COURSE DETAIL

LIVING MATERIALS AND THEIR BIOMATERIAL REPLACEMENTS 4
Country United Kingdom - Scotland
Host Institution University of Edinburgh
Program(s) University of Edinburgh
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mechanical Engineering
UCEAP Course Number 132
UCEAP Course Suffix
UCEAP Official Title LIVING MATERIALS AND THEIR BIOMATERIAL REPLACEMENTS 4
UCEAP Transcript Title LIVING MATERIALS
UCEAP Quarter Units 4.00
UCEAP Semester Units 2.70

Course Description

The tissues that make up the human body display extraordinary characteristics; self-assembly, self-healing, adaptive, and sometimes actuatable. This course looks into the source of these characteristics and then considers what materials we, as engineers, can use to replace them. Students focus attention on the musculoskeletal and cardiovascular systems of the body and the biomaterials that have been developed for use as substitutes. They consider how the body reacts to the presence of man-made biomaterials and the impact of the need for biomaterial sterilization. Not all replacement materials are man-made; students think about tissue engineering as a way to grow new tissue. Finally, the course introduces the legal processes surrounding regulation of biomaterial use and considers the ethics of growing new body parts.

Language(s) of Instruction
English

Host Institution Course Number
MECE10016

Host Institution Course Title
LIVING MATERIALS AND THEIR BIOMATERIAL REPLACEMENTS 4

Host Institution Course Details
http://www.drps.ed.ac.uk/21-22/dpt/cxmece10016.htm

Host Institution Campus

Host Institution Faculty
School of Engineering

Host Institution Degree

Host Institution Department

Course Last Reviewed
2021-2022

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