Macquarie School of Education
Faculty of Arts

2022
Secondary Teacher Education
Undergraduate Student Guide

Bachelor of Science and Bachelor of Education (Secondary)

Students commencing in 2022 are advised to retain the 2022 Student Guide and to refer to it in each subsequent year of study.
Table of Contents

Macquarie School of Education – Senior Staff ................................................................. 1

Important Links .............................................................................................................. 1

– Macquarie University Handbook .............................................................................. 1

– NSW Education Standards Authority (NESA) ...................................................... 1

– Australian Institute for Teaching and Learning Leadership (AITSL) ....................... 1

– EDSTCOMM Department of Educational Studies Undergraduate Communications ........................................ 1

– Macquarie School of Education .............................................................................. 1

– Our people ............................................................................................................. 1

– Professional Experience ....................................................................................... 1

Welcome from the Director ....................................................................................... 2

HOW TO USE THIS GUIDE .................................................................................... 3

Academic Advice ....................................................................................................... 3

Credit Overload .......................................................................................................... 3

SECTION 1 Teacher Education at Macquarie ................................................................. 4

1.1 The 5Rs Framework – attributes and capabilities for success .............................. 4

1.2 NESA requirements: Academic standards ....................................................... 4

1.2.1 EDST2999 - Literacy and Numeracy tests for Teacher Education (LANTITE) ........................................ 4

1.2.2 The Teaching Performance Assessment (TPA) ............................................. 5

1.3 Workload and Planning ....................................................................................... 5

1.4 Undergraduate Programs of Study...................................................................... 5

1.4.1 Subject content requirements ....................................................................... 5

SECTION 2 Bachelor of Science and Bachelor of Education (Secondary) ................... 6

2.1 First Teaching Subject ......................................................................................... 6

2.2 Additional Science Subject ................................................................................ 8

2.3 Bachelor of Science and Bachelor of Education (Secondary) – Content requirements and suggested patterns of study .................................................. 9

2.4 Major in Biology .................................................................................................. 10

2.4.1 Suggested Pattern of Study – Major in Biology with a minor in Chemistry ........................................ 10

2.4.2 Suggested Pattern of Study – Major in Biology with a minor in Earth and Environmental Sciences ........................................ 11

2.4.3 Suggested Pattern of Study – Major in Biology with a minor in Mathematics ........................................ 12

2.5 Major in Human Biology ..................................................................................... 13

2.5.1 Suggested Pattern of Study – Major in Human Biology with a minor in Chemistry ........................................ 13

2.5.2 Suggested Pattern of Study – Major in Human Biology with a minor in Earth and Environmental Sciences ........................................ 14

2.5.3 Suggested Pattern of Study – Major in Human Biology with minor in Mathematics ........................................ 15

2.6 Major in Chemistry .............................................................................................. 16

2.6.1 Suggested Pattern of Study – Major in Chemistry with a minor in Biology ........................................ 16

2.6.2 Suggested Pattern of Study – Major in Chemistry with a minor in Human Biology ........................................ 17

2.6.3 Suggested Pattern of Study – Major in Chemistry with a minor in Mathematics ........................................ 18

2.7 Major in Earth and Environmental Sciences (EES) ............................................. 19

2.7.1 Suggested Pattern of Study – major in EES minor in Biology ........................................ 19

2.8 Major in Mathematics .......................................................................................... 20

2.8.1 Suggested Pattern of Study – Major in Mathematics with a minor in Statistical Modelling ........................................ 21

2.8.2 Suggested Pattern of Study – Major in Mathematics with a minor in Physics ........................................ 22
2.8.3 Suggested Pattern of Study – Major in Mathematics with a minor in Biology

2.8.4 Suggested Pattern of Study – Major in Mathematics with a minor in Human Biology

2.8.5 Suggested Pattern of Study – Major in Mathematics with a minor in Chemistry

2.9 Major in Physics

2.9.1 Prerequisites for first year Physics and Mathematics units

2.9.2 Suggested Pattern of Study – Major in Physics with a minor in Mathematics

2.10 Major in Astronomy and Astrophysics

2.10.1 Prerequisites for first year Physics and Mathematics units

2.10.2 Suggested Pattern of Study – Major in Astronomy and Astrophysics with a minor in Mathematics

Section 3 Professional Experience Units

Plan your own course worksheet
Macquarie School of Education – Senior Staff

Dean of Education
Professor Mary Ryan
mary.ryan@mq.edu.au

Director of Initial Teacher Education
A/Prof Fay Hadley
Associate Professor
fay.hadley@mq.edu.au

Program Director
Secondary Teacher Education
Dr Sue Ollerhead
Senior Lecturer
susan.ollerhead@mq.edu.au

Deputy Director
Secondary Teacher Education
Dr Emma Burns
Lecturer
emma.burns@mq.edu.au

Important Links
Macquarie University Handbook
NSW Education Standards Authority (NESA)
Australian Institute for Teaching and Learning Leadership (AITSL)
EDSTCOMM Department of Educational Studies Undergraduate Communications
Macquarie School of Education
Our people
Professional Experience
Welcome from the Director

Welcome to the Macquarie University Teacher Education Program. The program includes discipline studies in Education, units covering subject content requirements for secondary teaching, curriculum studies, and a professional experience component. The sequence of units that you will study has been carefully designed to provide you with an excellent preparation for the secondary classroom. From time to time, there are also a variety of other activities on offer that will allow you to broaden your experience in teacher education.

A particular feature of the Macquarie program is the focus on integrating theory and practice throughout your academic studies and the concurrent School Experience Program. These activities will afford you an excellent opportunity to develop a reflective stance on your classroom practice so that it is fully informed by the latest developments in educational theory and research-based evidence.

As you progress through your studies, I encourage you to view yourself not simply as a university student, but as a Teacher Education Student who is preparing to join this challenging and rewarding profession. So, take every opportunity to fully engage in your academic work and make the most of all the opportunities presented to you during your school placements.

I wish you everything of the best as you embark on this exciting professional and personal journey!

Dr Sue Ollerhead
Director, Secondary Teacher Education Program
HOW TO USE THIS GUIDE

The information contained in this guide is for students entering the Bachelor of Science and Bachelor of Education (Secondary) in 2022.

Read this Guide in conjunction with the current University Handbook to be fully aware of the relevant Bachelor Degree Rules and about your course and units.

In the following sections, patterns are provided to show the units which students must complete to satisfy the Bachelor degree and Bachelor of Education requirements. There are also units that students must take in order to satisfy prerequisites or corequisites for required units. This information can also be found in the University Handbook.

It is important to refer to information in both the University Handbook and this Student Guide when planning their studies.

Information in this guide is accurate at the time of publication (date?).

Academic Advice

While care is always taken in the provision of academic advice, it is ultimately the student’s responsibility to see that their program satisfies both the Bachelor Degree Rules and the NESA requirements.

Students are expected to have consulted this Student Guide and the University Handbook before seeking advice.

Full information regarding academic and course advisers is available on:
https://students.mq.edu.au/support/study/academic-advisers

Students in the Macquarie School of Education shall submit their requests via ask.mq.edu.au.

IMPORTANT NOTE: Students are advised to familiarise themselves with the NESA requirements for future teachers. It is the student’s ultimate responsibility to understand and meet these requirements.

Credit Overload

If you wish to enrol in more than the standard number of credit points (credit overload) for a study period, you need academic approval. You must submit a Credit Overload form which will be forwarded to the Macquarie School of Education for consideration.

Please note that approval is not automatic and will depend upon your academic progress and reasons for the excess load.
SECTION 1
Teacher Education at Macquarie

1.1 The 5Rs Framework – attributes and capabilities for success

Teaching is a complex pursuit with competing demands, increasingly diverse student groups, high accountability, as well as new requirements and evidence being adopted regularly. Therefore, success in the teaching profession requires important attributes and capabilities.

At Macquarie University we aim to graduate teachers who not only have relevant discipline knowledge and teaching know-how, but who also understand and strive for those capabilities that will make teaching a sustaining career for years to come. Embedded in all our teaching courses is the Macquarie’s 5R’s framework which helps develop our Teacher Education Students to be:

1. Resilient
2. Reflexive in their teaching practice
3. Responsive to children, colleagues, parents, professionals and communities
4. Ready to learn, and
5. Research engaged

We believe that our 5Rs framework, when consciously adopted and continuously developed, leads to high quality outcomes for both teachers and students.

We make a conscious effort to equip you, our Teacher Education Students, with the tools you need to thrive so you can inspire our great minds of tomorrow.

1.2 NESA requirements: Academic standards

1.2.1 EDST2999 - Literacy and Numeracy tests for Teacher Education (LANTITE)

In order to be accredited as a teacher in Australian schools, Teacher Education Students are required to undertake a Literacy and Numeracy Test for Initial Teacher Education (the test). The LANTITE is designed to assess initial teacher education students’ personal literacy and numeracy skills to ensure teachers are well equipped to meet the demands of teaching.

The unit code for LANTITE at Macquarie is EDST2999. To satisfy requirements of this zero credit point unit of study, students must meet the required standard in both the literacy and numeracy components of the LANTITE. The test is externally administrated by the Australian Council for Educational Research.

In New South Wales, Teacher Education Students (TES) must meet the standards of the test prior to commencing their final professional experience placement.

At Macquarie we require our TES to have sat both LANTITE tests and have their results indicate they successfully met the standard in both literacy and numeracy before being eligible to enrol in EDST3010 Practice of Teaching: Classroom Management and Assessment in the Secondary School. It is strongly recommended that students complete both tests no later than the end of the second year of your course to ensure you meet these requirements. We recommend undertaking these tests early in your candidature, preferably by the end of the first year of your studies.

TES who do not meet the standard for literacy or numeracy on the first attempt will have two further opportunities to sit the test/s. Further information is available at https://teacheredtest.acer.edu.au/results/re-sit

All information regarding LANTITE is available on EDSTCOMM, our general communication platform for Teacher Education Students.

