

# BACHELOR OF SCIENCE (3754)

Approved Abbreviation: BSc

Western Sydney University Program Code: 3754

AQF Level: 7

CRICOS Code: 041144M

This program applies to students who commenced in 2022 or later.

Students should follow the program structure for the session start date relevant to the year they commenced.

For Commencement Year 2020 to 2021 - please refer to: 3754.1 Bachelor of Science (<http://handbook.westernsydney.edu.au/hbook/course.aspx?course=3754.1>)

Science asks questions about how the natural world works and the impact of humans at its interface. It does so in a systematic, yet rigorously creative way based on inquiry and evidence. A Bachelor of Science will prepare you to take part in this process of inquiry, by both contributing to it and by using scientific knowledge to solve current problems in broad settings. Students will learn core concepts and skills investigating the natural world, proposing and testing ideas by experimentation and observation; quantifying and modelling processes; communicating findings, thinking independently and critically. Students can enrol in this degree and select from a range of scientific disciplines with the option of expanding learning into other areas outside of science.

Students choosing T076 Environmental Health, Testamur Major must complete a compulsory work placement.

All students must complete 60 credit points of study at Level 3 to meet program requirements. Depending on the major selected, students may need to select at least 10 credit points of elective study at Level 3 to meet this requirement.

Students need to note that different majors are offered on different campuses, and not all majors will be offered at every campus.

## Study Mode

Three years full-time or six years part-time.

## Program Advice

[science@westernsydney.edu.au](mailto:science@westernsydney.edu.au)

Location

Campus	Attendance	Mode	Advice
Campbelltown Campus	Full Time	Internal	See above
Campbelltown Campus	Part Time	Internal	See above
Hawkesbury Campus	Full Time	External	See above
Hawkesbury Campus	Part Time	External	See above
Hawkesbury Campus	Full Time	Internal	See above
Hawkesbury Campus	Part Time	Internal	See above

Parramatta Campus - Victoria Road	Full Time	Internal	See above
Parramatta Campus - Victoria Road	Part Time	Internal	See above

## Accreditation

T076 Environmental Health when undertaken within the Bachelor of Science has Conditional Provisional Accreditation with Environmental Health Australia.

## Work Integrated Learning

Western Sydney University seeks to enhance student learning experiences by enabling students to engage in the culture, expectations and practices of their profession or discipline. This program includes a placement or other community-based unpaid practical experience opportunities.

Students who select T076 Environmental Health testamur major must complete a compulsory work placement. Please contact the Program Advisor listed above for information.

Work integrated learning is a component of many subjects in the core of the course and testamur majors. Additionally, students will be allocated to or, depending on the testamur major selected, may choose one of three specific work integrated learning subjects.

The first of these, *Complex Case Studies in Science*, is designed to provide students with opportunities for personal development, industry and civic engagement and to develop career readiness. The subject assures that students can critically analyse and logically argue complex scientific issues whilst taking into account multiple competing perspectives and builds on employability and communication skills developed in earlier subjects.

Complex Forensic Studies is the second specific work integrated learning subject. Students in T049 Forensic Science will undertake Complex Forensic Studies which assures similar skills to those in Complex Case Studies but in a specific forensic science context.

In the third specific work integrated learning subject, Work Internship for Science Professionals, students undertake an industry placement. This subject is compulsory for students studying MT3031 Environmental Health to meet accreditation requirements. The placement will allow students to observe and develop professional skills and behaviour and integrate theoretical and practical science knowledge and conventions into a real-world setting. Student placements are unpaid and are undertaken in accordance with the requirements of Western Sydney University's Placement Policy (<https://policies.westernsydney.edu.au/document/view.current.php?id=308>). Students who are in relevant employment may apply for this experience to be recognised for advanced standing purposes. Students should consult the Credit for Prior Learning Policy (<https://policies.westernsydney.edu.au/document/view.current.php?id=176>).

## Admission

Assumed Knowledge: Students should have at least two unit English, and two unit science (any science) and two unit mathematics at year 12 equivalent.

Applications from Australian and New Zealand citizens and holders of permanent resident visas may be made via the Universities Admissions Centre (UAC) or directly through the Western Portal. Use the links below to apply via UAC or Western Sydney University. Applications made directly to Western Sydney do not have an application fee.

<http://www.uac.edu.au/>  
<https://westernsydney.uac.edu.au/ws/>

Applicants who have undertaken studies overseas may have to provide proof of proficiency in English. Local applicants who are applying through the Universities Admissions Centre (UAC) will find details of minimum English proficiency requirements and acceptable proof on the UAC website. Local applicants applying directly to the University should also use the information provided on the UAC website.

International students currently completing an Australian Year 12 in or outside Australia, an International Baccalaureate in Australia or a New Zealand National Certificate of Educational Achievement (NCEA) level 3 must apply via UAC International.

