Bioinformatics Engineering

BINFAH

Bioinformatics Engineering is studied as a major stream in the BE(Hons). Day to day administration of this stream is conducted through the Computer Science and Engineering Student Office.

This page outlines the core rules for the Bioinformatics Engineering stream when taken as part of a single or dual award. The requirements total 168 units of credit, plus 60 days of industrial training. Refer to the program page for full details on the overall program requirements.

Further details on the stream requirements, electives, and advice regarding the order and placement of courses in the stream can be found at: Bioinformatics
Faculty
Faculty of Engineering

School
School of Computer Science and Engineering

Study Level
Undergraduate

Minimum Units of Credit
168

Specialisation Type
Honours
Available in Program(s)

Program(s) in which this honours is available

Bachelor of Engineering (Honours) - BE (Hons)
3707 Engineering (Honours)
Faculty: Faculty of Engineering
Campus: Kensington
Units of Credit: 192
Typical Duration: 4 Years

Bachelor of Engineering (Honours) - BE (Hons)
Master of Biomedical Engineering - MBiomedE
3768 Engineering (Honours)/Biomedical Engineering
Faculty: Faculty of Engineering
Campus: Kensington
Units of Credit: 240
Typical Duration: 5 Years
**Specialisation Structure**

Students must complete 168 UOC.

**Level 1 Core Courses**

Students must take 60 UOC of the following courses.

- **BAB51201** | 6 UOC
  Molecules, Cells and Genes

- **COMP1511** | 6 UOC
  Programming Fundamentals

- **COMP1521** | 6 UOC
  Computer Systems Fundamentals

- **COMP1531** | 6 UOC
  Software Engineering Fundamentals

- **ENGG1000** | 6 UOC
  Introduction to Engineering Design and Innovation

- **MATH1081** | 6 UOC
  Discrete Mathematics

One of the following:

- **CHEM1011** | 6 UOC
  Chemistry 1A: Atoms, Molecules and Energy

- **CHEM1031** | 6 UOC
  Higher Chemistry 1A: Atoms, Molecules and Energy

One of the following:

- **PHYS1111** | 6 UOC
  Fundamentals of Physics
PHYS1121  |  6 UOC
Physics 1A

PHYS1131  |  6 UOC
Higher Physics 1A

One of the following:
MATH1131  |  6 UOC
Mathematics 1A

MATH1141  |  6 UOC
Higher Mathematics 1A

One of the following:
MATH1231  |  6 UOC
Mathematics 1B

MATH1241  |  6 UOC
Higher Mathematics 1B

**Level 2 Core Courses**

Students must take 42 UOC of the following courses.

BINF2010  |  6 UOC
Introduction to Bioinformatics

BIOC2201  |  6 UOC
Principles of Molecular Biology (Advanced)

COMP2041  |  6 UOC
Software Construction: Techniques and Tools

COMP2511  |  6 UOC
Object-Oriented Design & Programming

COMP2521  |  6 UOC
Data Structures and Algorithms
One of the following:
MATH2801 | 6 UOC
Theory of Statistics

MATH2901 | 6 UOC
Higher Theory of Statistics

One of the following:
BABS2202 | 6 UOC
Molecular Cell Biology 1

BABS2204 | 6 UOC
Genetics

BABS2264 | 6 UOC
Genetics (Advanced Level)

BIOC2101 | 6 UOC
Principles of Biochemistry (Advanced)

MICR2011 | 6 UOC
Microbiology 1

**Level 3 Core Courses**

Students must take 30 UOC of the following courses.

BABS3121 | 6 UOC
Molecular Biology of Nucleic Acids

BINF3010 | 6 UOC
Applied Bioinformatics

BINF6111 | 6 UOC
Genome Informatics Engineering Design Workshop

COMP3121 | 6 UOC
Algorithms and Programming Techniques

COMP3311 | 6 UOC
Database Systems

**Level 4 Core Courses**

Students must take 24 UOC of the following courses.

BINF6112 | 6 UOC
Computational Biology Engineering Design Workshop

COMP4920 | 6 UOC
Management and Ethics

COMP4951 | 4 UOC
Research Thesis A

COMP4952 | 4 UOC
Research Thesis B

COMP4953 | 4 UOC
Research Thesis C

**Discipline Electives**

Students must take 12 UOC of the following:

Level 3 or higher COMP courses.

Level 3 BABS, BIOC or MICR courses

any level 3 Biotechnology & Biomolecular Sciences course

any level 3 Biochemistry course

any level 3 Computer Science course
any level 4 Computer Science course

any level 6 Computer Science course

any level 9 Computer Science course

ENGG3060 | 6 UOC
Maker Games

any level 3 Microbiology course

**Enrolment Disclaimer**

You are responsible for ensuring you enrol in courses according to your program requirements. myUNSW enrolment checks that you have met enrolment requirements such as pre-requisites for individual courses but not that a course will count towards your program requirements. Do not assume that because you have enrolled in a course that the course will be credited towards your program.
Pre-2019 Handbook Editions

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Authorised by Deputy Vice-Chancellor (Academic)
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