

# BIOMEDICAL SCIENCE, TESTAMUR MAJOR (T086)

Western Sydney University Major Code: T086

Previous code: MT3030.1

Available to students in other Western Sydney University programs?

No

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

Biomedical science is a broad field that aims to understand the biology that underpins human health and disease. The coursework in this major will give you an integrated foundation in physiology and anatomy, along with biochemistry, cell biology and genetics. It will equip you with knowledge from which you can embark on unlimited career choices from research laboratories to hospital pathology to biomedical engineering, medical technology, teaching and beyond. The degree also allows for enrolment in minors or flexible subjects, so students can design their own learning journey.

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

NOTE: Students up to end of 2023 - Students will need to select at least 10 credit points of elective study at Level 3 to meet this requirement.

## Location

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

## Recommended Sequence Current

All students must complete 60 credit points of study at Level 3 to meet course requirements. Students will need to select at least 10 credit points of elective study at Level 3 to meet this requirement.

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

### Bachelor of Medical Science

Qualification for the award of Bachelor of Medical Science with a major in Biomedical Science 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
CHEM 1008	Introductory Chemistry	10
NATS 1009	Human Anatomy and Physiology 1	10
Choose one of the following:		10
MATH 1014	Mathematics 1A	
MATH 1026	Quantitative Thinking	
MATH 1003	Biometry	
<b>Credit Points</b>		<b>40</b>
<b>Spring session</b>		
BIOS 1012	Cell Biology	10
CHEM 1012	Essential Chemistry	10
NATS 1010	Human Anatomy and Physiology 2	10
Choose one elective		10
<b>Credit Points</b>		<b>40</b>
<b>Year 2</b>		
<b>Autumn session</b>		
BIOS 2042	Biochemistry	10

Choose one elective	<b>Credit Points</b>	<b>40</b>
<b>Year 2</b>		
<b>Autumn session</b>		
BIOS 2042	Biochemistry	10
BIOS 2018	Genetics	10
NATS 2033	Cell Form and Function	10
Choose one elective		10
<b>Credit Points</b>		<b>40</b>
<b>Spring session</b>		
BIOS 3027	Molecular Biology of the Cell	10
BIOS 3038	Metabolism	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>		
BIOS 3014	Genes, Genomics and Human Health	10
Choose two electives		20
<b>Credit Points</b>		<b>30</b>
<b>Spring session</b>		
NATS 3034	Molecular Medicine	10
Choose three electives		30
<b>Credit Points</b>		<b>40</b>
<b>1H session</b>		
NATS 3055	Practicum 1	10
<b>Credit Points</b>		<b>10</b>
<b>Total Credit Points</b>		<b>240</b>
<b>Bachelor of Advanced Medical Science</b>		
Qualification for the award of Bachelor of Advanced Medical Science with a major in Biomedical Science 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
CHEM 1008	Introductory Chemistry	10
NATS 1009	Human Anatomy and Physiology 1	10
Choose one of the following:		10
MATH 1014	Mathematics 1A	
MATH 1026	Quantitative Thinking	
MATH 1003	Biometry	
<b>Credit Points</b>		<b>40</b>
<b>Spring session</b>		
BIOS 1012	Cell Biology	10
CHEM 1012	Essential Chemistry	10
NATS 1010	Human Anatomy and Physiology 2	10
Choose one elective		10
<b>Credit Points</b>		<b>40</b>
<b>Year 2</b>		
<b>Autumn session</b>		
BIOS 2042	Biochemistry	10

