

# 2019 Study Plan

## Bachelor of Teaching (Secondary) with Bachelor of Mathematical and Computer Sciences with a major in Mathematical Sciences and a second teaching area

Year 1				
ENG 1002 Programming (Matlab and C)	MATHS 1011 Mathematics IA*	Teaching Area 2 (Elective Level I)	EDUC 1001 Schools and Policy	
STATS 1005 Statistical Analysis and Modelling I	MATHS 1012 Mathematics IB	Teaching Area 2 (Elective Level I)	EDUC 1100 Introduction to Teaching and Learning (inc 10-day Placement)	
Year 2				
Teaching Area 1 Mathematical Sciences course Level II	Teaching Area 1 Mathematical Sciences course Level II	Teaching Area 2: (Elective Level II)	EDUC 2001 Issues in Contemporary Education (inc 10-day Placement)	
Teaching Area 1 Mathematical Sciences course Level II	Teaching Area 1 Mathematical Sciences course Level II	Teaching Area 2: (Elective Level II)	EDUC 2002 Professional Practice and Research	
Year 3				
Teaching Area 1 Mathematical Sciences course Level III	Teaching Area 1 Mathematical Sciences course Level III	Teaching Area 2 (Elective Level III)	EDUC 3006 Secondary Years Pedagogy (incl 10-day Placement)	
Teaching Area 1 Mathematical Sciences course Level III	Teaching Area 1 Mathematical Sciences course Level III	Teaching Area 2 (Elective Level III)	EDUC 3003 Teaching the Diverse Classroom	
Year 4				
Prior to commencing 4 <sup>th</sup> year ALL students must : <ol style="list-style-type: none"> <li>1. successfully complete both the literacy and numeracy components of the LANTITE</li> <li>2. complete the requirements for the Bachelor of Mathematical and Computer Sciences program</li> </ol>				
T 1	EDUC 4533A Senior Mathematics Curriculum and Methodology A	Teaching Area 2 Curriculum and Methodology A	EDUC 4213 Education Research Skills	
T 2	EDUC 4533B Senior Mathematics Curriculum and Methodology A	Teaching Area 2 Curriculum and Methodology B	EDUC 4206 Professional Experience A (UG) (25 days in a Secondary School)	
T 3	EDUC 4207 Professional Preparation (UG) (intensive week 1)	EDUC 4208 Professional Experience B (UG) (25 days in a Secondary School)		
T 4	Provided all of the above requirements have been met, students will be eligible for completion.			
Mathematical and Computer Sciences course		Teaching Area <sup>^</sup> 1 (Math Sciences major course) – guide only	Teaching Area <sup>^</sup> 2 (Elective course)	Teaching course

### Degree information

You must complete 96 units to finish your degree, comprising at least 12 units (and a maximum of 24 units) at Level I, and a minimum of 72 units at Levels II, III, and IV. Courses are worth 3 units each, unless specified.

### Mathematical and Computer Sciences Courses

You must complete 12 units of Mathematical and Computer Sciences Core courses. Ensure you check any restrictions and pre-requisites.

\*Students who have not passed SACE Stage 2 Specialist Maths are required to enrol in MATHS 1013 Mathematics IM as a prerequisite to enrolling in MATHS 1011 Mathematics IA. This does not count towards the degree.

### Teaching Area 1: Mathematical Sciences Major Course

You must complete 24 units to be eligible for the Mathematical Sciences teaching area (major). You must choose from one of four teaching pathways listed on page 2. The courses are a guide only.

Contact the Faculty of Engineering, Computer and Mathematical Sciences  
Phone: +61 8 8313 4148

Email: [ecms\\_office@adelaide.edu.au](mailto:ecms_office@adelaide.edu.au)

<https://ecms.adelaide.edu.au/>

<sup>^</sup> Defined by the accrediting body, Australian Institute for Teaching and School Leadership (AITSL):

- i) A **major teaching area** is the equivalent of a total of three-quarters of a year's full time study which equates to 18 units. No more than 6 units at Level I and at least 6 units at Level III can be counted.
- ii) A **minor teaching area** is equivalent to one-half year of full time study which equates to 12 units. No more than 6 units at Level I can be counted.

### Teaching Area 2

You must complete 18 units in one of the following areas to be eligible for a second teaching area:

- Accounting
- Linguistics (ESL)
- Italian Studies\*\*
- Biology
- French Studies\*\*
- Japanese Studies\*\*
- Business Studies
- Geography
- Physics
- Chemistry
- German Studies\*\*
- Spanish Studies\*\*
- Chinese Studies\*\*
- History
- Modern Greek Studies\*\*
- Music
- Indonesian Studies\*\*
- Digital Technologies
- Studies\*\*

\*\*Students must seek advice regarding eligibility from the Faculty of Arts prior to enrolling.

