

MASTER OF SCIENCE (3749)

Approved Abbreviation: MSc

Western Sydney University Program Code: 3749

AQF Level: 9

CRICOS Code: 098472B

This program applies to students who commenced in 2020 or later

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

For Commencement Year 2018 - 2019 - please refer to 3749.1 Master of Science (<http://handbook.westernsydney.edu.au/hbook/course.aspx?course=3749.1>)

The Master of Science is an advanced program that can be taken in a number of specialisations: Public Health Nutrition, Food Science, Greenhouse Horticulture, Agriculture or Sustainable Water Futures. The program builds on students' professional experience and/or prior qualifications to develop advanced expertise and critical understanding in science and in these disciplines. The program is completed with a capstone subject that is designed to integrate the various themes that flow throughout the program and develop research and project design skills in science. Depending on the specialisation, students may find employment at a senior level in a wide range of destinations, including federal, state and local government bodies, universities, research organisations, food and agriculture industries, private companies, health facilities, science-based industries, or private consultancies.

Students should note that travel to different campuses may be required depending on the specialisation chosen.

Early Exits

Students may exit this program on completion of 40 credit points with a 3776 Graduate Certificate in Science (exit only) (<https://hbook.westernsydney.edu.au/programs/graduate-certificate-science-exit-only/>) or on completion of 80 credit points with a 3777 Graduate Diploma in Science (exit only) (<https://hbook.westernsydney.edu.au/programs/graduate-diploma-science-exit-only/>)

Study Mode

Two years full-time or the equivalent part-time. Students will be required to attend the Hawkesbury campus for some learning experiences.

Program Advice

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

Hawkesbury	Full Time	Internal	See above
Hawkesbury	Part Time	Internal	See above

Accreditation

On completion of this Program graduates with the Food Science Specialisation will be eligible for professional membership of the Australian Institute of Food Science and Technology. On completion of this Program graduates with the Public Health Nutrition Specialisation will be eligible for apply to be an Associate Nutritionist (Anutr) or a Registered Public Health Nutritionist (RPHNtr) if combined with three years of suitable work experience with the Nutrition Society of Australia and/or a Certified Public Health Nutritionist (cPHN) with the World Public Health Nutrition Association. Students may also be eligible to apply for professional membership of Public Health Association of Australia and Australian Health Promotion Association.

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.

There is an optional work component available in this program. Please contact the Program Advisor listed above for information.

International students should be aware that if an elective is a requirement of the course but the work itself was not registered with CRICOS, students can still complete these electives but it would be counted towards the work limitation. For more details, refer to the 'Work Integrated Learning (WIL) for international students' website.

The course uses workplaces as a source of learning, with site excursions for some Specialisations. Some students may undertake an industry project as part of 301374 Professional Topic or 301361 Industry Project or 301362 Industry Project Extended. Students will be supervised on site visits by arrangement with the industry partner and overseen by an academic staff member.

Work Integrated Learning (WIL) for international students (https://www.westernsydney.edu.au/currentstudents/current_students/services_and_facilities/international_student_support/working_in_australia/work_integrated_learning/)

Admission

Applicants must have successfully completed an undergraduate degree, or higher, in natural or physical science, medical science, environmental studies, agriculture, horticulture, food science, food technology, nutrition or dietetics.

If you have completed relevant prior study or have relevant professional experience, you may be eligible for credit towards your Master of Science which can reduce the duration of your program. Applicants should consult the Director of Academic Programs for further information.

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.

<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.

Special Requirements Prerequisites

Subject HLTH 7014 Professional Topic has enrolment restrictions: Student must have permission from the Subject Coordinator to enrol in the subject.

Program Structure 2023

Qualification for this award requires the successful completion of 160 credit points comprising:

20 credit points of core units and 20 credit points of research capstone units and 40 credit points of specialisation units and at least 40 credit points from Alternate Pool 1 and up to 40 credit points from Alternate Pool 2.

Please note that the full course structure is shown in each of the specialisation documents and handbook links.

Core subjects

All students are required to complete the following two Subjects:

Subject	Title	Credit Points
MATH 7016	The Nature of Data	10
NATS 7055	Experiment Design and Project Management	10

Research Capstone Pool

All students are required to complete 20 credit points from:

Subject	Title	Credit Points
NATS 7033	MSc Research Project	20
HORT 7004	Industry Project	10
HORT 7005	Industry Project (Extended)	10
NATS 7054	Professional Topic	10
NATS 7057	Research Preparation in Post Graduate Studies	10

Equivalent Research Capstone Pool Subjects

The subjects listed below count towards completion of this program for students who passed these subjects in 2021 or earlier.