<http://www.uac.edu.au/>

All other International applicants must apply directly to the University via the International Office.

International students applying to the University through the International Office can find details of minimum English proficiency requirements and acceptable proof on their website.

International Office (<http://www.westernsydney.edu.au/international/>)

Overseas qualifications must be deemed by the Australian Education International - National Office of Overseas Skills Recognition (AEI-NOOSR) to be equivalent to Australian qualifications in order to be considered by UAC and Western Sydney University.

## Program Structure Current

Qualification for this award requires the completion of 240 credit points which includes 80 credit points of core subjects plus 80 credit points of subjects taken as a Science major plus 80 credit points of elective subjects.

An exception to this is MT3031 Environmental Health specialisation. Students undertaking this specialisation must complete 80 credit points of core subjects plus 120 credit points of Environmental Health units plus 40 credit points of flexible units.

All students must complete 60 credit points at level 3 or above. Subjects are 10 credit points each unless otherwise indicated.

### Early Exit

Students may exit this program on completion of 80 cps with a Diploma in General Science (exit only)

Diploma in General Science (exit only) (<https://hbook.westernsydney.edu.au/programs/diploma-general-science-exit-only/>)

### Core Subjects

All students are required to complete the following two subjects:

Subject	Title	Credit Points
NATS 1019	Scientific Literacy	10
CHEM 1008	Introductory Chemistry	10
<b>Total Credit Points</b>		<b>20</b>

**NOTE: Students are allocated a core subject from the following areas depending on the major chosen. Students should consult the sequence of subjects identified for each major.**

Subject	Title	Credit Points
Students are allocated two of the following:		20
BIOS 1001	Biodiversity	
BIOS 1012	Cell Biology	
CHEM 1012	Essential Chemistry	
Students are allocated one of the following:		10
MATH 1026	Quantitative Thinking	
MATH 1014	Mathematics 1A	
MATH 1003	Biometry	
Students are allocated one of the following:		10
MATH 2001	Advanced Calculus	
BIOS 2042	Biochemistry	
NATS 2019	Forensic and Environmental Analysis	
NATS 2042	Science Research Methods	
CHEM 2001	Analytical Chemistry	
PUBH 2010	Epidemiology	
Students are allocated one of the following:		10
NATS 3008	Complex Forensic Studies	
NATS 3045	Work Internship for Science Professionals	
NATS 3044	Complex Case Studies in Science	
And		
NATS 3055	Practicum 1	10
<b>Total Credit Points</b>		<b>60</b>

### Majors

Students are required to complete eight major subjects from one of the following testamur majors. Students selecting T076 Environmental Health are required to complete twelve major subjects.

Agrifood, Testamur Major (T123) (<https://hbook.westernsydney.edu.au/majors-minors/agrifood-ug-testamur-major/>)

Animal Science, Testamur Major (T054) (<https://hbook.westernsydney.edu.au/majors-minors/animal-science-ug-testamur-major/>)

Applied Physics, Testamur Major (T078) (<https://hbook.westernsydney.edu.au/majors-minors/applied-physics-ug-testamur-major/>)

Biology, Testamur Major (T053) (<https://hbook.westernsydney.edu.au/majors-minors/biology-ug-testamur-major/>)

Chemistry, Testamur Major (T026) (<https://hbook.westernsydney.edu.au/majors-minors/chemistry-ug-testamur-major/>)

Environmental Health, Testamur Major (T076) (<https://hbook.westernsydney.edu.au/majors-minors/environmental-health-ug-testamur-major/>)

Forensic Science, Testamur Major (T049) (<https://hbook.westernsydney.edu.au/majors-minors/forensic-science-ug-testamur-major/>)

Innovative Foods, Testamur Major (T124) (<https://hbook.westernsydney.edu.au/majors-minors/innovative-foods-ug-testamur-major/>)

Sustainable Environmental Futures, Testamur Major (T120) (<https://hbook.westernsydney.edu.au/majors-minors/sustainable-environmental-futures-ug-testamur-major/>)

Zoology, Testamur Major (T029) (<https://hbook.westernsydney.edu.au/majors-minors/zoology-ug-testamur-major/>)

## Elective Subjects

Students may use their elective subjects to complete a major (80 credit points) or one or more minors (40 credit points each) from the same or another discipline area, or up to 80 credit points from the wide range of units offered by Western Sydney University.

