

CHEMISTRY, TESTAMUR MAJOR (T026)

Western Sydney University Major Code: T026

Previous Code: MT3027.1

Available to students in other Western Sydney University

Programs: Yes, however the following restrictions apply.

This major is available as an elective in Bachelor of Science 3754, and an elective major option in Bachelor of Medical Science 3755. See the related programs tab for more information.

Please note, the BSc Major Environmental Health T076, BSc Adv 3757, Bachelor of Science (Pathway to Teaching Primary/Secondary) 3756 & BMedSc Adv 3758, do not have sufficient Flexible space to accommodate a second/elective Major.

Chemistry knowledge underpins all aspects of our modern society. Chemists can use an understanding of chemical structures and processes to adapt, control and manipulate systems involved in energy production, food safety, forensics, biomedical technology, and ecosystem. Indeed, there is not an area of our society that has not been impacted by chemical knowledge. At WSU we teach the theoretical and practical aspects of chemical sciences covering the sub-disciplines of physical, analytical, inorganic and organic chemistries. We have a particular focus on contemporary spectroscopy and separation methods that are required to solve big-picture problems in all areas of scientific discovery. Our graduates have opportunities to be closely mentored by experienced academics. We aim to produce scientists who are confident and self-directed, having gained independence in scientific discovery through an integrated theoretical and practical teaching programme that seeks to solve problems relating to societal needs.

Location

Campus	Mode	Advice
Campbelltown Campus	Internal	science@westernsydney.edu.au
Parramatta Campus - Victoria Road	Internal	science@westernsydney.edu.au

Recommended Sequence Current

Select the link for your program below to see details of the major

Bachelor of Science

Qualification for the award of Bachelor of Science with a major in Chemistry requires the successful completion of 240 credit points as per the recommended sequence below.

Course	Title	Credit Points
Year 1		
Autumn session		
NATS 1019	Scientific Literacy	10
BIOS 1001	Biodiversity	10
CHEM 1008	Introductory Chemistry	10
Choose one elective		10
Credit Points		40
Spring session		
CHEM 1012	Essential Chemistry	10
Choose one of the following:		10
MATH 1014	Mathematics 1A	

MATH 1026	Quantitative Thinking	
MATH 1003	Biometry	
Choose two electives		20
Credit Points		40

Year 2

Autumn session

CHEM 2001	Analytical Chemistry	10
CHEM 2008	Organic Chemistry	10
CHEM 2006	Inorganic Chemistry	10
Choose one elective		10

Credit Points 40

Spring session

CHEM 2010	Physical Chemistry	10
CHEM 3004	Advanced Organic Chemistry	10
Choose one of		10

NATS 3044	Complex Case Studies in Science	
NATS 3045	Work Internship for Science Professionals	
Choose one elective		10

Credit Points 40

Year 3

1H session

NATS 3055	Practicum 1	10
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Credit Points 10

Autumn session

CHEM 3005	Advanced Physical Chemistry	10
CHEM 3003	Advanced Inorganic Chemistry	10
Choose one elective		10

Credit Points 30

2H session

NATS 3056	Practicum 2	10
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Credit Points 10

Spring session

CHEM 3001	Advanced Analytical Chemistry	10
Choose two electives		20

Credit Points 30

Total Credit Points 240

Bachelor of Science (Pathway to Teaching Primary/Secondary)

Qualification for the Bachelor of Science (Pathway to Teaching Primary/Secondary) with a major in Chemistry requires the successful completion of 240 credit points as per the recommended sequence for the Bachelor of Science with a major in Chemistry, given above.

In addition, all students must complete a mandatory 40 credit point minor in Education Studies. Students must choose one of:

Education Studies – Primary Teaching, Minor (0296) (<https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/education-studies-primary-teaching-minor/>)

Or

Education Studies - Secondary Teaching, Minor (0267) (<https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/education-studies-secondary-teaching-minor/>)

Students must meet this requirement by choosing subjects from the selected Education Studies minor as electives within their Bachelor of Science program.