ENGR 7018 - Research Preparation in Post Graduate Studies, replaced by NATS 7057 Research Preparation in Post Graduate Studies

Major Testamurs

Students are required to complete four major core units from one of the following majors. Students may only select one Major

Agriculture, Testamur Major (T108) (<https://hbook.westernsydney.edu.au/majors-minors/agriculture-pg-testamur-major/>)

Food Science, Testamur Major (T059) (<https://hbook.westernsydney.edu.au/majors-minors/food-science-testamur-pg-major/>)

Greenhouse Horticulture, Testamur Major (T107) (<https://hbook.westernsydney.edu.au/majors-minors/greenhouse-horticulture-pg-testamur-major/>)

Public Health Nutrition, Testamur Major (T068) (<https://hbook.westernsydney.edu.au/majors-minors/public-health-nutrition-pg-testamur-major/>)

Alternate Pool

Complete 80 credit points comprising:

at least 40 credit points from Alternate Pool 1 and up to 40 credit points from Alternate Pool 2.

Graduate Diploma in Science (Exit only)

Qualification for this award requires the successful completion of 80 credit points comprising: 10 credit points of core units and 70 credit points of alternate units comprising at least 30 credit points from Alternate Pool 1 and up to 40 credit points from Alternate Pool 2.

Core Subject

All students are required to complete the following core unit:

Subject	Title	Credit Points
MATH 7016	The Nature of Data	10

Alternate Pool

Students are required to complete 70 credit points comprising: at least 30 credit points from Alternate Pool 1 and up to 40 credit points from Alternate Pool 2.

Graduate Certificate in Science (Exit only)

Qualification for this award requires the successful completion of 40 credit points as follows: 10 credit points of core subjects and at least 10 credit points from Alternate Pool 1 and up to 20 credit points from Alternate Pool 2.

Core Subject

All students are required to complete the following core unit:

Subject	Title	Credit Points
MATH 7016	The Nature of Data	10

Alternate Pool

Students are required to complete 30 credit points as follows: Choose at least 10 credit points from Alternate Pool 1 and choose up to 20 credit points from Alternate Pool 2.

Alternate Pool 1

Subject	Title	Credit Points
NATS 7053	MSc Research Project (extended)	20
HORT 7004	Industry Project	10

NATS 7054	Professional Topic	10
NATS 7016	Food Preservation and Packaging Technologies	10
NATS 7015	Food Evaluation	10
NATS 7018	Food Quality Management	10
NATS 7017	Food Product Design	10
HLTH 7003	Community and Public Health Nutrition	10
HLTH 7011	Nutritional Assessment Methods	10
PUBH 7022	Public Health, Policy and Society	10
HLTH 7010	Nutrition Promotion	10
HORT 7006	Plant-Climate Interactions in Controlled Environments	10
HORT 7001	Advanced Greenhouse Technology	10
HORT 7002	Greenhouse Control Systems	10
HORT 7003	Greenhouse Crop Production	10
AGRI 7001	Agricultural Biosecurity	10
AGRI 7002	Agricultural Biotechnology	10
AGRI 7003	Agricultural Technologies	10
AGRI 7004	Livestock Production Systems	10
PHYS 7001	A Cosmic Perspective	10
PHYS 7002	Space Instrumentation, Technology and Communication	10
PHYS 7003	Space Science, Planetary Science and Meteorology	10
BIOS 7001	Emerging Technologies for Biological Science	10
AGEN 7002	Ecosystems in a Changing World	10
COMP 7006	Data Science	10
COMP 7023	Predictive Analytics	10
COMP 7024	Programming for Data Science	10
COMP 7025	Social Media Intelligence	10
COMP 7016	Visualisation	10

Equivalent Subjects

The subjects listed below count towards completion of this program for students who passed these subjects in 2021 or earlier.

MATH 7011 Predictive Analytics, replaced by COMP 7023 Predictive Analytics
 MATH 7012 Programming for Data Science, replaced by COMP 7024 Programming for Data Science
 MATH 7014 Social Media Intelligence, replaced by COMP 7025 Social Media Intelligence

Alternate Pool 2

This pool comprises units from other fields that add breadth to your studies.