### Teaching Course

You must complete 42 units of Teaching Core courses, including 12 units of Curriculum & Methodology courses. Both Part A and the matching Part B of the same Curriculum & Methodology course (detailed on page 3) must be completed from your chosen two teaching subject areas.

### Study Overseas

A Study Overseas experience may be included in your program. Please see: [www.arts.adelaide.edu.au/study-with-us/student-support/study-overseas](http://www.arts.adelaide.edu.au/study-with-us/student-support/study-overseas)

### Further Information and Enrolment Advice

Faculty of Arts

Phone: +61 8 8313 5245

Email: [arts@adelaide.edu.au](mailto:arts@adelaide.edu.au)

[www.arts.adelaide.edu.au](http://www.arts.adelaide.edu.au)

## Mathematical Sciences Teaching Pathways

### Pathway 1: Pure Maths, Statistics and Applied Maths 1 (Stochastics)

#### Level II

All the following courses must be completed:

- MATHS 2101 Multivariable and Complex Calculus II
- STATS 2103 Probability and Statistics II
- MATHS 2100 Real Analysis II
- STATS 2107 Statistical Modelling and Inference II

#### Level III

Choose courses to the value of 12 units from the following:

- PURE MTH 3019 Complex Analysis III
- PURE MTH 3002 Topology and Analysis III
- APP MTH 3001 Applied Probability III
- STATS 3006 Mathematical Statistics III
- STATS 3001 Statistical Modelling III
- PURE MTH 3009 Integration and Analysis III
- PURE MTH 3022 Geometry of Surfaces III
- APP MTH 3016 Random Processes III
- STATS 3005 Time Series III
- MATHS 3012 Financial Modelling: Tools and Techniques

### Pathway 2: Pure Maths

#### Level II

All the following courses must be completed:

- MATHS 2101 Multivariable and Complex Calculus II
- MATHS 2100 Real Analysis II

Choose courses to the value of 6 units from the following:

- PURE MTH 2106 Algebra II<sup>^</sup>
- MATHS 2102 Differential Equations II
- MATHS 2104 Numerical Methods II
- APP MTH 2105 Optimisation and Operational Research II<sup>^</sup>

#### Level III

Choose courses to the value of 12 units from the following:

- PURE MTH 3019 Complex Analysis III
- PURE MTH 3007 Group and Rings III
- PURE MTH 3002 Topology and Analysis III
- PURE MTH 3023 Field and Modules III
- PURE MTH 3009 Integration and Analysis III
- PURE MTH 3022 Geometry of Surfaces III
- MATHS 3012 Financial Modelling: Tools and Techniques

<sup>^</sup>This course has assumed knowledge.

### Pathway 3: Statistics and Applied Maths 1 (Stochastics)

#### Level II

All the following courses must be completed

- STATS 2103 Probability and Statistics II
- STATS 2107 Statistical Modelling and Inference II

Choose courses to the value of 6 units from the following:

- PURE MTH 2106 Algebra II<sup>^</sup>
- MATHS 2104 Differential Equations II
- MATHS 2101 Multivariable and Complex Calculus II
- APP MTH 2105 Optimisation and Operational Research II<sup>^</sup>

#### Level III

Choose courses to the value of 12 units from the following:

- APP MTH 3001 Applied Probability III
- APP MTH 3014 Optimisation III
- STATS 3006 Mathematical Statistics III
- STATS 3001 Statistical Modelling III
- APP MTH 3016 Random Processes III
- APP MTH 3020 Stochastic Decision Theory III
- STATS 3005 Time Series III
- MATHS 3012 Financial Modelling: Tools and Techniques

### Pathway 4: Applied Maths 2 (Mechanics)

#### Level II

All the following courses must be completed:

- MATHS 2101 Multivariable and Complex Calculus II
- MATHS 2102 Differential Equations II
- MATHS 2104 Numerical Methods II

Choose courses to the value of 3 units from the following:

- APP MTH 2105 Optimisation and Operational Research II<sup>^</sup>
- MATHS 2100 Real Analysis II

#### Level III

Choose courses to the value of 12 units from the following:

- APP MTH 3002 Fluid Mechanics III
- APP MTH 3021 Modelling with Ordinary Differential Equations III
- APP MTH 3022 Optimal Functions and Nanomechanics III
- APP MTH 3023 Partial Differential Equations and Waves III
- MATHS 3012 Financial Modelling: Tools and Techniques

<sup>^</sup>This course has assumed knowledge.