BIOS 2018	Genetics	10	NATS 2033	Cell Form and Function	10
NATS 2033	Cell Form and Function	10	Choose one elective		10
NATS 2001	Advanced Science Project A	10			
<b>Credit Points</b>		<b>40</b>	<b>Credit Points</b>		<b>40</b>
<b>Spring session</b>			<b>Spring session</b>		
BIOS 3027	Molecular Biology of the Cell	10	BIOS 3027	Molecular Biology of the Cell	10
BIOS 3038	Metabolism	10	BIOS 3038	Metabolism	10
NATS 2002	Advanced Science Project B	10	Choose one of		10
Choose one of		10	NATS 3044	Complex Case Studies in Science	
NATS 3044	Complex Case Studies in Science		NATS 3045	Work Internship for Science Professionals	
NATS 3045	Work Internship for Science Professionals		Choose one elective		10
<b>Credit Points</b>		<b>40</b>	<b>Credit Points</b>		<b>40</b>
<b>Year 3</b>			<b>Year 3</b>		
<b>Autumn session</b>			<b>Autumn session</b>		
BIOS 3014	Genes, Genomics and Human Health	10	BIOS 3014	Genes, Genomics and Human Health	10
NATS 3043	Advanced Science Research Project C	10	Choose two electives		20
Choose one elective		10			
<b>Credit Points</b>		<b>30</b>	<b>Credit Points</b>		<b>30</b>
<b>Spring session</b>			<b>Spring session</b>		
NATS 3034	Molecular Medicine	10	NATS 3034	Molecular Medicine	10
NATS 3043	Advanced Science Research Project C	10	Choose three electives		30
Choose two electives		20			
<b>Credit Points</b>		<b>40</b>	<b>Credit Points</b>		<b>40</b>
<b>1H session</b>			<b>1H session</b>		
NATS 3055	Practicum 1	10	NATS 3055	Practicum 1	10
<b>Credit Points</b>		<b>10</b>	<b>Credit Points</b>		<b>10</b>
<b>Total Credit Points</b>		<b>240</b>	<b>Total Credit Points</b>		<b>250</b>

## Diploma in Science/Bachelor of Medical Science

Qualification for the award of Diploma in Science/Bachelor of Medical Science with a major in Biomedical Science requires the successful completion of 250 credit points as per the recommended sequence below.

Course	Title	Credit Points	Course	Title	Credit Points
<b>Year 1</b>					
<b>College subjects</b>					
Standard 3-term year					
<b>Preparatory subject</b>					
CHEM 0001	Chemistry (WSTC Prep)	10	Education Studies - Primary Teaching, Minor (0296) ( <a href="https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/education-studies-primary-teaching-minor/">https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/education-studies-primary-teaching-minor/</a> )		
<b>And eight university level subjects as follows</b>					
BIOS 1014	Cell Biology (WSTC)	10	Education Studies - Secondary Teaching, Minor (0267) ( <a href="https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/education-studies-secondary-teaching-minor/">https://hbook.westernsydney.edu.au/archives/2024-2025/majors-minors/education-studies-secondary-teaching-minor/</a> )		
CHEM 1013	Essential Chemistry (WSTC)	10	Students must meet this requirement by choosing subjects from the selected Education Studies minor as electives within their Bachelor of Science program.		
NATS 1020	Scientific Literacy (WSTC)	10			
CHEM 1009	Introductory Chemistry (WSTC)	10			
MATH 1027	Quantitative Thinking (WSTC)	10			
NATS 1029	Human Anatomy and Physiology 1 (WSTC)	10			
NATS 1030	Human Anatomy and Physiology 2 (WSTC)	10			
<b>And choose one elective</b>					
<b>Credit Points</b>		<b>90</b>	<b>Year 1</b>		
<b>Year 2</b>					
<b>Autumn session</b>			<b>Autumn session</b>		
BIOS 2042	Biochemistry	10	NATS 1019	Scientific Literacy	10
BIOS 2018	Genetics	10	CHEM 1008	Introductory Chemistry	10
			NATS 1009	Human Anatomy and Physiology 1	10
			Choose one of		10
			MATH 1014	Mathematics 1A	
			MATH 1026	Quantitative Thinking	