Subject	Title	Credit Points
ACCT 7015	Financial Reports for Decision Making	10
BUSM 7099	Understanding Contemporary Organisations	10
MKTG 7019	Marketing Systems	10
BUSM 7018	Contemporary People Management	10
ECON 7001	Economics	10
BUSM 7040	Governance, Ethics and Social Entrepreneurship	10
BUSM 7086	Strategic Business Management	10
PUBH 7016	Introduction to Epidemiology	10
NURS 7022	Ethics in Health Research	10
ENGR 7017	Professional Practice and Communication	10
PUBH 7019	Occupational Health Management	10

PUBH 7024	Safety and Risk Management	10
CIVL 7014	Sustainable Systems	10
CIVL 7018	Water Treatment and Distribution	10
CIVL 7008	Advanced Waste Management	10
ENVL 7002	Planning and Environmental Regulation	10
BUSM 7014	Compliance Management	10
BUSM 7078	Project Management	10
BUSM 7011	Business Operations and Logistics	10
BUSM 7092	Supply Chain Management	10
MKTG 7033	Customer Experience	10
BUSM 7046	Innovation for New Markets	10
BUSM 7048	Innovation, Creativity and Foresight	10
BUSM 7043	Industrial Relations and Workplace Change	10
BUSM 7024	Developing Human Capital and Organisational Capability	10
BUSM 7086	Strategic Business Management	10
PUBH 7011	Health Advancement and Health Promotion	10
HLTH 7001	A Global Perspective on Social Determinants of Health	10
HLTH 7015	Qualitative Research Methodology in Health	10
HLTH 7006	Health Services and Facilities Planning	10
ARCH 7001	Developing Sustainable Places	10
POLI 7002	Translation from Theory and Research to Policy	10
PUBH 7020	Policy, Power and Politics in Health Care Provision	10
PUBH 7014	Health and Socio-political Issues in Aged Care	10
PUBH 7004		10
HLTH 7007	Health Workforce Planning	10
HLTH 7002	Building Organisational Capacity in Health Care	10
PUBH 7028	Surveillance and Disaster Planning	10
PUBH 7015	Introduction to Clinical Epidemiology	10
PUBH 7006	Data Management and Programming for Epidemiology	10
PUBH 7010	Epidemiology of Non-Communicable Diseases	10
PUBH 7005	Controversies in Epidemiology	10
PUBH 7002	Analytic Approaches in Epidemiology	10
PUBH 7025	Statistical Methods in Epidemiology	10

Please note that the availability of Alternate Subjects may vary from year to year. New subjects may become available and some others discontinued. The most recent version of program Master of Science indicates which units are offered in the course. The School will publish information on which units are available in a session

Replaced Subjects

The subjects listed below count towards completion of this program for students who passed these subjects in 2020 or earlier.

MATH 7013 Scientific Informatics

Program Structure 2024

Qualification for this award requires the successful completion of 160 credit points comprising:

20 credit points of core units and 20 credit points of research capstone units and 40 credit points of specialisation units and at least 40 credit points from Alternate Pool 1 and up to 40 credit points from Alternate Pool 2.

Please note that the full course structure is shown in each of the specialisation documents and handbook links.

Core subjects

All students are required to complete the following two Subjects:

Subject	Title	Credit Points
MATH 7016	The Nature of Data	10
NATS 7055	Experiment Design and Project Management	10

Research Capstone Pool

All students are required to complete 20 credit points from:

Subject	Title	Credit Points
NATS 7033	MSc Research Project	20
NATS 7054	Professional Topic	10
NATS 7057	Research Preparation in Post Graduate Studies	10

Equivalent Research Capstone Pool Subjects

The subjects listed below count towards completion of this program for students who passed these subjects in 2021 or earlier.

ENGR 7018 - Research Preparation in Post Graduate Studies, replaced by NATS 7057 Research Preparation in Post Graduate Studies

Major Testamurs

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Food Science, Testamur Major (T059) (<https://hbook.westernsydney.edu.au/majors-minors/food-science-testamur-pg-major/>)

Greenhouse Horticulture, Testamur Major (T107) (<https://hbook.westernsydney.edu.au/majors-minors/greenhouse-horticulture-pg-testamur-major/>)

Public Health Nutrition, Testamur Major (T068) (<https://hbook.westernsydney.edu.au/majors-minors/public-health-nutrition-pg-testamur-major/>)

Sustainable Water Futures, Testamur Major (T152) (<https://hbook.westernsydney.edu.au/majors-minors/sustainable-water-futures-testamur-major/>)

Alternate Pool

Complete 80 credit points comprising:

at least 40 credit points from Alternate Pool 1 and up to 40 credit points from Alternate Pool 2.

Graduate Diploma in Science (Exit only)

Qualification for this award requires the successful completion of 80 credit points comprising: 10 credit points of core units and 70 credit points of alternate units comprising at least 30 credit points from Alternate Pool 1 and up to 40 credit points from Alternate Pool 2.

Core Subject

All students are required to complete the following core unit:

Subject	Title	Credit Points
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Alternate Pool

Students are required to complete 70 credit points comprising: at least 30 credit points from Alternate Pool 1 and up to 40 credit points from Alternate Pool 2.