Course	Title	Credit Points
Year 1		
Autumn session		
NATS 1019	Scientific Literacy	10
BIOS 1001	Biodiversity	10
CHEM 1008	Introductory Chemistry	10
Choose one elective		10
Credit Points		40
Spring session		
CHEM 1012	Essential Chemistry	10
Choose one of the following:		10
MATH 1014	Mathematics 1A	
MATH 1026	Quantitative Thinking	
MATH 1003	Biometry	
Choose two electives		20
Credit Points		40
Year 2		
Autumn session		
CHEM 2001	Analytical Chemistry	10
CHEM 2008	Organic Chemistry	10
CHEM 2006	Inorganic Chemistry	10
Choose one elective		10
Credit Points		40
Spring session		
CHEM 2010	Physical Chemistry	10
CHEM 3004	Advanced Organic Chemistry	10
Choose one of		10
NATS 3044	Complex Case Studies in Science	
NATS 3045	Work Internship for Science Professionals	
Choose one elective		10
Credit Points		40
Year 3		
1H session		
NATS 3055	Practicum 1	10
Credit Points		10
Autumn session		
CHEM 3005	Advanced Physical Chemistry	10
CHEM 3003	Advanced Inorganic Chemistry	10
Choose one elective		10
Credit Points		30
2H session		
NATS 3056	Practicum 2	10
Credit Points		10
Spring session		
CHEM 3001	Advanced Analytical Chemistry	10
Choose two electives		20
Credit Points		30
Total Credit Points		240

Bachelor of Advanced Science

Course	Title	Credit Points
Year 1		
Autumn session		
NATS 1019	Scientific Literacy	10

BIOS 1001	Biodiversity	10
CHEM 1008	Introductory Chemistry	10
Choose one elective		10
Credit Points		40
Spring session		
CHEM 1012	Essential Chemistry	10
Choose one of		10
MATH 1014	Mathematics 1A	
MATH 1026	Quantitative Thinking	
MATH 1003	Biometry	
Choose two electives		20
Credit Points		40
Year 2		
Autumn session		
CHEM 2001	Analytical Chemistry	10
CHEM 2008	Organic Chemistry	10
CHEM 2006	Inorganic Chemistry	10
NATS 2001	Advanced Science Project A	10
Credit Points		40
Spring session		
CHEM 2010	Physical Chemistry	10
CHEM 3004	Advanced Organic Chemistry	10
NATS 2002	Advanced Science Project B	10
Choose one of		10
NATS 3044	Complex Case Studies in Science	
NATS 3045	Work Internship for Science Professionals	
Credit Points		40
Year 3		
1H session		
NATS 3055	Practicum 1	10
Credit Points		10
Autumn session		
CHEM 3005	Advanced Physical Chemistry	10
CHEM 3003	Advanced Inorganic Chemistry	10
NATS 3043	Advanced Science Research Project C	10
Credit Points		30
2H session		
NATS 3056	Practicum 2	10
Credit Points		10
Spring session		
CHEM 3001	Advanced Analytical Chemistry	10
NATS 3043	Advanced Science Research Project C	10
Choose one elective		10
Credit Points		30
Total Credit Points		240

Qualification for the award of Bachelor of Advanced Science with a major in Chemistry requires the successful completion of 240 credit points as per the recommended sequence below.

Diploma in Science/Bachelor of Science

Qualification for this award requires the successful completion of 250 credit points which include the units listed in the recommended sequence below.

Course	Title	Credit Points
Year 1		
Year 1: College Subjects		
Standard 3-term year		
Preparatory subject		
CHEM 0001	Chemistry (WSTC Prep)	10
Eight university-level subjects		
BIOS 1014	Cell Biology (WSTC)	10
CHEM 1013	Essential Chemistry (WSTC)	10
NATS 1020	Scientific Literacy (WSTC)	10
CHEM 1009	Introductory Chemistry (WSTC)	10
BIOS 1003	Biodiversity (WSTC)	10
MATH 1027	Quantitative Thinking (WSTC)	10
BIOS 1034	Management of Aquatic Environments (WSTC)	10
ENVL 1007	Environmental Health Issues and Solutions (WSTC)	10
Credit Points		90
Year 2		
Autumn session		
CHEM 2001	Analytical Chemistry	10
CHEM 2008	Organic Chemistry	10
CHEM 2006	Inorganic Chemistry	10
Choose one elective		10
Credit Points		40
Spring session		
CHEM 2010	Physical Chemistry	10
CHEM 3004	Advanced Organic Chemistry	10
Choose one of		10
NATS 3044	Complex Case Studies in Science	
NATS 3045	Work Internship for Science Professionals	
Choose one elective		10
Credit Points		40
Year 3		
1H session		
NATS 3055	Practicum 1	10
Credit Points		10
Autumn session		
CHEM 3005	Advanced Physical Chemistry	10
CHEM 3003	Advanced Inorganic Chemistry	10
Choose one elective		10
Credit Points		30
2H session		
NATS 3056	Practicum 2	10
Credit Points		10
Spring session		
CHEM 3001	Advanced Analytical Chemistry	10
Choose two electives		20
Credit Points		30
Total Credit Points		250

Recommended Sequence 2023

Select the link for your program below to see details of the major

Bachelor of Science

Qualification for the award of Bachelor of Science with a major in Chemistry requires the successful completion of 240 credit points as per the recommended sequence below.

