

COURSE DETAIL

ENGINEERING BIOLOGY

Country

Singapore

Host Institution

National University of Singapore

Program(s)

National University of Singapore

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Bioengineering

UCEAP Course Number

109

UCEAP Course Suffix**UCEAP Official Title**

ENGINEERING BIOLOGY

UCEAP Transcript Title

ENGINEERING BIOLOGY

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course introduces engineering students to Engineering Biology, which involves genetic modification of biological systems using engineering approach. These engineered biological systems have wide biomedical and industrial applications. The course covers key engineering concepts and methodologies to the design of engineered genetic systems. Topics include foundational techniques in Engineering Biology, abstraction and composition of functional genetic devices and systems, use of computational modelling for genetic device and system design, combinatorial logic gene circuit design, use of control theory in dynamic device and systems design, and applications of engineered systems and societal impact.

Language(s) of Instruction

English

Host Institution Course Number

BN4501

Host Institution Course Title

ENGINEERING BIOLOGY

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Biomedical Engineering

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