Graduate Certificate in Science (Exit only)

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Core Subject

All students are required to complete the following core unit:

Subject	Title	Credit Points
MATH 7016	The Nature of Data	10

Alternate Pool

Students are required to complete 30 credit points as follows: Choose at least 10 credit points from Alternate Pool 1 and choose up to 20 credit points from Alternate Pool 2.

Alternate Pool 1

Subject	Title	Credit Points
NATS 7053	MSc Research Project (extended)	20
NATS 7057	Research Preparation in Post Graduate Studies	10
NATS 7054	Professional Topic	10
NATS 7016	Food Preservation and Packaging Technologies	10
NATS 7015	Food Evaluation	10
NATS 7018	Food Quality Management	10
NATS 7017	Food Product Design	10
HLTH 7003	Community and Public Health Nutrition	10
HLTH 7011	Nutritional Assessment Methods	10
PUBH 7022	Public Health, Policy and Society	10
HLTH 7010	Nutrition Promotion	10
HORT 7006	Plant-Climate Interactions in Controlled Environments	10
HORT 7001	Advanced Greenhouse Technology	10
HORT 7002	Greenhouse Control Systems	10
HORT 7003	Greenhouse Crop Production	10
AGRI 7001	Agricultural Biosecurity	10
AGRI 7002	Agricultural Biotechnology	10
AGRI 7003	Agricultural Technologies	10
AGRI 7004	Livestock Production Systems	10
BIOS 7001	Emerging Technologies for Biological Science	10
AGEN 7002	Ecosystems in a Changing World	10
AGEN 7007	Water Planning, Policy and Governance	10
AGEN 7008	Water Sustainability in Agriculture	10
AGEN 7009	Water Sustainability in Catchments	10
AGEN 7010	Sustainability through Transdisciplinary Approaches	10
MATH 7018	Scientific Informatics	10
COMP 7006	Data Science	10
COMP 7023	Predictive Analytics	10

COMP 7024	Programming for Data Science	10
COMP 7025	Social Media Intelligence	10
COMP 7016	Visualisation	10

Equivalent Subjects

The subjects listed below count towards completion of this program for students who passed these subjects in 2021 or earlier.

MATH 7011 Predictive Analytics, replaced by COMP 7023 Predictive Analytics

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MATH 7014 Social Media Intelligence, replaced by COMP 7025 Social Media Intelligence

Alternate Pool 2

This pool comprises units from other fields that add breadth to your studies.

Subject	Title	Credit Points
ACCT 7013	Financial Decision Making	10
ACCT 7015	Financial Reports for Decision Making	10
BUSM 7099	Understanding Contemporary Organisations	10
MKTG 7019	Marketing Systems	10
BUSM 7018	Contemporary People Management	10
ECON 7001	Economics	10
BUSM 7040	Governance, Ethics and Social Entrepreneurship	10
PUBH 7016	Introduction to Epidemiology	10
NURS 7022	Ethics in Health Research	10
PUBH 7019	Occupational Health Management	10
PUBH 7024	Safety and Risk Management	10
AGEN 7004	Perspectives of Sustainable Development	10
CIVL 7014	Sustainable Systems	10
CIVL 7018	Water Treatment and Distribution	10
CIVL 7008	Advanced Waste Management	10
ENVL 7002	Planning and Environmental Regulation	10
BUSM 7014	Compliance Management	10
BUSM 7078	Project Management	10
BUSM 7011	Business Operations and Logistics	10
BUSM 7092	Supply Chain Management	10
MKTG 7033	Customer Experience	10
BUSM 7046	Innovation for New Markets	10
BUSM 7048	Innovation, Creativity and Foresight	10
BUSM 7043	Industrial Relations and Workplace Change	10
BUSM 7024	Developing Human Capital and Organisational Capability	10
BUSM 7086	Strategic Business Management	10
PUBH 7011	Health Advancement and Health Promotion	10
HLTH 7001	A Global Perspective on Social Determinants of Health	10
HLTH 7006	Health Services and Facilities Planning	10
ARCH 7001	Developing Sustainable Places	10
POLI 7002	Translation from Theory and Research to Policy	10
PUBH 7020	Policy, Power and Politics in Health Care Provision	10
PUBH 7014	Health and Socio-political Issues in Aged Care	10
PUBH 7004		10
HLTH 7007	Health Workforce Planning	10

HLTH 7002	Building Organisational Capacity in Health Care	10
PUBH 7028	Surveillance and Disaster Planning	10
PUBH 7015	Introduction to Clinical Epidemiology	10
PUBH 7006	Data Management and Programming for Epidemiology	10
PUBH 7010	Epidemiology of Non-Communicable Diseases	10
PUBH 7005	Controversies in Epidemiology	10
PUBH 7002	Analytic Approaches in Epidemiology	10
PUBH 7025	Statistical Methods in Epidemiology	10

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