Course	Title	Credit Points
Year 1		
Autumn session		
NATS 1019	Scientific Literacy	10
BIOS 1001	Biodiversity	10
CHEM 1008	Introductory Chemistry	10
Choose one elective		10
Credit Points		40
Spring session		
CHEM 1012	Essential Chemistry	10
Choose one of the following:		10
MATH 1014	Mathematics 1A	
MATH 1026	Quantitative Thinking	
MATH 1003	Biometry	
Choose two electives		20
Credit Points		40
Year 2		
Autumn session		
CHEM 2001	Analytical Chemistry	10
CHEM 2008	Organic Chemistry	10
CHEM 2006	Inorganic Chemistry	10
Choose one elective		10
Credit Points		40
Spring session		
CHEM 2010	Physical Chemistry	10
CHEM 3004	Advanced Organic Chemistry	10
Choose one of		
NATS 3044	Complex Case Studies in Science	10
NATS 3045	Work Internship for Science Professionals	10
Choose one elective		10
Credit Points		50
Year 3		
Autumn session		
CHEM 3005	Advanced Physical Chemistry	10
CHEM 3003	Advanced Inorganic Chemistry	10
Choose two electives		20
Credit Points		40
Spring session		
NATS 3027	Laboratory Quality Management	10
CHEM 3001	Advanced Analytical Chemistry	10
NATS 3039	Science Research Project	10
Choose one elective		10
Credit Points		40
Total Credit Points		250

Bachelor of Science (Pathway to Teaching Primary/Secondary)

Qualification for the Bachelor of Science (Pathway to Teaching Primary/Secondary) with a major in Chemistry requires the successful completion of 240 credit points as per the recommended sequence for the Bachelor of Science with a major in Chemistry, given above.

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Year 1		
Autumn session		
NATS 1019	Scientific Literacy	10
BIOS 1001	Biodiversity	10
CHEM 1008	Introductory Chemistry	10
Choose one elective		10
Credit Points		40
Spring session		
CHEM 1012	Essential Chemistry	10
Choose one of the following:		10
MATH 1014	Mathematics 1A	
MATH 1026	Quantitative Thinking	
MATH 1003	Biometry	
Choose two electives		20
Credit Points		40
Year 2		
Autumn session		
CHEM 2001	Analytical Chemistry	10
CHEM 2008	Organic Chemistry	10
CHEM 2006	Inorganic Chemistry	10
Choose one elective		10
Credit Points		40
Spring session		
CHEM 2010	Physical Chemistry	10
CHEM 3003	Advanced Inorganic Chemistry	10
Choose one of		10
NATS 3044	Complex Case Studies in Science	
NATS 3045	Work Internship for Science Professionals	
Choose one elective		10
Credit Points		40
Year 3		
Autumn session		
CHEM 3005	Advanced Physical Chemistry	10
CHEM 3003	Advanced Inorganic Chemistry	10
Choose two electives		20
Credit Points		40
Spring session		
NATS 3027	Laboratory Quality Management	10
CHEM 3001	Advanced Analytical Chemistry	10
NATS 3039	Science Research Project	10
Choose one elective		10
Credit Points		40
Total Credit Points		240

In addition, all students must complete a mandatory 40 credit point minor in Education Studies. Students must choose one of:

Education Studies – Primary Teaching, Minor (0296) (<https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/education-studies-primary-teaching-minor/>)

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Bachelor of Advanced Science