Students may complete a second testamur major chosen from the list below:

- Agrifood, Testamur Major (T123) (<https://hbook.westernsydney.edu.au/majors-minors/agrifood-ug-testamur-major/>)
- Anatomy and Physiology, Testamur Major (T084) (<https://hbook.westernsydney.edu.au/majors-minors/anatomy-physiology-ug-testamur-major/>)
- Animal Science, Testamur Major (T054) (<https://hbook.westernsydney.edu.au/majors-minors/animal-science-ug-testamur-major/>)
- Applied Physics, Testamur Major (T078) (<https://hbook.westernsydney.edu.au/majors-minors/applied-physics-ug-testamur-major/>)
- Biology, Testamur Major (T053) (<https://hbook.westernsydney.edu.au/majors-minors/biology-ug-testamur-major/>)
- Biomedical Science, Testamur Major (T086) (<https://hbook.westernsydney.edu.au/majors-minors/biomedical-science-ug-testamur-major/>)
- Chemistry, Testamur Major (T026) (<https://hbook.westernsydney.edu.au/majors-minors/chemistry-ug-testamur-major/>)
- Forensic Science, Testamur Major (T049) (<https://hbook.westernsydney.edu.au/majors-minors/forensic-science-ug-testamur-major/>)
- Human Nutrition, Testamur Major (T125) (<https://hbook.westernsydney.edu.au/majors-minors/human-nutrition-ug-testamur-major/>)
- Innovative Foods, Testamur Major (T124) (<https://hbook.westernsydney.edu.au/majors-minors/innovative-foods-ug-testamur-major/>)
- Sustainable Environmental Futures, Testamur Major (T120) (<https://hbook.westernsydney.edu.au/majors-minors/sustainable-environmental-futures-ug-testamur-major/>)
- Zoology, Testamur Major (T029) (<https://hbook.westernsydney.edu.au/majors-minors/zoology-ug-testamur-major/>)

### Suggested minors

Pharmacology, Minor (<https://hbook.westernsydney.edu.au/majors-minors/pharmacology-/#text>)

Environmental Health, Minor (<https://hbook.westernsydney.edu.au/majors-minors/environmental-health-minor/>)

Infectious Diseases, Minor (<https://hbook.westernsydney.edu.au/majors-minors/infectious-diseases-minor/>)

Mathematics, Minor (<https://hbook.westernsydney.edu.au/majors-minors/mathematics-minor/>)

Microbiology, Minor (<https://hbook.westernsydney.edu.au/majors-minors/microbiology-minor/>)

Conservation Science, Minor (<https://hbook.westernsydney.edu.au/majors-minors/conservation-science-minor/>)

Students taking a pathway to teaching minor must first seek academic advice before selecting electives or minors.

Students can apply for a major or minor via MySR.

Enrolment in elective subjects is dependent on meeting any required criteria for individual subjects, such as co-requisites and pre-requisites.

## Program Structure 2023

Qualification for this award requires the completion of 240 credit points which includes 80 credit points of core subjects plus 80 credit points of subjects taken as a Science major plus 80 credit points of elective subjects.

There are two exceptions to this: For T076 Environmental Health, students must complete 80 credit points of core subjects plus 120 credit points of Environmental Health subjects plus 40 credit points of elective subjects.

All students must complete 60 credit points at level 3 or above. Depending on the major selected, students may need to select at least 10 credit points of flexible study at Level 3 to meet this requirement.

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Students are allocated one of the following:		10
MATH 2001	Advanced Calculus	
BIOS 2042	Biochemistry	
NATS 2019	Forensic and Environmental Analysis	
NATS 2042	Science Research Methods	
CHEM 2001	Analytical Chemistry	
PUBH 2010	Epidemiology	
Students are allocated one of the following:		10
NATS 3008	Complex Forensic Studies	
NATS 3044	Complex Case Studies in Science	

NATS 3045	Work Internship for Science Professionals	
Students are allocated one of the following:		10
NATS 3027	Laboratory Quality Management	
NATS 3015	Field Project 1	
BIOS 3012	Conservation Biology	
NATS 3040	Topics in Medical Science	
<b>Total Credit Points</b>		<b>60</b>

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Applied Physics, Testamur Major (T078) (<https://hbook.westernsydney.edu.au/majors-minors/applied-physics-ug-testamur-major/>)

Biology, Testamur Major (T053) (<https://hbook.westernsydney.edu.au/majors-minors/biology-ug-testamur-major/>)

Chemistry, Testamur Major (T026) (<https://hbook.westernsydney.edu.au/majors-minors/chemistry-ug-testamur-major/>)

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Zoology, Testamur Major (T029) (<https://hbook.westernsydney.edu.au/majors-minors/zoology-ug-testamur-major/>)

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Applied Physics, Testamur Major (T078) (<https://hbook.westernsydney.edu.au/majors-minors/applied-physics-ug-testamur-major/>)

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Biomedical Science, Testamur Major (T086) (<https://hbook.westernsydney.edu.au/majors-minors/biomedical-science-ug-testamur-major/>)

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## Suggested minors

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Infectious Diseases, Minor (<https://hbook.westernsydney.edu.au/majors-minors/infectious-diseases-minor/>)

Mathematics, Minor (<https://hbook.westernsydney.edu.au/majors-minors/mathematics-minor/>)

Microbiology, Minor (<https://hbook.westernsydney.edu.au/majors-minors/microbiology-minor/>)

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