Information about the test and how to register is available on the Australian Council for Educational Research (ACER) website.
1.2.2 The Teaching Performance Assessment (TPA)

To be accredited as a teacher in Australian schools, TES are required to undertake and meet the minimum standard for a Teaching Performance Assessment (TPA). The TPA is completed in the final professional experience unit EDST4020 Practice of Teaching: Culturally and Linguistically Diverse Secondary Classrooms.

In completing the TPA, TES must provide evidence of their proficiency in lesson planning, classroom teaching, assessment of student learning, and critical reflection on their classroom practice. All information regarding this assessment is available on EDSTCOMM.

1.3 Workload and Planning

A 10 credit point unit requires a minimum study time commitment of 9 hours per week across all unit activities and requirements. This is typically a mix of face to face and independent work.

To complete your course in the minimum time you must complete 40 credit points per session if following a standard Session 1/Session 2 pattern of study.

1.4 Undergraduate Programs of Study

The Bachelor of Science and Bachelor of Education (Secondary) is a desirable double degree offered at Macquarie leading to accreditation as a secondary school teacher:

TES must complete 16 units in the core zone of the Bachelor of Science and 16 units in the core zone of the Bachelor of Education (Secondary) which includes units in educational theory, pedagogy, methodology and professional practice.

These programs may be completed in four years of full-time study. The option for part-time study is available.

1.4.1 Subject content requirements

In order to be accredited as a secondary school teacher in NSW, graduates must satisfy the NESA subject content requirements. These minimum requirements may vary based on the teaching subject. These requirements also may differ from the requirements of the Macquarie program of study (i.e. have specific requirements which may include units outside the major or minor). Thus, students are reminded it is ultimately their responsibility to be familiar with both their degree requirements and the requirements of NESA.
SECTION 2
Bachelor of Science and Bachelor of Education (Secondary)

All TES must meet their LANTITE requirement by the end of the second year of full-time study. See section 1.2.1 *Literacy and Numeracy tests for Teacher Education Students (LANTITE)*

### 2.1 First Teaching Subject

Secondary Teacher Education Students (TES) must select a first teaching subject. TES shall enrol in a major that aligns to the subject you wish to teach and satisfy NESA subject content requirements. Some subject areas have specific requirements which may include units outside the major (see section 1.4.1).

The table below outlines teaching subject areas and appropriate majors available in the Bachelor of Science and Bachelor of Education (Secondary).

<table>
<thead>
<tr>
<th>First Teaching Subject</th>
<th>Major</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>Biology</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Chemistry</td>
</tr>
<tr>
<td>Earth and Environmental Sciences (EES)</td>
<td>Earth and Environmental Sciences</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> To meet NESA requirements to teach EES, you must include at least one unit in Biology or Human Biology in your studies</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Mathematics</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> The prerequisite for MATH1010 is (HSC Advanced Mathematics Band 4 and above or Extension 1 Band E2 and above or Extension 2) or MATH130 or MATH1000 or WFMA003 or WFMA0003 or WMAT123 or WMAT1000. Students who do not meet the prerequisite for MATH1010 should contact the Arts team via ask.mq.edu.au to arrange for space to be added to their study plan to allow them to take MATH1000 prior to starting the major.</td>
</tr>
<tr>
<td>Physics</td>
<td>Astronomy and Astrophysics</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> TES who major in Physics or Astronomy and Astrophysics must select Mathematics as a minor to meet the pre- and co-requisites for enrolment in Essential Physics units:</td>
</tr>
<tr>
<td></td>
<td>- PHYS1020 <em>Electric and Magnetic Interactions</em></td>
</tr>
<tr>
<td></td>
<td>- PHYS2010 <em>Classical and Quantum Oscillations and Waves</em></td>
</tr>
<tr>
<td></td>
<td>- PHYS2020 <em>Electromagnetism and Relativity</em></td>
</tr>
<tr>
<td></td>
<td>- PHYS2030 <em>The Structure of Matter</em></td>
</tr>
</tbody>
</table>
|                        | **Note:** Students who do not meet the HSC prerequisites for PHYS1010 (HSC Advanced Mathematics Band 4 and above or Extension 1 Band E2 and above or Extension 2) or MATH1000 or MATH130 or WFMA003 or WFMA0003 or MATH1010[(HSC Advanced Mathematics Band 4 and above or Extension 1 Band E2 and above or Extension 2) or MATH130 or MATH1000 or WFMA003 or WFMA0003 or WMAT123 or WMAT1000] may seek to enrol in MATH1000 *Introduction to Mathematical Modelling*. This unit is an elementary unit}
<table>
<thead>
<tr>
<th>First Teaching Subject</th>
<th>Major</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>designed for Engineering, Mathematics and Physics students whose mathematics background has not met the recommended standard for students entering these programs. As there is no elective space in this double degree, students will need to contact ask.mq.edu.au for assistance in making room in their program for MATH1000 and for academic advice on an alternate pattern of study. Due to the offering patterns in the degree, students requiring this prerequisite unit be unable to complete this degree in four years.</td>
</tr>
</tbody>
</table>
### 2.2 Additional Science Subject

To improve employability, Secondary TES are encouraged to select an additional science subject. You will enrol in a minor that aligns to the subject you wish to teach and satisfies NESA subject content requirements (see section 1.4.1). The minor shall consist of four units, with no more than two units at first year level. Note: Students who major in Mathematics do not require a second teaching subject but may minor in Statistical Modelling to enhance their mathematical knowledge.

The table below outlines the appropriate major and minor study combinations available in the Bachelor of Science and Bachelor of Education (Secondary).

<table>
<thead>
<tr>
<th>Academic Major</th>
<th>Academic Minor</th>
<th>Meets NESA requirements to teach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>Chemistry</td>
<td>Biology and Chemistry</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td>Both first teaching subjects</td>
</tr>
<tr>
<td>Human Biology</td>
<td>Earth and Environmental Science</td>
<td>Biology and Earth and Environmental Science</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Both first teaching subjects</td>
</tr>
<tr>
<td>Biology</td>
<td>Mathematics</td>
<td>Biology first teaching subject</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics second teaching subject</td>
</tr>
<tr>
<td>Human Biology</td>
<td>Mathematics</td>
<td>Biology first teaching subject</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics second teaching subject</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Biology</td>
<td>Biology and Chemistry</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Both first teaching subjects</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Human Biology</td>
<td>Biology and Chemistry</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Both first teaching subjects</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Mathematics</td>
<td>Chemistry first teaching subject</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mathematics second teaching subject</td>
</tr>
<tr>
<td>Earth and Environmental Science</td>
<td>Biology</td>
<td>Earth and Environmental Science and Biology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Both first teaching subjects</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Biology</td>
<td>Mathematics and Biology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Both first teaching subjects</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Human Biology</td>
<td>Mathematics and Biology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Both first teaching subjects</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Chemistry</td>
<td>Mathematics and Chemistry</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Both first teaching subject</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Physics</td>
<td>Mathematics/Physics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Both first teaching subjects</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Statistical Modelling</td>
<td>Mathematics first teaching subject</td>
</tr>
<tr>
<td>Physics OR</td>
<td>Mathematics</td>
<td>Mathematics/Physics</td>
</tr>
<tr>
<td>Astronomy and Astrophysics</td>
<td></td>
<td>Both first teaching subjects</td>
</tr>
</tbody>
</table>
2.3 Bachelor of Science and Bachelor of Education (Secondary) - Content requirements and suggested patterns of study

This section sets out suggested patterns of study for the academic major and minor combinations that will meet NESA requirements for accreditation to teach. These patterns will help show you how a program can be completed in four years full-time.

These suggested patterns have been prepared based on the available 2022 Timetable. The University timetable may change, and some units may not be offered every year or may be discontinued. Please check current requirements in the online University Handbook before enrolling each year.

<table>
<thead>
<tr>
<th>MAJORS</th>
<th>MINORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Astronomy and Astrophysics</td>
<td>Biology</td>
</tr>
<tr>
<td>Biology</td>
<td>Chemistry</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Earth and Environmental Sciences</td>
</tr>
<tr>
<td>Earth and Environmental Sciences</td>
<td>Human Biology</td>
</tr>
<tr>
<td>Human Biology</td>
<td>Mathematics</td>
</tr>
<tr>
<td>Mathematics</td>
<td>Physics</td>
</tr>
<tr>
<td>Physics</td>
<td>Statistical Modelling</td>
</tr>
</tbody>
</table>

EDTE4330 and EDTE4340 Science in the Secondary School I and II are the required methodology units for accreditation to teach Science in NSW Secondary Schools.

EDTE4290 and EDTE4300 Mathematics in the Secondary School I and II are the required methodology units for accreditation to teach Mathematics as a first or second teaching subject in NSW Secondary Schools.
2.4 Major in Biology

2.4.1 Suggested Pattern of Study – Major in Biology with a minor in Chemistry

This pattern of study will meet NESA subject content requirements to teach Biology and Chemistry as first teaching subjects.

Please check current requirements in the online University Handbook before enrolling.