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Autumn session		
NATS 1019	Scientific Literacy	10
BIOS 1001	Biodiversity	10
CHEM 1008	Introductory Chemistry	10
Choose one elective		10
Credit Points		40
Spring session		
CHEM 1012	Essential Chemistry	10
Choose one of		10
MATH 1014	Mathematics 1A	
MATH 1026	Quantitative Thinking	
MATH 1003	Biometry	
Choose two electives		20
Credit Points		40
Year 2		
Autumn session		
CHEM 2001	Analytical Chemistry	10
CHEM 2008	Organic Chemistry	10
CHEM 2006	Inorganic Chemistry	10
NATS 2001	Advanced Science Project A	10
Credit Points		40
Spring session		
CHEM 2010	Physical Chemistry	10
CHEM 3004	Advanced Organic Chemistry	10
NATS 2002	Advanced Science Project B	10
Choose one of		10
NATS 3044	Complex Case Studies in Science	
NATS 3045	Work Internship for Science Professionals	
Credit Points		40
Year 3		
Autumn session		
CHEM 3005	Advanced Physical Chemistry	10
CHEM 3003	Advanced Inorganic Chemistry	10
NATS 3043	Advanced Science Research Project C	10
Choose one elective		10
Credit Points		40
Spring session		
NATS 3027	Laboratory Quality Management	10
CHEM 3001	Advanced Analytical Chemistry	10
NATS 3039	Science Research Project	10
NATS 3043	Advanced Science Research Project C	10
Credit Points		40
Total Credit Points		240

Qualification for the award of Bachelor of Advanced Science with a major in Chemistry requires the successful completion of 240 credit points as per the recommended sequence below.

Diploma in Science/Bachelor of Science

Qualification for this award requires the successful completion of 250 credit points which include the units listed in the recommended sequence below.

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BIOS 1014	Cell Biology (WSTC)	10
CHEM 1013	Essential Chemistry (WSTC)	10
NATS 1020	Scientific Literacy (WSTC)	10
CHEM 1009	Introductory Chemistry (WSTC)	10
BIOS 1003	Biodiversity (WSTC)	10
MATH 1027	Quantitative Thinking (WSTC)	10
BIOS 1034	Management of Aquatic Environments (WSTC)	10
ENVL 1007	Environmental Health Issues and Solutions (WSTC)	10
Credit Points		90
Year 2		
Autumn session		
CHEM 2001	Analytical Chemistry	10
CHEM 2008	Organic Chemistry	10
CHEM 2006	Inorganic Chemistry	10
Choose one elective		10
Credit Points		40
Spring session		
CHEM 2010	Physical Chemistry	10
CHEM 3004	Advanced Organic Chemistry	10
Choose one of		10
NATS 3044	Complex Case Studies in Science	
NATS 3045	Work Internship for Science Professionals	
Choose one elective		10
Credit Points		40
Year 3		
Autumn session		
CHEM 3005	Advanced Physical Chemistry	10
CHEM 3003	Advanced Inorganic Chemistry	10
Choose two electives		20
Credit Points		40
Spring session		
NATS 3027	Laboratory Quality Management	10
CHEM 3001	Advanced Analytical Chemistry	10
NATS 3039	Science Research Project	10
Choose one elective		10
Credit Points		40
Total Credit Points		250

Bachelor of Medical Science (3755) (<https://hbook.westernsydney.edu.au/archives/2024-2025/programs/bachelor-medical-science/>)

Bachelor of Science (3754) (<https://hbook.westernsydney.edu.au/archives/2024-2025/programs/bachelor-science/>)

Bachelor of Science (Pathway to Teaching Primary/Secondary) (3756) (<https://hbook.westernsydney.edu.au/archives/2024-2025/programs/bachelor-science-pathway-teaching-primary-secondary/>)

Bachelor of Science/Bachelor of Arts (3763) (<https://hbook.westernsydney.edu.au/archives/2024-2025/programs/bachelor-science-bachelor-arts/>)

Bachelor of Science/Bachelor of Business (4748) (<https://hbook.westernsydney.edu.au/archives/2024-2025/programs/bachelor-science-bachelor-business/>)

Bachelor of Science/Bachelor of International Studies (3764) (<https://hbook.westernsydney.edu.au/archives/2024-2025/programs/bachelor-science-bachelor-international-studies/>)

Bachelor of Science/Bachelor of Laws (2743) (<https://hbook.westernsydney.edu.au/archives/2024-2025/programs/bachelor-science-bachelor-laws/>)

Diploma in Science/Bachelor of Medical Science (6042) (<https://hbook.westernsydney.edu.au/archives/2024-2025/programs/diploma-science-bachelor-medical-science/>)

Diploma in Science/Bachelor of Science (6043) (<https://hbook.westernsydney.edu.au/archives/2024-2025/programs/diploma-science-bachelor-science/>)

Related Programs

Bachelor of Advanced Science (3757) (<https://hbook.westernsydney.edu.au/archives/2024-2025/programs/bachelor-advanced-science/>)