

COURSE DETAIL

BIOMATERIALS ENGINEERING

Country

Singapore

Host Institution

National University of Singapore

Program(s)

National University of Singapore

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Mechanical Engineering Bioengineering

UCEAP Course Number

172

UCEAP Course Suffix**UCEAP Official Title**

BIOMATERIALS ENGINEERING

UCEAP Transcript Title

BIOMATERIALS ENGR

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

Biomaterials involve the integration of engineering materials with biological entities in the body. The success of any implant or medical device depends very much on the biomaterials used. The course introduces life-science topics and provides an appreciation of multi-disciplinary approach to problem solving. Topics include biological materials, metals, polymers, ceramics and composites use as implants, relationship between structure-composition-manufacturing process, mechanical testing and evaluation of implants and numerous case studies ranging from heart valves to tissue engineering of bones. Video presentations and invited lectures from clinicians compliments the breadth covered in this course.

Language(s) of Instruction

English

Host Institution Course Number

ME4253

Host Institution Course Title

BIOMATERIALS ENGINEERING

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Mechanical Engineering

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