination (main exam period): 80%
- Coursework: 20%

**Find out more**

For more information about the department, programmes, relevant open days and to browse other modules, visit [ucl.ac.uk](http://ucl.ac.uk)
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**Disclaimer:** All information correct as of December 2018. Please note that aspects of the module may be subject to change. UCL will make best efforts to inform applicants of major changes.