MATH 1003	Biometry		MATH 1014	Mathematics 1A
	<b>Credit Points</b>	<b>40</b>	MATH 1026	Quantitative Thinking
<b>Spring session</b>			MATH 1003	Biometry
BIOS 1012	Cell Biology	10		<b>Credit Points</b>
CHEM 1012	Essential Chemistry	10	<b>Spring session</b>	<b>40</b>
NATS 1010	Human Anatomy and Physiology 2	10	BIOS 1012	Cell Biology
Choose one elective		10	CHEM 1012	Essential Chemistry
	<b>Credit Points</b>	<b>40</b>	NATS 1010	Human Anatomy and Physiology 2
<b>Year 2</b>			Choose one elective	10
<b>Autumn session</b>				<b>Credit Points</b>
BIOS 2042	Biochemistry	10	<b>Year 2</b>	<b>40</b>
BIOS 2018	Genetics	10	<b>Autumn session</b>	
NATS 2033	Cell Form and Function	10	BIOS 2042	Biochemistry
Choose one elective		10	BIOS 2018	Genetics
	<b>Credit Points</b>	<b>40</b>	NATS 2033	Cell Form and Function
<b>Spring session</b>			Choose one elective	10
BIOS 3027	Molecular Biology of the Cell	10		<b>Credit Points</b>
BIOS 3038	Metabolism	10	<b>Spring session</b>	<b>40</b>
Choose one of		10	BIOS 3027	Molecular Biology of the Cell
NATS 3044	Complex Case Studies in Science		BIOS 2021	Metabolism
NATS 3045	Work Internship for Science Professionals		Choose one of	10
And one subject from chosen Education minor		10	NATS 3044	Complex Case Studies in Science
	<b>Credit Points</b>	<b>40</b>	NATS 3045	Work Internship for Science Professionals
<b>Year 3</b>			Choose one elective	10
<b>Autumn session</b>				<b>Credit Points</b>
BIOS 3014	Genes, Genomics and Human Health	10	<b>Year 3</b>	<b>40</b>
And two subjects from chosen Education minor		20	<b>Autumn session</b>	
	<b>Credit Points</b>	<b>30</b>	NATS 3040	Topics in Medical Science
<b>Spring session</b>			BIOS 3014	Genes, Genomics and Human Health
NATS 3034	Molecular Medicine	10	Choose two electives	20
And one subject from chosen Education minor		10		<b>Credit Points</b>
Choose two electives		20	<b>Spring session</b>	<b>40</b>
	<b>Credit Points</b>	<b>40</b>	NATS 3034	Molecular Medicine
<b>1H session</b>			Choose three electives	30
NATS 3055	Practicum 1	10		<b>Credit Points</b>
	<b>Credit Points</b>	<b>10</b>		<b>Total Credit Points</b>
	<b>Total Credit Points</b>	<b>240</b>		<b>240</b>

## Recommended Sequence 2023

All students must complete 60 credit points of study at Level 3 to meet course requirements. Students will need to select at least 10 credit points of elective study at Level 3 to meet this requirement.

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

### Bachelor of Medical Science

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

Course	Title	Credit Points	Credit Points
<b>Year 1</b>			
<b>Autumn session</b>			
NATS 1019	Scientific Literacy	10	
CHEM 1008	Introductory Chemistry	10	
NATS 1009	Human Anatomy and Physiology 1	10	
Choose one of			
MATH 1014	Mathematics 1A		
MATH 1026	Quantitative Thinking		
MATH 1003	Biometry		
	<b>Credit Points</b>	<b>40</b>	
<b>Spring session</b>			
BIOS 1012	Cell Biology		
CHEM 1012	Essential Chemistry		
Choose one of the following:			

