

# 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 testamur major is available as an elective major for Bachelor of Medical Science students only.

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	Dr Narsimha Reddy (n.reddy@westernsydney.edu.au)
Parramatta Campus - Victoria Road	Internal	Dr Narsimha Reddy (n.reddy@westernsydney.edu.au)

## Recommended Sequence

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
<b>Year 1</b>		
<b>Autumn session</b>		
NATS 1019	Scientific Literacy	10
BIOS 1001	Biodiversity	10
CHEM 1008	Introductory Chemistry	10
Choose one elective		10
<b>Credit Points</b>		<b>40</b>
<b>Spring session</b>		
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
<b>Credit Points</b>		<b>40</b>
<b>Year 2</b>		
<b>Autumn session</b>		
CHEM 2001	Analytical Chemistry	10
CHEM 2008	Organic Chemistry	10
CHEM 2006	Inorganic Chemistry	10
Choose one elective		10
<b>Credit Points</b>		<b>40</b>
<b>Spring session</b>		
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
<b>Credit Points</b>		<b>50</b>
<b>Year 3</b>		
<b>Autumn session</b>		
CHEM 3005	Advanced Physical Chemistry	10
CHEM 3003	Advanced Inorganic Chemistry	10
Choose two electives		20
<b>Credit Points</b>		<b>40</b>
<b>Spring session</b>		
NATS 3027	Laboratory Quality Management	10
CHEM 3001	Advanced Analytical Chemistry	10
NATS 3039	Science Research Project	10
Choose one elective		10
<b>Credit Points</b>		<b>40</b>
<b>Total Credit Points</b>		<b>250</b>

### 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.

Course	Title	Credit Points
<b>Year 1</b>		
<b>Autumn session</b>		
NATS 1019	Scientific Literacy	10
BIOS 1001	Biodiversity	10
CHEM 1008	Introductory Chemistry	10
Choose one elective		10
<b>Credit Points</b>		<b>40</b>
<b>Spring session</b>		
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
<b>Credit Points</b>		<b>40</b>

**Year 2****Autumn session**

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

<b>Credit Points</b>		<b>40</b>
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**Spring session**

CHEM 2010	Physical Chemistry	10
CHEM 3003	Advanced Inorganic Chemistry	10
Choose one of		10

NATS 3044	Complex Case Studies in Science	
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NATS 3045	Work Internship for Science Professionals	
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Choose one elective		10
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<b>Credit Points</b>		<b>40</b>
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**Year 3****Autumn session**

CHEM 3005	Advanced Physical Chemistry	10
CHEM 3003	Advanced Inorganic Chemistry	10
Choose two electives		20

<b>Credit Points</b>		<b>40</b>
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**Spring session**

NATS 3027	Laboratory Quality Management	10
CHEM 3001	Advanced Analytical Chemistry	10
NATS 3039	Science Research Project	10
Choose one elective		10

<b>Credit Points</b>		<b>40</b>
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<b>Total Credit Points</b>		<b>240</b>
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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/2022-2023/majors-minors/education-studies--primary-teaching-minor/>)

Or

Education Studies - Secondary Teaching, Minor (0267) (<https://hbook.westernsydney.edu.au/archives/2022-2023/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.

**Bachelor of Advanced Science**

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

MATH 1026	Quantitative Thinking	
MATH 1003	Biometry	
Choose two electives		20
<b>Credit Points</b>		<b>40</b>

**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

<b>Credit Points</b>		<b>40</b>
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**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	
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NATS 3045	Work Internship for Science Professionals	
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<b>Credit Points</b>		<b>40</b>
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**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

<b>Credit Points</b>		<b>40</b>
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**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

<b>Credit Points</b>		<b>40</b>
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<b>Total Credit Points</b>		<b>240</b>
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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
<b>Year 1</b>		
<b>Year 1: College Subjects</b>		
Standard 3-term year		
<b>Preparatory subject</b>		
CHEM 0001	Chemistry (WSTC Prep)	10
<b>Eight university-level subjects</b>		
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
<b>Credit Points</b>		<b>90</b>
<b>Year 2</b>		
<b>Autumn session</b>		
CHEM 2001	Analytical Chemistry	10
CHEM 2008	Organic Chemistry	10
CHEM 2006	Inorganic Chemistry	10
Choose one elective		10
<b>Credit Points</b>		<b>40</b>
<b>Spring session</b>		
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
<b>Credit Points</b>		<b>40</b>
<b>Year 3</b>		
<b>Autumn session</b>		
CHEM 3005	Advanced Physical Chemistry	10
CHEM 3003	Advanced Inorganic Chemistry	10
Choose two electives		20
<b>Credit Points</b>		<b>40</b>
<b>Spring session</b>		
NATS 3027	Laboratory Quality Management	10
CHEM 3001	Advanced Analytical Chemistry	10
NATS 3039	Science Research Project	10
Choose one elective		10
<b>Credit Points</b>		<b>40</b>
<b>Total Credit Points</b>		<b>250</b>

Diploma in Science/Bachelor of Medical Science (6042) (<https://hbook.westernsydney.edu.au/archives/2022-2023/programs/diploma-science-bachelor-medical-science/>)

Diploma in Science/Bachelor of Science (6043) (<https://hbook.westernsydney.edu.au/archives/2022-2023/programs/diploma-science-bachelor-science/>)

## Related Programs

Bachelor of Advanced Science (3757) (<https://hbook.westernsydney.edu.au/archives/2022-2023/programs/bachelor-advanced-science/>)

Bachelor of Medical Science (3755) (<https://hbook.westernsydney.edu.au/archives/2022-2023/programs/bachelor-medical-science/>)

Bachelor of Science (3754) (<https://hbook.westernsydney.edu.au/archives/2022-2023/programs/bachelor-science/>)

Bachelor of Science (Pathway to Teaching Primary/Secondary) (3756) (<https://hbook.westernsydney.edu.au/archives/2022-2023/programs/bachelor-science-pathway-teaching-primary-secondary/>)

Bachelor of Science/Bachelor of Arts (3763) (<https://hbook.westernsydney.edu.au/archives/2022-2023/programs/bachelor-science-bachelor-arts/>)

Bachelor of Science/Bachelor of Business (4748) (<https://hbook.westernsydney.edu.au/archives/2022-2023/programs/bachelor-science-bachelor-business/>)

Bachelor of Science/Bachelor of International Studies (3764) (<https://hbook.westernsydney.edu.au/archives/2022-2023/programs/bachelor-science-bachelor-international-studies/>)

Bachelor of Science/Bachelor of Laws (2743) (<https://hbook.westernsydney.edu.au/archives/2022-2023/programs/bachelor-science-bachelor-laws/>)