## Curriculum & Methodology Courses

### Accounting

- EDUC 4508A Accounting Curriculum & Methodology A
- EDUC 4508B Accounting Curriculum & Methodology B

### Biology

- EDUC 4510A Biology Curriculum & Methodology A
- EDUC 4510B Biology Curriculum & Methodology B

### Business Studies

- EDUC 4511A Business Studies Curriculum & Methodology A
- EDUC 4511B Business Studies Curriculum & Methodology B

### Chemistry

- EDUC 4512A Chemistry Curriculum & Methodology A
- EDUC 4512B Chemistry Curriculum & Methodology B

### Chinese

- EDUC 4513A Chinese Curriculum & Methodology A
- EDUC 4513B Chinese Curriculum & Methodology B

### Classroom Music

- EDUC 4514A Classroom Music Curriculum & Methodology A
- EDUC 4514B Classroom Music Curriculum & Methodology B

### Digital Technologies

- EDUC 4524A Digital Technologies Curriculum & Methodology A
- EDUC 4524B Digital Technologies Curriculum & Methodology B

### Earth & Environmental Science

- EDUC 4545A Earth & Environmental Sci Curric & Methodology A
- EDUC 4545B Earth & Environmental Sci Curric & Methodology B

### Economics

- EDUC 4515A Economics Curriculum & Methodology A
- EDUC 4515B Economics Curriculum & Methodology B

### English

- EDUC 4519A English Curriculum & Methodology A
- EDUC 4519B English Curriculum & Methodology B

### English as a Second Language

- EDUC 4516A Engl as an Additional Lang/Dialect Curriculum & Methodology A
- EDUC 4516B Engl as an Additional Lang/Dialect Curriculum & Methodology B

### French

- EDUC 4518A French Curriculum & Methodology A
- EDUC 4518B French Curriculum & Methodology B

### Geography

- EDUC 4520A Geography Curriculum & Methodology A
- EDUC 4520B Geography Curriculum & Methodology B

### German

- EDUC 4521A German Curriculum & Methodology A
- EDUC 4521B German Curriculum & Methodology B

### History

- EDUC 4544A History Curriculum & Methodology A
- EDUC 4544B History Curriculum & Methodology B

### Indonesian

- EDUC 4523A Indonesian Curriculum & Methodology A
- EDUC 4523B Indonesian Curriculum & Methodology B

### Instrumental Music

- EDUC 4525A Instrumental Music Curriculum & Methodology A
- EDUC 4525B Instrumental Music Curriculum & Methodology B

### Italian

- EDUC 4526A Italian Curriculum & Methodology A
- EDUC 4526B Italian Curriculum & Methodology B

### Japanese

- EDUC 4524A Japanese Curriculum & Methodology A
- EDUC 4524B Japanese Curriculum & Methodology B

### Legal Studies

- EDUC 4546A Legal Studies Curriculum & Methodology A
- EDUC 4546B Legal Studies Curriculum & Methodology B

### Mathematics

- EDUC 4528A Mathematics Curriculum & Methodology A
- EDUC 4528B Mathematics Curriculum & Methodology B

### Media Studies

- EDUC 4544A Media Studies Curriculum & Methodology A
- EDUC 4544B Media Studies Curriculum & Methodology B

### Modern Greek

- EDUC 4538A Modern Greek Curriculum & Methodology A
- EDUC 4538B Modern Greek Curriculum & Methodology B

### Other Language

- EDUC 4536A Other Language Curriculum & Methodology A
- EDUC 4536B Other Language Curriculum & Methodology B

### Psychology

- EDUC 4540A Psychology Curriculum & Methodology A
- EDUC 4540B Psychology Curriculum & Methodology B

### Physics

- EDUC 4531A Physics Curriculum & Methodology A
- EDUC 4531B Physics Curriculum & Methodology B

### Science

- EDUC 4529A Science Curriculum & Methodology A
- EDUC 4529B Science Curriculum & Methodology B

### Scientific Studies / STEM

- EDUC 4548A Scientific Studies/STEM Curric & Method A
- EDUC 4548B Scientific Studies/STEM Curric & Method B

### Senior English

- EDUC 4532A Senior English Curriculum & Methodology A
- EDUC 4532B Senior English Curriculum & Methodology B

### Senior History

- EDUC 4522A Senior History Curriculum & Methodology A
- EDUC 4522B Senior History Curriculum & Methodology B

### Senior Mathematics

- EDUC 4533A Senior Mathematics Curriculum & Methodology A
- EDUC 4533B Senior Mathematics Curriculum & Methodology B

### Spanish

- EDUC 4535A Spanish Curriculum & Methodology A
- EDUC 4535B Spanish Curriculum & Methodology B

### Vietnamese

- EDUC 4534A Vietnamese Curriculum & Methodology A
- EDUC 4534B Vietnamese Curriculum & Methodology B

### Alternative Curricula

- EDUC 4543A Alternative Curricula A
- EDUC 4543B Alternative Curricula B

### Extended Specialist

- EDUC 4514A Extended Specialist Curriculum & Method A
- EDUC 4514B Extended Specialist Curriculum & Method B