<table>
<thead>
<tr>
<th>Year 1 Session 1</th>
<th>cp</th>
<th>Year 1 Session 2</th>
<th>cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST1000</td>
<td>10</td>
<td>EDST1010</td>
<td>10</td>
</tr>
<tr>
<td>BIOL1310</td>
<td>10</td>
<td>BIOL1110</td>
<td>10</td>
</tr>
<tr>
<td>CHEM1001</td>
<td>10</td>
<td>CHEM1002</td>
<td>10</td>
</tr>
<tr>
<td>To meet prerequisites for BIOL2110 and BIOL2410 you must include at least one of the following units in your studies:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOSE1015</td>
<td>10</td>
<td>FOSE/STAT</td>
<td>10</td>
</tr>
<tr>
<td>STAT1170</td>
<td>10</td>
<td>Level Option Set</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Session 1</th>
<th>Year 2 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST2999 LANTITE</td>
<td>Ensure that you have met the standard for both literacy and numeracy by the end of your second year of study. See paragraph 1.2.1 for full information regarding LANTITE and its requirements</td>
</tr>
<tr>
<td>EDST2000</td>
<td>EDST3170</td>
</tr>
<tr>
<td>BIOL2110</td>
<td>BIOL2210</td>
</tr>
<tr>
<td>CHEM2401</td>
<td>CHEM2201</td>
</tr>
<tr>
<td>CHEM2601</td>
<td></td>
</tr>
<tr>
<td>STAT1170</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Session 1</th>
<th>Year 3 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST3140</td>
<td>EDST3010</td>
</tr>
<tr>
<td>BIOL3510</td>
<td>EDTE4330</td>
</tr>
<tr>
<td>BIOL3640 - PACE Experience in Biological Sciences</td>
<td>EDTE4330</td>
</tr>
<tr>
<td>FOSE3000</td>
<td>EDST3410</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Session 1</th>
<th>Year 4 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST4010 Practice of Teaching: ICT in the Secondary School (30 days)</td>
<td>EDST4020 Practice of Teaching: Culturally and Linguistically Diverse Secondary Classrooms (30 days)</td>
</tr>
<tr>
<td>EDTE4340 Science in the Secondary School II</td>
<td>EDST4180 Transitioning to the Secondary Teaching Profession</td>
</tr>
<tr>
<td>EDST4120 Adolescent Development and Classroom Practice</td>
<td>EDST4200 Using and interpreting Educational Data</td>
</tr>
<tr>
<td>EDUC unit at 3000 level</td>
<td>EDUC unit at 3000 level</td>
</tr>
</tbody>
</table>
## 2.4.2 Suggested Pattern of Study – Major in Biology with a minor in Earth and Environmental Sciences

This pattern of study will meet NESA subject content requirements to teach Biology and Earth and Environmental Sciences as first teaching subjects.

Please check current requirements in the online *University Handbook* before enrolling.

<table>
<thead>
<tr>
<th>Year 1 Session 1</th>
<th>cp</th>
<th>Year 1 Session 2</th>
<th>cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST1000 Exploring Australian Education: Social and Historical Contexts</td>
<td>10</td>
<td>EDST1010 Learning and Development: An Introduction for Educators</td>
<td>10</td>
</tr>
<tr>
<td>BIOL1310 Organisms to Ecosystems</td>
<td>10</td>
<td>BIOL1110 Genes to Organisms</td>
<td>10</td>
</tr>
<tr>
<td>ENVS1017 The Living Environment</td>
<td>10</td>
<td>EESC1150 Planet Earth</td>
<td>10</td>
</tr>
<tr>
<td>To meet prerequisites for BIOL2110 and BIOL2410 you must include at least one</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>of the following units in your studies:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOSE1015 Statistical Concepts for Science OR</td>
<td>10</td>
<td>FOSE/STAT 1000 Level Option Set</td>
<td>10</td>
</tr>
<tr>
<td>STAT1170 Introductory Statistics</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Session 1</th>
<th>Year 2 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST2999 LANTITE Ensure that you have met the standard for both literacy and</td>
<td></td>
</tr>
<tr>
<td>numeracy by the end of your second year of study. See paragraph 1.2.1 for full</td>
<td></td>
</tr>
<tr>
<td>information regarding LANTITE and its requirements</td>
<td></td>
</tr>
<tr>
<td>EDST2000 The Practice of Teaching: Inclusive Education (10 days)</td>
<td>EDST3170 Indigenous Education</td>
</tr>
<tr>
<td>EDUC 2620 Education: The Learner</td>
<td>10 BIOL2410 Ecology</td>
</tr>
<tr>
<td>BIOL2110 Genetics</td>
<td>10 BIOL2210 Life Processes</td>
</tr>
<tr>
<td>ENVS2266 Earth Surface Processes OR</td>
<td>EESC2150 Mass extinctions and the hidden history of Earth</td>
</tr>
<tr>
<td>ENVS2364 Introduction to Geographic Information Science and Remote Sensing</td>
<td>OR ENVS3241 Active Environments (S3)**</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Session 1</th>
<th>Year 3 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST3140 Introduction to the Secondary Curriculum</td>
<td>EDST3010 Practice of Teaching: Classroom Management and Assessment in the</td>
</tr>
<tr>
<td>BIOL3510 Vertebrate Biology and Behaviour</td>
<td>Secondary School (10 days)</td>
</tr>
<tr>
<td>BIOL3640 PACE Experience in Biological Sciences</td>
<td>EDTE4330 Science in the Secondary School I</td>
</tr>
<tr>
<td>FOSE3000 Making Science Work for You and Society (CAPSTONE)</td>
<td>10 BIOL3410 Plant Biology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Session 1</th>
<th>Year 4 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST4010 Practice of Teaching: ICT in the Secondary School (30 days)</td>
<td>EDST4020 Practice of Teaching: Culturally and Linguistically Diverse Secondary</td>
</tr>
<tr>
<td>EDTE4340 Science in the Secondary School II</td>
<td>EDST4180 Transitioning to the Secondary Teaching Profession</td>
</tr>
<tr>
<td>EDST4120 Adolescent Development and Classroom Practice</td>
<td>EDST4200 Using and interpreting Educational Data</td>
</tr>
<tr>
<td>EDUC unit at 3000 level</td>
<td>10 EDUC unit at 3000 level</td>
</tr>
</tbody>
</table>

** As the prerequisite for ENVS3241 - Active Environments is 130cp at 1000 level or above and permission by special approval, this unit may be available to you in Y2 S3. Please contact the Department of Earth and Environmental Science for advice through ask.mq.edu.au. This unit may also be completed in Y3 S3 or Y4 S3.
2.4.3 Suggested Pattern of Study – Major in Biology with a minor in Mathematics

This pattern of study will meet NESA subject content requirements to teach Biology and a first teaching subject and Mathematics as a second teaching subject.

Note: The prerequisite for MATH1010 is (HSC Advanced Mathematics Band 4 and above or Extension 1 Band E2 and above or Extension 2) or MATH130 or MATH1000 or WFMA003 or WFMA0003 or WMAT123 or WMAT1000.

Students who do not meet the prerequisite for MATH1010 should contact the Arts team via ask.mq.edu.au to arrange for space to be added to their study plan to allow them to take MATH1000 prior to starting the major.

Please check current requirements in the online University Handbook before enrolling.

<table>
<thead>
<tr>
<th>Year 1 Session 1</th>
<th>cp</th>
<th>Year 1 Session 2</th>
<th>cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST1000 Exploring Australian Education: Social and Historical Contexts</td>
<td>10</td>
<td>EDST1010 Learning and Development: An Introduction for Educators</td>
<td>10</td>
</tr>
<tr>
<td>BIOL1310 Organisms to Ecosystems</td>
<td>10</td>
<td>BIOL1110 Genes to Organisms</td>
<td>10</td>
</tr>
<tr>
<td>MATH1010 Calculus and Linear Algebra I OR MATH1015 Calculus and Linear Algebra I (Advanced)</td>
<td>10</td>
<td>MATH1020 Calculus and Linear Algebra II OR MATH1025 Calculus and Linear Algebra II (Advanced)</td>
<td>10</td>
</tr>
<tr>
<td>To meet prerequisites for BIOL2410 you must include at least one of the following units in your studies: FOSE1015 Statistical Concepts for Science OR STAT1170 Introductory Statistics</td>
<td>10</td>
<td>FOSE/STAT1000 Level Option Set</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Session 1</th>
<th>Year 2 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST2999 LANTITE Ensure that you have met the standard for both literacy and numeracy by the end of your second year of study. See paragraph 1.2.1 for full information regarding LANTITE and its requirements</td>
<td>0</td>
</tr>
<tr>
<td>EDST2000 The Practice of Teaching: Inclusive Education (10 days)</td>
<td>EDST3170 Indigenous Education</td>
</tr>
<tr>
<td>EDUC 2620 Education: The Learner</td>
<td>BIOL2410 Ecology</td>
</tr>
<tr>
<td>BIOL2110 Genetics</td>
<td>BIOL2210 Life Processes</td>
</tr>
<tr>
<td>MATH2010 Calculus and Linear Algebra III</td>
<td>MATH2020 Vector Calculus and Complex Analysis OR MATH2110 Mathematical Modelling and Differential Equations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Session 1</th>
<th>Year 3 Session 2 * FIVE UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST3140 Introduction to the Secondary Curriculum</td>
<td>EDST3010 Practice of Teaching: Classroom Management and Assessment in the Secondary School (10 days)</td>
</tr>
<tr>
<td>BIOL3510 Vertebrate Biology and Behaviour</td>
<td>EDTE4330 Science in the Secondary School I</td>
</tr>
<tr>
<td>BIOL3640 PACE Experience in Biological Sciences</td>
<td>EDTE4290 Mathematics in the Secondary School I</td>
</tr>
<tr>
<td>FOSE3000 Making Science Work for You and Society (CAPSTONE)</td>
<td>BIOL3310 Invertebrate Biology and Behaviour</td>
</tr>
<tr>
<td></td>
<td>BIOL3410 Plant Biology</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Session 1</th>
<th>Year 4 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST4010 Practice of Teaching: ICT in the Secondary School (30 days)</td>
<td>EDST4020 Practice of Teaching: Culturally and Linguistically Diverse Secondary Classrooms (30 days)</td>
</tr>
<tr>
<td>EDTE4340 Science in the Secondary School II</td>
<td>EDST4180 Transitioning to the Secondary Teaching Profession</td>
</tr>
<tr>
<td>EDTE4300 Mathematics in the Secondary School II</td>
<td>EDST4200 Using and Interpreting Educational Data</td>
</tr>
<tr>
<td>EDST4120 Adolescent Development and Classroom Practice</td>
<td></td>
</tr>
</tbody>
</table>

* Students who wish to complete this degree in four years may follow this pattern of study. Application for a credit overload will be necessary in Year 3, Session 2.