NATS 1010	Human Anatomy and Physiology 2	10	<b>Year 2</b>	
Choose one elective		10	<b>Autumn session</b>	
	<b>Credit Points</b>	<b>40</b>	BIOS 2042	Biochemistry
			BIOS 2018	Genetics
			NATS 2033	Cell Form and Function
			Choose one elective	10
				<b>Credit Points</b>
				<b>40</b>
	<b>Year 2</b>		<b>Spring session</b>	
	<b>Autumn session</b>		BIOS 3027	Molecular Biology of the Cell
BIOS 2042	Biochemistry	10	BIOS 2021	Metabolism
BIOS 2018	Genetics	10	Choose one of	10
NATS 2033	Cell Form and Function	10	NATS 3044	Complex Case Studies in Science
NATS 2001	Advanced Science Project A	10	NATS 3045	Work Internship for Science Professionals
	<b>Credit Points</b>	<b>40</b>	Choose one elective	10
				<b>Credit Points</b>
				<b>40</b>
	<b>Spring session</b>		<b>Year 3</b>	
BIOS 3027	Molecular Biology of the Cell	10	<b>Autumn session</b>	
BIOS 2021	Metabolism	10	NATS 3040	Topics in Medical Science
NATS 2002	Advanced Science Project B	10	BIOS 3014	Genes, Genomics and Human Health
Choose one of		10	Choose two electives	20
NATS 3044	Complex Case Studies in Science			<b>Credit Points</b>
NATS 3045	Work Internship for Science Professionals			<b>40</b>
	<b>Credit Points</b>	<b>40</b>	<b>Spring session</b>	
			NATS 3034	Molecular Medicine
NATS 3040	Topics in Medical Science	10	Choose three electives	30
BIOS 3014	Genes, Genomics and Human Health	10		<b>Credit Points</b>
NATS 3043	Advanced Science Research Project C	10		<b>40</b>
Choose one elective		10		<b>Total Credit Points</b>
	<b>Credit Points</b>	<b>40</b>		<b>250</b>
			<b>Bachelor of Science (Pathway to Teaching Primary/Secondary)</b>	
			Qualification for the Bachelor of Science (Pathway to Teaching Primary/Secondary) with a major in Biomedical Science requires the successful completion of 250 credit points as per the recommended sequence for the Bachelor of Science with a major in Biomedical Science, given above.	

## Diploma in Science/Bachelor of Medical Science

Qualification for the award of Diploma in Science/Bachelor of Medical Science with a major in Biomedical Science requires the successful completion of 250 credit points as per the recommended sequence below.

Course	Title	Credit Points		Credit Points
			<b>Year 1</b>	
			<b>Autumn session</b>	
Year 1			NATS 1019	Scientific Literacy
College subjects			CHEM 1008	Introductory Chemistry
Standard 3-term year			NATS 1009	Human Anatomy and Physiology 1
Preparatory subject			Choose one of	10
CHEM 0001	Chemistry (WSTC Prep)	10	MATH 1014	Mathematics 1A
And eight university level subjects as follows			MATH 1026	Quantitative Thinking
BIOS 1014	Cell Biology (WSTC)	10	MATH 1003	Biometry
CHEM 1013	Essential Chemistry (WSTC)	10		<b>Credit Points</b>
NATS 1020	Scientific Literacy (WSTC)	10		<b>40</b>
CHEM 1009	Introductory Chemistry (WSTC)	10	<b>Spring session</b>	
MATH 1027	Quantitative Thinking (WSTC)	10	BIOS 1012	Cell Biology
NATS 1009	Human Anatomy and Physiology 1	10	CHEM 1012	Essential Chemistry
NATS 1010	Human Anatomy and Physiology 2	10	NATS 1010	Human Anatomy and Physiology 2
And choose one elective		10	Choose one elective	10
	<b>Credit Points</b>	<b>90</b>		<b>Credit Points</b>
			<b>Year 2</b>	
			<b>Autumn session</b>	
			BIOS 2042	Biochemistry
			BIOS 2018	Genetics

NATS 2033	Cell Form and Function	10
Choose one elective		10
	<b>Credit Points</b>	<b>40</b>
<b>Spring session</b>		
BIOS 3027	Molecular Biology of the Cell	10
BIOS 2021	Metabolism	10
Choose one of		10
NATS 3044	Complex Case Studies in Science	
NATS 3045	Work Internship for Science Professionals	
And one subject from chosen Education minor		10
	<b>Credit Points</b>	<b>40</b>
<b>Year 3</b>		
<b>Autumn session</b>		
NATS 3040	Topics in Medical Science	10
BIOS 3014	Genes, Genomics and Human Health	10
And two subjects from chosen Education minor		20
	<b>Credit Points</b>	<b>40</b>
<b>Spring session</b>		
NATS 3034	Molecular Medicine	10
And one subject from chosen Education minor		10
Choose two electives		20
	<b>Credit Points</b>	<b>40</b>
	<b>Total Credit Points</b>	<b>240</b>

**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.

## Related Programs

Bachelor of Advanced Medical Science (3758) (<https://hbook.westernsydney.edu.au/archives/2024-2025/programs/bachelor-advanced-medical-science/>)

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

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