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 interchangable 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 2

Campus
Kensington

Indicative contact hours
7

Timetable
Visit timetable website for details
Conditions for Enrolment

Prerequisite: BABS2202 and BIQC2201
Course Outline

To access course outline, please visit:

BABS3200 Course Outline
Fees

Commonwealth Supported Students $1170
Domestic Students $5760
International Students $5760

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)

Pre-2019 Handbook Editions
© UNSW Sydney (CRICOS Provider No.: 00098G), 2019. The information contained in this Handbook is indicative only. While every effort is made to keep this information up-to-date, the University reserves the right to discontinue or vary arrangements, programs and courses at any time without notice and at its discretion. While the University will try to avoid or minimise any inconvenience, changes may also be made to programs, courses and staff after enrolment. The University may also set limits on the number of students in a course.

Authorised by Deputy Vice-Chancellor (Academic)
CRICOS Provider Code 00098G
ABN: 57 195 873 179