Seek advice early in your program if you would prefer an alternate pattern.
## 2.5 Major in Human Biology

### 2.5.1 Suggested Pattern of Study – Major in Human Biology with a minor in Chemistry

This pattern of study will meet NESA subject content requirements to teach Biology and Chemistry as first teaching subjects.

**Note:** The prerequisite for MATH1010 is (HSC Advanced Mathematics Band 4 and above or Extension 1 Band E2 and above or Extension 2) or MATH130 or MATH1000 or WFMA003 or WFMA0003 or WMAT123 or WMAT1000.

Students who do not meet the prerequisite for MATH1010 should contact the Arts team via ask.mq.edu.au to arrange for space to be added to their study plan to allow them to take MATH1000 prior to starting the major.

Please check current requirements in the online University Handbook before enrolling.

<table>
<thead>
<tr>
<th>Year 1 Session 1</th>
<th>cp</th>
<th>Year 1 Session 2</th>
<th>cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST1000</td>
<td>10</td>
<td>EDST1010</td>
<td>10</td>
</tr>
<tr>
<td>BIOL1210</td>
<td>10</td>
<td>BIOL1110</td>
<td>10</td>
</tr>
<tr>
<td>CHEM1001</td>
<td>10</td>
<td>CHEM1002</td>
<td>10</td>
</tr>
<tr>
<td>To meet prerequisites for BIOL2110 you must include at least one of the following units in your studies: FOSE1015 Statistical Concepts for Science OR STAT1170 Introductory Statistics</td>
<td>10</td>
<td>FOSE/STAT 1000 Level Option Set</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Session 1</th>
<th>Year 2 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST2999 LANTITE Ensure that you have met the standard for both literacy and numeracy by the end of your second year of study. See paragraph 1.2.1 for full information regarding LANTITE and its requirements</td>
<td>Year 2 Session 2</td>
</tr>
<tr>
<td>EDST2000 The Practice of Teaching: Inclusive Education (10 days)</td>
<td>10</td>
</tr>
<tr>
<td>BIOL2110 Genetics</td>
<td>10</td>
</tr>
<tr>
<td>BIOL2230 Neurophysiology</td>
<td>10</td>
</tr>
<tr>
<td>CHEM2401 Physical Chemistry 1 OR CHEM260 Synthesis</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Session 1</th>
<th>Year 3 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST3140 Introduction to the Secondary Curriculum</td>
<td>10</td>
</tr>
<tr>
<td>BIOL3120 Human Genetics and Evolutionary Medicine</td>
<td>10</td>
</tr>
<tr>
<td>BIOL3210 Advanced Human Physiology</td>
<td>10</td>
</tr>
<tr>
<td>BIOL3640 PACE Experience in Biological Sciences</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Session 1</th>
<th>Year 4 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST4010 Practice of Teaching: ICT in the Secondary School (30 days)</td>
<td>10</td>
</tr>
<tr>
<td>EDTE4340 Science in the Secondary School II</td>
<td>10</td>
</tr>
<tr>
<td>EDST4120 Adolescent Development and Classroom Practice</td>
<td>10</td>
</tr>
<tr>
<td>EDUC unit at 3000 level</td>
<td>10</td>
</tr>
</tbody>
</table>
### 2.5.2 Suggested Pattern of Study – Major in Human Biology with a minor in Earth and Environmental Sciences

This pattern of study will meet NESA subject content requirements to teach Biology and Earth and Environmental Science as first teaching subjects.

Please check current requirements in the online University Handbook before enrolling.

<table>
<thead>
<tr>
<th>Year 1 Session 1</th>
<th>cp</th>
<th>Year 1 Session 2</th>
<th>cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST1000 Exploring Australian Education: Social and Historical Contexts</td>
<td>10</td>
<td>EDST1010 Learning and Development: An Introduction for Educators</td>
<td>10</td>
</tr>
<tr>
<td>BIOL1210 Human Biology</td>
<td>10</td>
<td>BIOL1110 Genes to Organisms</td>
<td>10</td>
</tr>
<tr>
<td>ENVS1017 The Living Environment</td>
<td>10</td>
<td>EESC1150 Planet Earth</td>
<td>10</td>
</tr>
<tr>
<td>To meet prerequisites for BIOL2110 you must include at least one of the following units in your studies:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOSE1015 Statistical Concepts for Science OR STAT1170 Introductory Statistics</td>
<td>10</td>
<td>FOSE/STAT 1000 Level Option Set</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Session 1</th>
<th>Year 2 Session 2</th>
<th>Year 2 Session 3</th>
<th>cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST2999 LANTITE Ensure that you have met the standard for both literacy and numeracy by the end of your second year of study. See paragraph 1.2.1 for full information regarding LANTITE and its requirements</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>EDST2000 The Practice of Teaching: Inclusive Education (10 days)</td>
<td>EDST3170 Indigenous Education</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>EDUC 2620 Education: The Learner</td>
<td>BIOL2220 Systems Physiology</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>BIOL2110 Genetics</td>
<td>EESC2150 Mass extinctions and the hidden history of Earth</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>BIOL2230 Neurophysiology</td>
<td></td>
<td>ENVS3241 Active Environments</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Session 1</th>
<th>Year 3 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST3140 Introduction to the Secondary Curriculum</td>
<td>EDST3010 Practice of Teaching: Classroom Management and Assessment in the Secondary School (10 days)</td>
</tr>
<tr>
<td>BIOL3120 Human Genetics and Evolutionary Medicine</td>
<td>EDTE4330 Science in the Secondary School I</td>
</tr>
<tr>
<td>BIOL3210 Advanced Human Physiology</td>
<td>ANTH3022 Gender, Sexuality and Global Health</td>
</tr>
<tr>
<td>BIOL3640 PACE Experience in Biological Sciences</td>
<td>FOSE3000 Making Science Work for You and Society (CAPSTONE)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Session 1</th>
<th>Year 4 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST4010 Practice of Teaching: ICT in the Secondary School (30 days)</td>
<td>EDST4020 Practice of Teaching: Culturally and Linguistically Diverse Secondary Classrooms (30 days)</td>
</tr>
<tr>
<td>EDTE4340 Science in the Secondary School II</td>
<td>EDST4180 Transitioning to the Secondary Teaching Profession</td>
</tr>
<tr>
<td>EDST4120 Adolescent Development and Classroom Practice</td>
<td>EDST4200 Using and Interpreting Educational Data</td>
</tr>
<tr>
<td>EDUC unit at 3000 level</td>
<td>EDUC unit at 3000 level</td>
</tr>
</tbody>
</table>

---

2022 Student Guide_BScBEd(Sec)_29Nov21 14
2.5.3 Suggested Pattern of Study – Major in Human Biology with minor in Mathematics

This pattern of study will meet NESA subject content requirements to teach Biology as a first teaching subject and Mathematics as a second teaching subject.

Note: The prerequisite for MATH1010 is (HSC Advanced Mathematics Band 4 and above or Extension 1 Band E2 and above or Extension 2) or MATH130 or MATH1000 or WFMA003 or WFMA0003 or WMAT123 or WMAT1000.

Students who do not meet the prerequisite for MATH1010 should contact the Arts team via ask.mq.edu.au to arrange for space to be added to their study plan to allow them to take MATH1000 prior to starting the major.

Please check current requirements in the online University Handbook before enrolling.

<table>
<thead>
<tr>
<th>Year 1 Session 1</th>
<th>cp</th>
<th>Year 1 Session 2</th>
<th>cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST1000</td>
<td>10</td>
<td>EDST1010</td>
<td>10</td>
</tr>
<tr>
<td>BIOL1210</td>
<td>10</td>
<td>BIOL1110</td>
<td>10</td>
</tr>
<tr>
<td>MATH1010</td>
<td>10</td>
<td>MATH1020</td>
<td>10</td>
</tr>
<tr>
<td>MATH1015</td>
<td>10</td>
<td>MATH1025</td>
<td>10</td>
</tr>
<tr>
<td>MATH1010 OR MATH1015</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To meet prerequisites for BIOL2110 you must include at least one of the following units in your studies:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOSE1015 OR STAT1170</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDST2999 LANTITE</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDST2000</td>
<td>10</td>
<td>EDST1210</td>
<td>10</td>
</tr>
<tr>
<td>BIOL2110</td>
<td>10</td>
<td>BIOL2220</td>
<td>10</td>
</tr>
<tr>
<td>BIOL2230</td>
<td>10</td>
<td>BIOL2220</td>
<td>10</td>
</tr>
<tr>
<td>MATH2010</td>
<td>10</td>
<td>MATH2020 OR MATH2110</td>
<td>10</td>
</tr>
<tr>
<td>MATH2010</td>
<td>10</td>
<td>EDST3170</td>
<td>10</td>
</tr>
<tr>
<td>Year 2 Session 1</td>
<td></td>
<td>Year 2 Session 2</td>
<td></td>
</tr>
<tr>
<td>EDST2999 LANTITE</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDST2000</td>
<td>10</td>
<td>EDST2000</td>
<td>10</td>
</tr>
<tr>
<td>BIOL2110</td>
<td>10</td>
<td>BIOL2220</td>
<td>10</td>
</tr>
<tr>
<td>BIOL2230</td>
<td>10</td>
<td>BIOL2220</td>
<td>10</td>
</tr>
<tr>
<td>MATH2010</td>
<td>10</td>
<td>MATH2020 OR MATH2110</td>
<td>10</td>
</tr>
<tr>
<td>MATH2010</td>
<td>10</td>
<td>EDST3170</td>
<td>10</td>
</tr>
<tr>
<td>Year 3 Session 1</td>
<td>3</td>
<td>Year 4 Session 1</td>
<td></td>
</tr>
<tr>
<td>EDST3140</td>
<td>10</td>
<td>EDST3140</td>
<td>10</td>
</tr>
<tr>
<td>BIOL3120</td>
<td>10</td>
<td>BIOL3120</td>
<td>10</td>
</tr>
<tr>
<td>BIOL3210</td>
<td>10</td>
<td>BIOL3210</td>
<td>10</td>
</tr>
<tr>
<td>BIOL3640</td>
<td>10</td>
<td>BIOL3640</td>
<td>10</td>
</tr>
<tr>
<td>Year 4 Session 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDST4010</td>
<td>10</td>
<td>EDST4010</td>
<td>10</td>
</tr>
<tr>
<td>EDTE4340</td>
<td>10</td>
<td>EDTE4340</td>
<td>10</td>
</tr>
<tr>
<td>EDTE4300</td>
<td>10</td>
<td>EDTE4300</td>
<td>10</td>
</tr>
<tr>
<td>EDST4120</td>
<td>10</td>
<td>EDST4120</td>
<td>10</td>
</tr>
</tbody>
</table>

* Students who wish to complete this degree in four years may follow this pattern of study. Application for a credit overload will be necessary in Year 3, Session 2.

