

Bachelor of Science (Biotechnology) (BSc(Biotech))

Program Code

BSC

Program Minimum Units

72

Standard Duration

3 Years

Program Faculty

Faculty of Sciences

AQF Level

07

Academic Year

2017

These Program Rules should be read in conjunction with the University's policies (<http://www.adelaide.edu.au/policies>).

Overview

The field of biotechnology is constantly evolving and utilises current technologies such as protein separation technologies, genomics and proteomics to produce foods, drugs and other products. This program provides training in both the molecular basis for biotechnology and the bioprocess technology, which are required for the development of biotechnology products. This program is based on the areas of molecular biology, animal, plant and microbial biotechnology, structural biology and bioprocess engineering. It provides students with a unique cross disciplinary approach, which incorporates expertise from the Faculty of Sciences, and the Faculty of Engineering, Computer and Mathematical Sciences.

The Bachelor of Science (Biotechnology) is an AQF Level 7 program with a standard full-time duration of 3 years.

Academic Program Rules for Bachelor of Science (Biotechnology) (BSc(Biotech))

There shall be a Bachelor of Science (Biotechnology) (BSc(Biotech)).

Qualification Requirements Academic Program

To qualify for the degree of Bachelor of Science (Biotechnology), the student must complete satisfactorily a program of study consisting of the following requirements with a combined total of not less than 72 units, comprising:

1. Core courses to the value of 36 units
2. Elective courses to the value of 36 units, which may include other undergraduate courses offered by the University that are not offered by the Faculty of Sciences up to the value of 9 units in total at levels I and/or II with no more than 6 units at Level I.
3. Level I courses not exceeding 30 units

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4. Level III Science courses to the value of at least 24 units
5. A major in Biochemistry

Core Courses

To satisfy the requirements for Core Courses students must complete courses to the value of 36 units.

Level I

SCIENCE 1400 [Science or Fiction I](#) (3 units)

BIOLOGY 1101 [Biology I: Molecules, Genes and Cells](#) (3 units)

Courses to the value of 3 units from the following:

BIOLOGY 1201 [Biology I: Human Perspectives](#) (3 units)

or

BIOLOGY 1202 [Biology I: Organisms](#) (3 units)

and

Courses to the value of 6 units from the following:

CHEM 1100 [Chemistry IA](#) (3 units)

CHEM 1200 [Chemistry IB](#) (3 units)

CHEM 1101 [Foundations of Chemistry IA](#) (3 units)

CHEM 1201 [Foundations of Chemistry IB](#) (3 units)

CHEM 1310 [Chemistry IA\(S\)](#) (3 units)

CHEM 1311 [Chemistry IB\(S\)](#) (3 units)

Level II

All of the following courses must be completed:

BIOCHEM 2502 [Biochem II \(Biotech\): Molecular and Cell Biology](#) (3 units)

CHEM ENG 2015 [Principles of Biotechnology II](#) (3 units)

MICRO 2504 [Microbiology II \(Biotechnology\)](#) (3 units)

Level III - For a Major in Biochemistry

BIOCHEM 3000 [Molecular and Structural Biology III](#) (6 units)

BIOTECH 3000 [Biotechnology Practice III](#) (6 units)

Elective Courses

Level I

Elective courses from the degree of Bachelor of Science or other undergraduate courses offered by the University that are available to the student.

Note: Both BIOLOGY 1201 Biology I: Human Perspectives and BIOLOGY 1202 Biology I: Organisms may be presented towards this program.

Level II

BIOCHEM 2503 [Biochemistry II \(Biotechnology\): Metabolism](#) (3 units)

CHEM 2510 [Chemistry IIA](#) (3 units)

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CHEM 2530 [Environmental & Analytical Chemistry II](#) (3 units)
CHEM 2520 [Chemistry IIB](#) (3 units)
CHEM 2540 [Medicinal & Biological Chemistry II](#) (3 units)
ENV BIOL 2503 [Zoology II](#) (3 units)
ENV BIOL 2501 [Evolutionary Biology II](#) (3 units)
GENETICS 2510 [Genetics IIA: Foundation of Genetics](#) (3 units)
GENETICS 2520 [Genetics IIB: Function and Diversity of Genomes](#) (3 units)
MICRO 2505 [Immunology & Virology II \(Biotechnology\)](#) (3 units)

or

Elective courses from the degree of Bachelor of Science or other undergraduate courses offered by the University that are available to the student.

Level III

BIOCHEM 3001 [Cancer, Stem Cells & Development III](#) (6 units)
CHEM 3111 [Chemistry III](#) (6 units)
CHEM 3211 [Synthesis of Materials III](#) (3 units)
CHEM 3212 [Fundamentals of Materials III](#) (3 units)
CHEM 3213 [Advanced Synthetic Methods III](#) (3 units)
CHEM 3214 [Medicinal and Biological Chemistry III](#) (3 units)
GENETICS 3111 [Genes, Genomes and Molecular Evolution III](#) (6 units)
GENETICS 3211 [Gene Expression & Human Developmental Genetics III](#) (6 units)
MICRO 3000 [Infection and Immunity IIIA](#) (6 units)
MICRO 3001 [Infection and Immunity IIIB](#) (6 units)

or additional Level III courses from the degree of Bachelor of Science, which may include a major

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