



Course

Synthetic Biology

BABS3200

6 Units of Credit

Overview

Synthetic biology is the design and construction of novel biological systems or the redesign of existing biological systems. A fundamental aim of synthetic biology is to make biology easier to engineer through the application of engineering principles and standardisation of biological components. Central to this engineering is the deconstruction of biological systems into components (e.g. DNA, enzymes, genetic circuits, metabolic pathways, etc.) that can be uncoupled from each other, abstracted into predictable forms, characterised, and reassembled into novel functional systems to solve specific problems.

This course will give students insight into the assembly and design of interchangeable biological parts that form the basis of synthetic biology. Students will learn the methods for standardised assembly of DNA and genes into functioning devices, including biological circuits, DNA/RNA/protein nanostructures, and engineered organisms. A particular emphasis is placed on using online tutorials and computer labs to apply engineering principles for the design of a biological system, followed by wet labs to build and evaluate the biological function of the assemblages. This design - build - test paradigm reinforces an understanding of how biological systems are not static processes to be memorised, but rather, dynamic systems which can be manipulated and built from the ground-up.

Faculty

Faculty of Science

School

School of Biotechnology and Biomolecular Sciences

Study Level

Undergraduate

Offering Terms

Term 3

Campus

Kensington

Indicative contact hours

7

Timetable

[Visit timetable website for details](#)

Conditions for Enrolment

Prerequisite: BIOC2201

Course Outline

To access course outline, please visit:

[BABS3200 Course Outline](#)

Fees

Commonwealth Supported Students \$1191

Domestic Students \$5970

International Students \$5970

DISCLAIMER

Please note that the University reserves the right to vary student fees in line with relevant legislation. This fee information is provided as a guide and more specific information about fees, including fee policy, can be found on the [fee website](#).

For advice about fees for courses with a fee displayed as "Not Applicable", including some Work Experience and UNSW Canberra at ADFA courses, please contact the relevant Faculty.

Where a Commonwealth Supported Students fee is displayed, it does not guarantee such places are available.

Pre-2019 Handbook Editions

Access past handbook editions (2018 and prior)

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Authorised by Deputy Vice-Chancellor (Academic)

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