Seek advice early in your program if you would prefer an alternate pattern.
2.5 Major in Chemistry

2.6.1 Suggested Pattern of Study – Major in Chemistry with a minor in Biology

This pattern of study will meet NESA subject content requirements to teach Chemistry and Biology as first teaching subjects.

Please check current requirements in the online University Handbook before enrolling.

<table>
<thead>
<tr>
<th>Year 1 Session 1</th>
<th>cp</th>
<th>Year 1 Session 2</th>
<th>cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST1000</td>
<td>10</td>
<td>EDST1010</td>
<td>10</td>
</tr>
<tr>
<td>CHEM1001</td>
<td>10</td>
<td>CHEM1002</td>
<td>10</td>
</tr>
<tr>
<td>BIOL1310</td>
<td>10</td>
<td>BIOL1110</td>
<td>10</td>
</tr>
<tr>
<td>To meet prerequisites for BIOL2110 and BIOL2410 you must include at least one of the following units in your studies: FOSE1015</td>
<td>10</td>
<td>FOSE/STAT 1000 Level Option Set</td>
<td>10</td>
</tr>
<tr>
<td>STAT1170</td>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Session 1</th>
<th>Year 2 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST2999 LANTITE</td>
<td>Ensure that you have met the standard for both literacy and numeracy by the end of your second year of study. See paragraph 1.2.1 for full information regarding LANTITE and its requirements</td>
</tr>
<tr>
<td>EDST2000</td>
<td>EDST2000 The Practice of Teaching: Inclusive Education (10 days)</td>
</tr>
<tr>
<td>CHEM2401</td>
<td>CHEM2401 Physical Chemistry 1</td>
</tr>
<tr>
<td>CHEM2601</td>
<td>CHEM2601 Synthesis</td>
</tr>
<tr>
<td>BIOL2110</td>
<td>BIOL2110 Genetics</td>
</tr>
<tr>
<td>FOSE3000</td>
<td>FOSE3000 Making Science Work for You and Society (CAPSTONE)</td>
</tr>
<tr>
<td>MOLS3003</td>
<td>MOLS3003 - Molecular Sciences Project (PACE)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Session 1</th>
<th>Year 3 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST3140</td>
<td>EDST3140 Introduction to the Secondary Curriculum</td>
</tr>
<tr>
<td>CHEM3202 Advanced Analysis and Measurement</td>
<td>CHEM3202 Advanced Analysis and Measurement</td>
</tr>
<tr>
<td>CHEM3801 Medicinal Chemistry</td>
<td>CHEM3801 Medicinal Chemistry</td>
</tr>
<tr>
<td>FOSE3000</td>
<td>FOSE3000 Making Science Work for You and Society (CAPSTONE)</td>
</tr>
<tr>
<td>MOLS3003</td>
<td>MOLS3003 - Molecular Sciences Project (PACE)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Session 1</th>
<th>Year 4 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST4010 Practice of Teaching: ICT in the Secondary School (30 days)</td>
<td>EDST4010 Practice of Teaching: ICT in the Secondary School (30 days)</td>
</tr>
<tr>
<td>EDTE4340 Science in the Secondary School II</td>
<td>EDTE4340 Science in the Secondary School II</td>
</tr>
<tr>
<td>EDST4120 Adolescent Development and Classroom Practice</td>
<td>EDST4120 Adolescent Development and Classroom Practice</td>
</tr>
<tr>
<td>EDUC unit at 3000 level</td>
<td>EDUC unit at 3000 level</td>
</tr>
</tbody>
</table>
2.6.2 Suggested Pattern of Study – Major in Chemistry with a minor in Human Biology

This pattern of study will meet NESA subject content requirements to teach Chemistry and Biology as first teaching subjects.

Note: Although ANTH3022 Gender, Sexuality and Global Health is offered in the Human Biology minor, it does not contribute to the NESA requirements for teaching in NSW schools. You must only select units with a BIOL prefix to meet requirements to teach.

Please check current requirements in the online University Handbook before enrolling.

<table>
<thead>
<tr>
<th>Year 1 Session 1</th>
<th>cp</th>
<th>Year 1 Session 2</th>
<th>cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST1000 Exploring Australian Education: Social</td>
<td>10</td>
<td>EDST1010 Learning and Development: An Introduction</td>
<td>10</td>
</tr>
<tr>
<td>and Historical Contexts</td>
<td></td>
<td>for Educators</td>
<td></td>
</tr>
<tr>
<td>CHEM1001 Foundations of Chemical and Biomolecular</td>
<td>10</td>
<td>CHEM1002 Foundations of Chemical and Biomolecular</td>
<td>10</td>
</tr>
<tr>
<td>Sciences 1</td>
<td></td>
<td>Sciences 2</td>
<td></td>
</tr>
<tr>
<td>BIOL2230 Neurophysiology</td>
<td>10</td>
<td>BIOL2220 Systems Physiology</td>
<td>10</td>
</tr>
<tr>
<td>To meet prerequisites for BIOL2110 you must include</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>at least one of the following units in your studies:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOSE1015 Statistical Concepts for Science</td>
<td>10</td>
<td>FOSE/STAT1000 Level Option Set</td>
<td>10</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAT1170 Introductory Statistics</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Session 1</th>
<th>Year 2 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST2999 LANTITE</td>
<td></td>
</tr>
<tr>
<td>Ensure that you have met the standard for both literacy</td>
<td></td>
</tr>
<tr>
<td>and numeracy by the end of your second year of study.</td>
<td></td>
</tr>
<tr>
<td>See paragraph 1.2.1 for full information regarding</td>
<td></td>
</tr>
<tr>
<td>LANTITE and its requirements</td>
<td></td>
</tr>
<tr>
<td>EDST2000 The Practice of Teaching: Inclusive</td>
<td>10</td>
</tr>
<tr>
<td>Education (10 days)</td>
<td></td>
</tr>
<tr>
<td>EDST3170 Indigenous Education</td>
<td>10</td>
</tr>
<tr>
<td>CHEM2401 Physical Chemistry 1</td>
<td></td>
</tr>
<tr>
<td>CHEM2601 Synthesis</td>
<td>10</td>
</tr>
<tr>
<td>BIOL2110 Genetics OR BIOL2230 Neurophysiology</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Session 1</th>
<th>Year 3 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST3140 Introduction to the Secondary Curriculum</td>
<td>10</td>
</tr>
<tr>
<td>EDST3010 Practice of Teaching: Classroom Management</td>
<td>10</td>
</tr>
<tr>
<td>and Assessment in the Secondary School (10 days)</td>
<td></td>
</tr>
<tr>
<td>CHEM3202 Advanced Analysis and Measurement</td>
<td>10</td>
</tr>
<tr>
<td>CHEM3801 Medicinal Chemistry</td>
<td>10</td>
</tr>
<tr>
<td>FOSE3000 Making Science Work for You and Society</td>
<td>10</td>
</tr>
<tr>
<td>(CAPSTONE)</td>
<td></td>
</tr>
<tr>
<td>MOLS3003 - Molecular Sciences Project (PACE)</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Session 1</th>
<th>Year 4 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST4010 Practice of Teaching: ICT in the</td>
<td>10</td>
</tr>
<tr>
<td>Secondary School (30 days)</td>
<td></td>
</tr>
<tr>
<td>EDST4020 Practice of Teaching: Culturally and</td>
<td>10</td>
</tr>
<tr>
<td>Linguistically Diverse Secondary Classrooms (30 days)</td>
<td></td>
</tr>
<tr>
<td>EDT4340 Science in the Secondary School II</td>
<td>10</td>
</tr>
<tr>
<td>EDT4180 Transitioning to the Secondary Teaching</td>
<td></td>
</tr>
<tr>
<td>Profession</td>
<td></td>
</tr>
<tr>
<td>EDST4120 Adolescent Development and Classroom</td>
<td>10</td>
</tr>
<tr>
<td>Practice</td>
<td></td>
</tr>
<tr>
<td>EDST4200 Using and Interpreting Educational Data</td>
<td>10</td>
</tr>
<tr>
<td>EDUC unit at 3000 level</td>
<td>10</td>
</tr>
<tr>
<td>EDUC unit at 3000 level</td>
<td>10</td>
</tr>
</tbody>
</table>
2.6.3 Suggested Pattern of Study – Major in Chemistry with a minor in Mathematics

This pattern of study will meet NESA subject content requirements to teach Chemistry as a first teaching subject and Mathematics as a second teaching subject.

**Note:** The prerequisite for MATH1010 is (HSC Advanced Mathematics Band 4 and above or Extension 1 Band E2 and above or Extension 2) or MATH130 or MATH1000 or WFMA003 or WFMA0003 or WMAT123 or WMAT1000.

