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;
9. To be familiar with orthopaedic treatments for various diseases;

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

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.
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