

# BACHELOR OF ADVANCED MEDICAL SCIENCE (3758)

**Approved Abbreviation:** BAdvMedSc

**Western Sydney University Program Code:** 3758

**AQF Level:** 7

**CRICOS Code:** 075674D

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 3758.1 Bachelor of Advanced Medical Science (<http://handbook.westernsydney.edu.au/hbook/course.aspx?course=3758.1>)

This degree equips students with both specialised knowledge and enhanced inquiry and critical thinking skills. It provides training for a range of careers in medical science and allows development of leadership and research skills. The advanced science subjects partner you with experienced academic researchers in human nutrition, biomedical science or anatomy and physiology. The biomedical science major focuses on the cellular, molecular and genetic aspects of health. The Human Nutrition major uses biology, chemistry and physiology to develop concepts in food and nutrient form and function in relation to human metabolism and physiology, while the Anatomy and Physiology major focuses on the structure and function of the human body.

All students must complete 60 credit points of study at Level 3 to meet course requirements. Students prior to 2024 start may need to select at least 10 credit points of flexible study at Level 3 to meet this requirement.

Students should note that different majors are offered on different campuses.

## Study Mode

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

## Program Advice

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

Prospective students should visit the following websites for general enquiries about this program.

Enquire about this program (<https://enquiry.westernsydney.edu.au/courseenquiry/>) | Local Admission (<https://www.westernsydney.edu.au/future/>) | International Admission (<https://www.westernsydney.edu.au/international/home/apply/admissions/>) |

Location

Campus	Attendance	Mode	Advice
Campbelltown Campus	Full Time	Internal	See above
Campbelltown Campus	Part Time	Internal	See above
Parramatta Campus - Victoria Road	Full Time	Internal	See above
Parramatta Campus - Victoria Road	Part Time	Internal	See above

## 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.

Work integrated learning is a component of many subjects in the core of the course and testamur majors. Additionally, students may choose one of two 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

In the second specific work integrated learning subject, *Work Internship for Science Professionals*, students undertake an industry placement. 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 2 unit English, 2 unit science (any science) and 2 unit mathematics at year 12 equivalent.

Minimum ATAR of 90. Students must maintain a Grade Point Average of (GPA) of 5.0 or above to continue their enrolment in the program. If this GPA is not maintained they will be automatically transferred into the standard program after one warning (one semester of further study). Students in other WSU science programs who achieve a GPA of 5.0 or greater at the end of their first year of study may be admitted into the Advanced Medical Science program by invitation if sufficient places are available.

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.

## Structure Current

Qualification for this award requires the completion of 240 credit points which includes: 120 credit points of core subjects, 80 credit points taken as a Science specialisation and 40 credit points of elective subjects.

All students must complete 60 credit points of study at Level 3 to meet program requirements.

Please note that the full three year sequence is shown on each of the Major Testamur handbook pages at the links below.

## 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/archives/2024-2025/programs/diploma-general-science-exit-only/>)

Subject	Title	Credit Points
All students are required to complete the following two core subjects:		
NATS 1019	Scientific Literacy	10
CHEM 1008	Introductory Chemistry	10

**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. Limited choice may be available and this is indicated in the sequence 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 1003	Biometry	
MATH 1026	Quantitative Thinking	
MATH 1014	Mathematics 1A	
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 3044	Complex Case Studies in Science	
NATS 3045	Work Internship for Science Professionals	
NATS 3008	Complex Forensic Studies	

And		
NATS 3055	Practicum 1	10
all of Advanced Science subjects		
NATS 2001	Advanced Science Project A	10
NATS 2002	Advanced Science Project B	10
NATS 3043	Advanced Science Research Project C	20

## Specialisations

Students are required to complete eight specialisation subjects from one of the following testamur majors:

Please note that the full three year structure is shown on each of the Major Testamur handbook pages via the links below.

Anatomy and Physiology, Testamur Major (T084) (<https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/anatomy-physiology-ug-testamur-major/>)

Biomedical Science, Testamur Major (T086) (<https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/biomedical-science-ug-testamur-major/>)

Human Nutrition, Testamur Major (T125) (<https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/human-nutrition-ug-testamur-major/>)

## Elective subjects

Enrolment in elective units is subject to meeting any required criteria for individual units, such as co-requisites and pre-requisites.

## Suggested Minors

Environmental Health, Minor (<https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/environmental-health-minor/>)

Infectious Diseases, Minor (<https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/infectious-diseases-minor/>)

Microbiology, Minor (<https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/microbiology-minor/>)

Conservation Science, Minor (<https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/conservation-science-minor/>)

Pharmacology, Minor (<https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/pharmacology-/>)

## Minor elective spaces

Elective subjects may be used toward obtaining an additional approved minor (40 credit points). Western Sydney University offers minors in a range of areas including Sustainability and Indigenous Studies.