Students who do not meet the prerequisite for MATH1010 should contact the Arts team via ask.mq.edu.au to arrange for space to be added to their study plan to allow them to take MATH1000 prior to starting the major.

Please check current requirements in the online University Handbook before enrolling.

<table>
<thead>
<tr>
<th>Year 1 Session 1</th>
<th>cp</th>
<th>Year 1 Session 2</th>
<th>cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST1000 Exploring Australian Education: Social and Historical Contexts</td>
<td>10</td>
<td>EDST1010 Learning and Development: An Introduction for Educators</td>
<td>10</td>
</tr>
<tr>
<td>CHEM1001 Foundations of Chemical and Biomolecular Sciences 1</td>
<td>10</td>
<td>CHEM1002 Foundations of Chemical and Biomolecular Sciences 2</td>
<td>10</td>
</tr>
<tr>
<td>MATH1010 Calculus and Linear Algebra I OR Calculus and Linear Algebra I (Advanced)</td>
<td>10</td>
<td>MATH1020 Calculus and Linear Algebra II OR MATH1025 Calculus and Linear Algebra II (Advanced)</td>
<td>10</td>
</tr>
<tr>
<td>FOSE/STAT 1000 Level Option Set</td>
<td>10</td>
<td>FOSE/STAT1000 Level Option Set</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Session 1</th>
<th>Year 2 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST2999 LANTITE Ensure that you have met the standard for both literacy and numeracy by the end of your second year of study. See paragraph 1.2.1 for full information regarding LANTITE and its requirements</td>
<td>0</td>
</tr>
<tr>
<td>EDST2000 The Practice of Teaching: Inclusive Education (10 days)</td>
<td>EDUC 2620 Education: The Learner</td>
</tr>
<tr>
<td>CHEM2401 Physical Chemistry 1</td>
<td>EDST3170 Indigenous Education</td>
</tr>
<tr>
<td>CHEM2601 Synthesis</td>
<td>CHEM2201 Analysis and Measurement</td>
</tr>
<tr>
<td>MATH2010 Calculus and Linear Algebra III</td>
<td>MATH2020 Vector Calculus and Complex Analysis OR MATH2110 Mathematical Modelling and Differential Equations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Session 1</th>
<th>Year 3 Session 2</th>
<th>FIVE UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST3140 Introduction to the Secondary Curriculum</td>
<td>10</td>
<td>EDST3010 Practice of Teaching: Classroom Management and Assessment in the Secondary School (10 days)</td>
</tr>
<tr>
<td>CHEM3202 Advanced Analysis and Measurement</td>
<td>EDTE4330 Science in the Secondary School I</td>
<td>10</td>
</tr>
<tr>
<td>CHEM3801 Medicinal Chemistry</td>
<td>EDTE4290 Mathematics in the Secondary School I</td>
<td>10</td>
</tr>
<tr>
<td>FOSE3000 Making Science Work for You and Society (CAPSTONE)</td>
<td>10</td>
<td>CHEM3601 Advanced Synthesis</td>
</tr>
<tr>
<td></td>
<td>MOLS3003 - Molecular Sciences Project (PACE)</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Session 1</th>
<th>Year 4 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST4010 Practice of Teaching: ICT in the Secondary School (30 days)</td>
<td>10</td>
</tr>
<tr>
<td>EDTE4340 Science in the Secondary School II</td>
<td>EDST4180 Transitioning to the Secondary Teaching Profession</td>
</tr>
<tr>
<td>EDTE4300 Mathematics in the Secondary School II</td>
<td>EDST4200 Using and Interpreting Educational Data</td>
</tr>
<tr>
<td>EDST4120 Adolescent Development and Classroom Practice</td>
<td>10</td>
</tr>
</tbody>
</table>

* Students who wish to complete this degree in four years may follow this pattern of study. Application for a credit overload will be necessary in Year 3, Session 2.

Seek advice early in your program if you would prefer an alternate pattern.
## 2.7 Major in Earth and Environmental Sciences (EES)

### 2.7.1 Suggested Pattern of Study – major in EES minor in Biology

This pattern of study will meet [NESA subject content requirements](#) to teach EES and Biology as first teaching subjects.

Please check current requirements in the online [University Handbook](#) before enrolling.

<table>
<thead>
<tr>
<th>Year 1 Session 1</th>
<th>cp</th>
<th>Year 1 Session 2</th>
<th>cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST1000 Exploring Australian Education: Social and Historical Contexts</td>
<td>10</td>
<td>EDST1010 Learning and Development: An Introduction for Educators</td>
<td>10</td>
</tr>
<tr>
<td>ENVS1017 The Living Environment</td>
<td>10</td>
<td>EESC1150 Planet Earth</td>
<td>10</td>
</tr>
<tr>
<td>BIOL1310 Organisms to Ecosystems</td>
<td>10</td>
<td>BIOL1110 Genes to Organisms</td>
<td>10</td>
</tr>
<tr>
<td><strong>To meet prerequisites for BIOL2110 and BIOL2410 you must include at least one of the following units in your studies:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOSE1015 Statistical Concepts for Science OR STAT1170 Introductory Statistics</td>
<td>10</td>
<td>FOSE/STAT 1000 Level Option Set</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Session 1</th>
<th>Year 2 Session 2</th>
<th>Year 2 Session 3</th>
<th>cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST2999 LANTITE Ensure that you have met the standard for both literacy and numeracy by the end of your second year of study. See paragraph 1.2.1 for full information regarding LANTITE and its requirements</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>EDST2000 The Practice of Teaching: Inclusive Education (10 days)</td>
<td>10</td>
<td>EDUC 2620 Education: The Learner</td>
<td>10</td>
</tr>
<tr>
<td>ENVS2266 Earth Surface Processes</td>
<td>10</td>
<td>EESC2150 Mass extinctions and the hidden history of Earth</td>
<td>10</td>
</tr>
<tr>
<td>ENVS2364 Introduction to Geographic Information Science and Remote Sensing</td>
<td>10</td>
<td>BIOL2410 Ecology OR BIOL2210 Life Processes</td>
<td>10</td>
</tr>
<tr>
<td><strong>To meet prerequisites for BIOL2110 and BIOL2410 you must include at least one of the following units in your studies:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOSE1015 Statistical Concepts for Science OR STAT1170 Introductory Statistics</td>
<td>10</td>
<td>FOSE/STAT 1000 Level Option Set</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Session 1</th>
<th>Year 3 Session 2</th>
<th>Year 3 Session 3</th>
<th>cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST3140 Introduction to the Secondary Curriculum</td>
<td>10</td>
<td>EDST3010 Practice of Teaching: Classroom Management and Assessment in the Secondary School (10 days)</td>
<td></td>
</tr>
<tr>
<td>EDUC unit at 3000 level</td>
<td>10</td>
<td>EDTE4330 Science in the Secondary School I</td>
<td>10</td>
</tr>
<tr>
<td>ENVS3240 Environmental Change</td>
<td>10</td>
<td>ENVS3238 Environmental Quality and Assessment</td>
<td>10</td>
</tr>
<tr>
<td>EESC3000 PACE in Earth and Environmental Sciences</td>
<td>10</td>
<td>FOSE3000 Making Science Work for You and Society (CAPSTONE)</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Session 1</th>
<th>Year 4 Session 2</th>
<th>Year 4 Session 3</th>
<th>cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST4010 Practice of Teaching: ICT in the Secondary School (30 days)</td>
<td>10</td>
<td>EDST3170 Indigenous Education</td>
<td>10</td>
</tr>
<tr>
<td>EDTE4340 Science in the Secondary School II</td>
<td>10</td>
<td>EDST4180 Transitioning to the Secondary Teaching Profession</td>
<td>10</td>
</tr>
<tr>
<td>EDUC unit at 3000 level</td>
<td>10</td>
<td>EDST4200 Using and Interpreting Educational Data</td>
<td>10</td>
</tr>
<tr>
<td>EDST4120 Adolescent Development and Classroom Practice</td>
<td>10</td>
<td>EDST4020 Practice of Teaching: Culturally and Linguistically Diverse Secondary Classrooms (30 days)</td>
<td>10</td>
</tr>
</tbody>
</table>
2.8 Major in Mathematics

2.8.1 Prerequisites for first year units – Major in Mathematics; Minor in Statistical Modelling; Minor in Physics

Students who do not meet the HSC prerequisites for MATH1010 may seek to enrol in MATH1000 Introduction to Mathematical Modelling. This unit is an elementary unit designed for Engineering, Mathematics and Physics students whose mathematics background has not met the recommended standard for students entering these programs.

As there is no elective space in this double degree, students will need to contact ask.mq.edu.au for assistance in making room in their program for MATH1000 and for academic advice on an alternate pattern of study. Due to the offering patterns in the degree, students requiring this prerequisite unit be unable to complete this degree in four years.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS1010 Modern Mechanics</td>
<td>(HSC Advanced Mathematics Band 4 and above or Extension 1 Band E2 and above or Extension 2) or MATH1000 or MATH130 or WFMA003 or WFMA0003</td>
</tr>
<tr>
<td>MATH1010 Calculus and Linear Algebra</td>
<td>(HSC Advanced Mathematics Band 4 and above or Extension 1 Band E2 and above or Extension 2) or MATH130 or MATH1000 or WFMA003 or WFMA0003 or WMAT123 or WMAT1000</td>
</tr>
<tr>
<td>MATH1015 Calculus and Linear Algebra I (Advanced)</td>
<td>(HSC Mathematics Extension 1 Band E3 and above or HSC Mathematics Extension 2) or admission to BMathSci or BAdvSc in Advanced Mathematics or BActStud or BActStudBSc or BAppFinBActStud or BActStudBProfPrac or BActStudBProfPrac(Hons)</td>
</tr>
<tr>
<td>STAT1371 Statistical Data Analysis</td>
<td>(HSC Mathematics Extension 1 or Extension 2) or (10cp from MATH1000 or MATH1010-MATH1025 or MATH130-MATH136) or admission to BActStud or BActStudBSc or BAppFinBActStud or BActStudBProfPrac or BActStudBProfPrac(Hons) or BMathSc</td>
</tr>
</tbody>
</table>
2.8.2 Suggested Pattern of Study – Major in Mathematics with a minor in Statistical Modelling

This pattern of study will meet NESA subject content requirements to teach Mathematics as a first teaching subject.