Global Sustainability Minor (<https://hbook.westernsydney.edu.au/majors-minors/global-sustainability-minor/>)

Indigenous Australian Studies Minor (<https://hbook.westernsydney.edu.au/majors-minors/indigenous-australian-studies-minor/>)

Sustainable Futures, Minor (<https://hbook.westernsydney.edu.au/majors-minors/sustainable-futures-minor/#structuretext>)

Western Sydney University also offers the following innovative transdisciplinary Challenge Minors ([https://www.westernsydney.edu.au/educational\\_partnerships\\_and\\_quality/home/challenge\\_minors/](https://www.westernsydney.edu.au/educational_partnerships_and_quality/home/challenge_minors/)) which we encourage those students who have elective space to consider.

Equitable Technologies (<https://hbook.westernsydney.edu.au/majors-minors/equitable-technologies-minor/>)

Urban Evolution (<https://hbook.westernsydney.edu.au/majors-minors/urban-evolution-minor/>)

Migration and Global Change (<https://hbook.westernsydney.edu.au/majors-minors/migration-global-change-minor/>)

Personal Innovation (<https://hbook.westernsydney.edu.au/majors-minors/personal-innovation-minor/>)

Innovating, Creating and Problem Solving (<https://hbook.westernsydney.edu.au/majors-minors/innovating-creating-problem-solving-minor/>)

Eco-Socially Conscious Design and Manufacturing (<https://hbook.westernsydney.edu.au/majors-minors/eco-socially-conscious-design-manufacturing-minor/>)

Water for Life (<https://hbook.westernsydney.edu.au/majors-minors/water-life-minor/>)

Climate Justice (<https://hbook.westernsydney.edu.au/majors-minors/climate-justice-minor/>)

Creative and Visual Communication (<https://hbook.westernsydney.edu.au/majors-minors/creative-visual-communication-minor/>)

Global Workplaces (<https://hbook.westernsydney.edu.au/majors-minors/global-workplaces-minor/>)

Innovating For Humans (<https://hbook.westernsydney.edu.au/majors-minors/innovating-humans-minor/>)

Creative Living for Cultural Wellbeing (<https://hbook.westernsydney.edu.au/majors-minors/creative-living-cultural-wellbeing-minor/>)

Ideate.Strategise.Innovate. (<https://hbook.westernsydney.edu.au/majors-minors/ideate-strategise-innovate-minor/>)

Humanising Data (<https://hbook.westernsydney.edu.au/majors-minors/humanising-data-minor/>)

For more information, visit the Challenge Minor ([https://www.westernsydney.edu.au/educational\\_partnerships\\_and\\_quality/home/challenge\\_minors/](https://www.westernsydney.edu.au/educational_partnerships_and_quality/home/challenge_minors/)) website.

Search for majors and minors (<https://hbook.westernsydney.edu.au/majors-minors/>)

Students can apply for an elective minor via Western Now.

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## Program Structure 2023

Qualification for this award requires the completion of 240 credit points which includes: 120 credit points of core subjects, 80 credit points taken as a Science specialisation and 40 credit points of elective subjects.

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Please note that the full three year sequence is shown on each of the Major Testamur handbook pages at the links below.

### Early Exit

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

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Subject	Title	Credit Points
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All students are required to complete the following two core subjects:

NATS 1019	Scientific Literacy	10
CHEM 1008	Introductory Chemistry	10

**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. Limited choice may be available and this is indicated in the sequence 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 1003	Biometry	
MATH 1026	Quantitative Thinking	
MATH 1014	Mathematics 1A	
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 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>Advanced Science subjects</b>		
NATS 2001	Advanced Science Project A	10
NATS 2002	Advanced Science Project B	10
NATS 3004	Advanced Science Project C	10

### Specialisations

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Biomedical Science, Testamur Major (T086) (<https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/biomedical-science-ug-testamur-major/>)

Human Nutrition, Testamur Major (T125) (<https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/human-nutrition-ug-testamur-major/>)

### Elective subjects

Enrolment in elective units is subject to meeting any required criteria for individual units, such as co-requisites and pre-requisites.

## Suggested Minors

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Infectious Diseases, Minor (<https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/infectious-diseases-minor/>)

Microbiology, Minor (<https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/microbiology-minor/>)

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NATS 2001	Advanced Science Project A	10
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Creative Living for Cultural Wellbeing (<https://hbook.westernsydney.edu.au/majors-minors/creative-living-cultural-wellbeing-minor/>)

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