Note: The prerequisite for MATH1010 is (HSC Advanced Mathematics Band 4 and above or Extension 1 Band E2 and above or Extension 2) or MATH130 or MATH1000 or WFMA003 or WFMA0003 or WMAT123 or WMAT1000. Students who do not meet the prerequisite for MATH1010 should contact the Arts team via ask.mq.edu.au to arrange for space to be added to their study plan to allow them to take MATH1000 prior to starting the major. Students who do not meet the prerequisites for STAT1371 (HSC Mathematics Extension 1 or Extension 2) or (10cp from MATH1000 or MATH1010-MATH1025 or MATH130-MATH136) or admission to BActStud or BActStudBSc or BAppFinBActStud or BActStudBProfPrac or BActStudProfPrac(Hons) or BMathSc

Please check current requirements in the online University Handbook before enrolling.

<table>
<thead>
<tr>
<th>Year 1 Session 1</th>
<th>cp</th>
<th>Year 1 Session 2</th>
<th>cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST1000 Exploring Australian Education: Social and Historical Contexts</td>
<td>10</td>
<td>EDST1010 Learning and Development: An Introduction for Educators</td>
<td>10</td>
</tr>
<tr>
<td>MATH1010 Calculus and Linear Algebra I</td>
<td>10</td>
<td>MATH1020 Calculus and Linear Algebra II OR MATH1025 Calculus and Linear Algebra II (Advanced)</td>
<td>10</td>
</tr>
<tr>
<td>MATH1015 Calculus and Linear Algebra I (Advanced)</td>
<td>10</td>
<td>STAT1170 Introductory Statistics OR STAT1378 Coding and Communications in Statistics</td>
<td>10</td>
</tr>
<tr>
<td>STAT1371 Statistical Data Analysis</td>
<td>10</td>
<td>FOSE/STAT 1000 Level Option Set</td>
<td>10</td>
</tr>
<tr>
<td>EDST1000 Exploring Australian Education: Social and Historical Contexts</td>
<td>10</td>
<td>EDST1010 Learning and Development: An Introduction for Educators</td>
<td>10</td>
</tr>
<tr>
<td>MATH1010 Calculus and Linear Algebra I OR MATH1015 Calculus and Linear Algebra I (Advanced)</td>
<td>10</td>
<td>STAT1170 Introductory Statistics OR STAT1378 Coding and Communications in Statistics</td>
<td>10</td>
</tr>
<tr>
<td>FOSE/STAT 1000 Level Option Set</td>
<td>10</td>
<td>FOSE/STAT 1000 Level Option Set II</td>
<td>10</td>
</tr>
<tr>
<td>Year 2 Session 1</td>
<td>Year 2 Session 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDST2999 LANTITE Ensure that you have met the standard for both literacy and numeracy by the end of your second year of study. See paragraph 1.2.1 for full information regarding LANTITE and its requirements</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDST2000 The Practice of Teaching: Inclusive Education (10 days)</td>
<td>10</td>
<td>EDST3170 Indigenous Education</td>
<td>10</td>
</tr>
<tr>
<td>EDUC 2620 Education: The Learner</td>
<td>10</td>
<td>MATH2020 Vector Calculus and Complex Analysis</td>
<td>10</td>
</tr>
<tr>
<td>MATH2010 Calculus and Linear Algebra III</td>
<td>10</td>
<td>MATH2110 Mathematical Modelling and Differential Equations</td>
<td>10</td>
</tr>
<tr>
<td>STAT2170 Applied Statistics OR STAT2173 Introduction to Probability</td>
<td>10</td>
<td>STAT2114 Design of Surveys and Experiments OR STAT2372 Probability</td>
<td>10</td>
</tr>
<tr>
<td>STAT2170 Applied Statistics OR STAT2173 Introduction to Probability</td>
<td>10</td>
<td>EDST3140 Introduction to the Secondary Curriculum</td>
<td>10</td>
</tr>
<tr>
<td>MATH 3000 Level Option Set</td>
<td>10</td>
<td>EDTE4290 Mathematics in the Secondary School I</td>
<td>10</td>
</tr>
<tr>
<td>MATH 3000 Level Option Set</td>
<td>10</td>
<td>MATH 3000 Level Option Set</td>
<td>10</td>
</tr>
<tr>
<td>FOSE3000 Making Science Work for You and Society (CAPSTONE)</td>
<td>10</td>
<td>MATH3599 Professional Practice for Mathematical Sciences (PACE)</td>
<td>10</td>
</tr>
<tr>
<td>Year 3 Session 1</td>
<td>Year 3 Session 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDST3140 Introduction to the Secondary Curriculum</td>
<td>10</td>
<td>EDST3010 Practice of Teaching: Classroom Management and Assessment in the Secondary School (10 days)</td>
<td>10</td>
</tr>
<tr>
<td>MATH 3000 Level Option Set</td>
<td>10</td>
<td>EDTE4290 Mathematics in the Secondary School I</td>
<td>10</td>
</tr>
<tr>
<td>MATH 3000 Level Option Set</td>
<td>10</td>
<td>MATH 3000 Level Option Set</td>
<td>10</td>
</tr>
<tr>
<td>FOSE3000 Making Science Work for You and Society (CAPSTONE)</td>
<td>10</td>
<td>MATH3599 Professional Practice for Mathematical Sciences (PACE)</td>
<td>10</td>
</tr>
<tr>
<td>Year 4 Session 1</td>
<td>Year 4 Session 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDST4010 Practice of Teaching: ICT in the Secondary School (30 days)</td>
<td>10</td>
<td>EDST4020 Practice of Teaching: Culturally and Linguistically Diverse Secondary Classrooms (30 days)</td>
<td>10</td>
</tr>
<tr>
<td>EDTE4300 Mathematics in the Secondary School II</td>
<td>10</td>
<td>EDST4180 Transitioning to the Secondary Teaching Profession</td>
<td>10</td>
</tr>
<tr>
<td>EDST4120 Adolescent Development and Classroom Practice</td>
<td>10</td>
<td>EDST4200 Using and interpreting Educational Data</td>
<td>10</td>
</tr>
<tr>
<td>EDUC unit at 3000 level</td>
<td>10</td>
<td>EDUC unit at 3000 level</td>
<td>10</td>
</tr>
</tbody>
</table>
2.8.2 Suggested Pattern of Study – Major in Mathematics with a minor in Physics

This pattern of study will meet NESA subject content requirements to teach Mathematics and Physics as a first teaching subject.

**Note:** The prerequisite for MATH1010 is (HSC Advanced Mathematics Band 4 and above or Extension 1 Band E2 and above or Extension 2) or MATH130 or MATH1000 or WFMA003 or WFMA0003 or WMAT123 or WMAT1000.

Students who do not meet the prerequisite for MATH1010 should contact the Arts team via ask.mq.edu.au to arrange for space to be added to their study plan to allow them to take MATH1000 prior to starting the major.

Please check current requirements in the online University Handbook before enrolling.

<table>
<thead>
<tr>
<th>Year 1 Session 1</th>
<th>cp</th>
<th>Year 1 Session 2</th>
<th>cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST1000 Exploring Australian Education: Social and Historical Contexts</td>
<td>10</td>
<td>EDST1010 Learning and Development: An Introduction for Educators</td>
<td>10</td>
</tr>
<tr>
<td>MATH1010 Calculus and Linear Algebra I</td>
<td>10</td>
<td>MATH1020 Calculus and Linear Algebra II OR MATH1025 Calculus and Linear Algebra II (Advanced)</td>
<td>10</td>
</tr>
<tr>
<td>MATH1015 Calculus and Linear Algebra I (Advanced)</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHYS1010 Modern Mechanics</td>
<td>10</td>
<td>PHYS1020 Electric and Magnetic Interactions</td>
<td>10</td>
</tr>
<tr>
<td>FOSE/STAT 1000 Level Option Set</td>
<td>10</td>
<td>FOSE/STAT 1000 Level Option Set II</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Session 1</th>
<th>Year 2 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST2999 LANTITE Ensure that you have met the standard for both literacy and numeracy by the end of your second year of study. See paragraph 1.2.1 for full information regarding LANTITE and its requirements</td>
<td>0</td>
</tr>
<tr>
<td>EDST2000 The Practice of Teaching: Inclusive Education (10 days)</td>
<td>10</td>
</tr>
<tr>
<td>EDUC 2620 Education: The Learner</td>
<td>10</td>
</tr>
<tr>
<td>MATH2010 Calculus and Linear Algebra III</td>
<td>10</td>
</tr>
<tr>
<td>PHYS2010 Classical and Quantum Oscillations and Waves</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Session 1</th>
<th>Year 3 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST3140 Introduction to the Secondary Curriculum</td>
<td>10</td>
</tr>
<tr>
<td>MATH 3000 Level Option Set</td>
<td>10</td>
</tr>
<tr>
<td>MATH 3000 Level Option Set</td>
<td>10</td>
</tr>
<tr>
<td>FOSE3000 Making Science Work for You and Society (CAPSTONE)</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>MATH3599 Professional Practice for Mathematical Sciences (PACE)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Session 1</th>
<th>Year 4 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST4010 Practice of Teaching: ICT in the Secondary School (30 days)</td>
<td>10</td>
</tr>
<tr>
<td>EDTE4300 Mathematics in the Secondary School II</td>
<td>10</td>
</tr>
<tr>
<td>EDST4120 Adolescent Development and Classroom Practice</td>
<td>10</td>
</tr>
<tr>
<td>EDUC unit at 3000 level</td>
<td>10</td>
</tr>
</tbody>
</table>

2022 Student Guide_BScBEd(Sec)_29Nov21
2.8.3 Suggested Pattern of Study – Major in Mathematics with a minor in Biology

This pattern of study will meet NESA subject content requirements to teach Mathematics and Biology as first teaching subjects.

Note: The prerequisite for MATH1010 is (HSC Advanced Mathematics Band 4 and above or Extension 1 Band E2 and above or Extension 2) or MATH130 or MATH1000 or WFMA003 or WFMA0003 or WMAT123 or WMAT1000.

Students who do not meet the prerequisite for MATH1010 should contact the Arts team via ask.mq.edu.au to arrange for space to be added to their study plan to allow them to take MATH1000 prior to starting the major.

Please check current requirements in the online University Handbook before enrolling.

<table>
<thead>
<tr>
<th>Year 1 Session 1</th>
<th>cp</th>
<th>Year 1 Session 2</th>
<th>cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST1000 Exploring Australian Education: Social and Historical Contexts</td>
<td>10</td>
<td>EDST1010 Learning and Development: An Introduction for Educators</td>
<td>10</td>
</tr>
<tr>
<td>MATH1010 Calculus and Linear Algebra I OR MATH1015 Calculus and Linear Algebra I (Advanced)</td>
<td>10</td>
<td>MATH1020 Calculus and Linear Algebra II OR MATH1025 Calculus and Linear Algebra II (Advanced)</td>
<td>10</td>
</tr>
<tr>
<td>BIOL1310 Organisms to Ecosystems</td>
<td>10</td>
<td>BIOL1110 Genes to Organisms</td>
<td>10</td>
</tr>
</tbody>
</table>

To meet prerequisites for BIOL2110 and BIOL2410 you must include at least one of the following units in your studies:

FOSE1015 Statistical Concepts for Science OR STAT1170 Introductory Statistics

FOSE/STAT 1000 Level Option Set II

<table>
<thead>
<tr>
<th>Year 2 Session 1</th>
<th>Year 2 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST2999 LANTITE</td>
<td>Ensure that you have met the standard for both literacy and numeracy by the end of your second year of study. See paragraph 1.2.1 for full information regarding LANTITE and its requirements</td>
</tr>
<tr>
<td>EDST2000 The Practice of Teaching: Inclusive Education (10 days)</td>
<td>EDST3170 Indigenous Education</td>
</tr>
<tr>
<td>EDUC 2620 Education: The Learner</td>
<td>MATH2020 Vector Calculus and Complex Analysis</td>
</tr>
<tr>
<td>MATH2010 Calculus and Linear Algebra III</td>
<td>MATH2110 Mathematical Modelling and Differential Equations</td>
</tr>
<tr>
<td>BIOL2110 Genetics</td>
<td>BIOL2410 Ecology OR BIOL2210 Life Processes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Session 1</th>
<th>Year 3 Session 2</th>
<th>FIVE UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST3140 Introduction to the Secondary Curriculum</td>
<td>EDST3010 Practice of Teaching: Classroom Management and Assessment in the Secondary School (10 days)</td>
<td></td>
</tr>
<tr>
<td>MATH 3000 Level Option Set</td>
<td>EDTE4290 Mathematics in the Secondary School I</td>
<td></td>
</tr>
<tr>
<td>MATH 3000 Level Option Set</td>
<td>EDTE4330 Science in the Secondary School I</td>
<td></td>
</tr>
<tr>
<td>FOSE3000 Making Science work for you and Society (CAPSTONE)</td>
<td>MATH 3000 Level Option Set</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MATH3599 Professional Practice for Mathematical Sciences (PACE)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Session 1</th>
<th>Year 4 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST4010 Practice of Teaching: ICT in the Secondary School (30 days)</td>
<td>EDST4020 Practice of Teaching: Culturally and Linguistically Diverse Secondary Classrooms (30 days)</td>
</tr>
<tr>
<td>EDTE4300 Mathematics in the Secondary School II</td>
<td>EDST4180 Transitioning to the Secondary Teaching Profession</td>
</tr>
<tr>
<td>EDTE4340 Science in the Secondary School II</td>
<td>EDST4200 Using and Interpreting Educational Data</td>
</tr>
<tr>
<td>EDST4120 Adolescent Development and Classroom Practice</td>
<td></td>
</tr>
</tbody>
</table>

★ Students who wish to complete this degree in four years may follow this pattern of study. Application for a credit overload will be necessary in Year 3, Session 2.

Seek advice early in your program if you would prefer an alternate pattern.
2.8.4 Suggested Pattern of Study – Major in Mathematics with a minor in Human Biology

This pattern of study will meet NESA subject content requirements to teach Mathematics and Biology as first teaching subjects.

Note: The prerequisite for MATH1010 is (HSC Advanced Mathematics Band 4 and above or Extension 1 Band E2 and above or Extension 2) or MATH130 or MATH1000 or WFMA003 or WFMA0003 or WMAT123 or WMAT1000. Students who do not meet the prerequisite for MATH1010 should contact the Arts team via ask.mq.edu.au to arrange for space to be added to their study plan to allow them to take MATH1000 prior to starting the major.

Note: Although ANTH3022 Gender, Sexuality and Global Health is offered in the Human Biology minor, it does not contribute to the NESA requirements for teaching Biology in NSW schools. You must only select units with a BIOL prefix to meet requirements to teach.

Please check current requirements in the online University Handbook before enrolling.

<table>
<thead>
<tr>
<th>Year 1 Session 1</th>
<th>cp</th>
<th>Year 1 Session 2</th>
<th>cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST1000 Exploring Australian Education: Social and Historical Contexts</td>
<td>10</td>
<td>EDST1010 Learning and Development: An Introduction for Educators</td>
<td>10</td>
</tr>
<tr>
<td>MATH1010 Calculus and Linear Algebra I OR MATH1015 Calculus and Linear Algebra I (Advanced)</td>
<td>10</td>
<td>MATH1020 Calculus and Linear Algebra II OR MATH1025 Calculus and Linear Algebra II (Advanced)</td>
<td>10</td>
</tr>
<tr>
<td>BIOL1210 Human Biology</td>
<td>10</td>
<td>BIOL1110 Genes to Organisms</td>
<td>10</td>
</tr>
<tr>
<td>To meet prerequisites for BIOL2110 and BIOL2410 you must include at least one of the following units in your studies: FOSE1015 Statistical Concepts for Science OR STAT1170 Introductory Statistics</td>
<td>10</td>
<td>FOSE/STAT 1000 Level Option Set II</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Session 1</th>
<th>Year 2 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST2999 LANTITE Ensure that you have met the standard for both literacy and numeracy by the end of your second year of study. See paragraph 1.2.1 for full information regarding LANTITE and its requirements</td>
<td>0</td>
</tr>
<tr>
<td>EDST2000 The Practice of Teaching: Inclusive Education (10 days)</td>
<td>10</td>
</tr>
<tr>
<td>EDUC 2620 Education: The Learner</td>
<td>10</td>
</tr>
<tr>
<td>MATH2010 Calculus and Linear Algebra III</td>
<td>10</td>
</tr>
<tr>
<td>BIOL2110 Genetics OR BIOL2230 Neurophysiology</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Session 1</th>
<th>Year 3 Session 2 * FIVE UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST3140 Introduction to the Secondary Curriculum</td>
<td>10</td>
</tr>
<tr>
<td>MATH 3000 Level Option Set</td>
<td>10</td>
</tr>
<tr>
<td>MATH 3000 Level Option Set</td>
<td>10</td>
</tr>
<tr>
<td>FOSE3000 Making Science work for you and Society (CAPSTONE)</td>
<td>10</td>
</tr>
<tr>
<td>MATH3599 Professional Practice for Mathematical Sciences (PACE)</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Session 1</th>
<th>Year 4 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST4010 Practice of Teaching: ICT in the Secondary School (30 days)</td>
<td>10</td>
</tr>
<tr>
<td>EDTE4300 Mathematics in the Secondary School II</td>
<td>10</td>
</tr>
<tr>
<td>EDTE4340 Science in the Secondary School II</td>
<td>10</td>
</tr>
<tr>
<td>EDST4120 Adolescent Development and Classroom Practice</td>
<td>10</td>
</tr>
</tbody>
</table>
Students who wish to complete this degree in four years may follow this pattern of study. Application for a credit overload will be necessary in Year 3, Session 2.
Seek advice early in your program if you would prefer an alternate pattern.
2.8.5 Suggested Pattern of Study – Major in Mathematics with a minor in Chemistry

This pattern of study will meet [NESA subject content requirements](#) to teach Mathematics and Chemistry as first teaching subjects.

**Note:** The prerequisite for MATH1010 is (HSC Advanced Mathematics Band 4 and above or Extension 1 Band E2 and above or Extension 2) or MATH130 or MATH1000 or WFMA003 or WFMA0003 or WMAT123 or WMAT1000.

Students who do not meet the prerequisite for MATH1010 should contact the Arts team via ask.mq.edu.au to arrange for space to be added to their study plan to allow them to take MATH1000 prior to starting the major.

Please check current requirements in the online [University Handbook](#) before enrolling.

<table>
<thead>
<tr>
<th>Year 1 Session 1</th>
<th>cp</th>
<th>Year 1 Session 2</th>
<th>cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST1000</td>
<td>10</td>
<td>EDST1010</td>
<td>10</td>
</tr>
<tr>
<td>MATH1010</td>
<td>10</td>
<td>MATH1020</td>
<td>10</td>
</tr>
<tr>
<td>MATH1015</td>
<td>10</td>
<td>MATH1025</td>
<td>10</td>
</tr>
<tr>
<td>CHEM1001</td>
<td>10</td>
<td>CHEM1002</td>
<td>10</td>
</tr>
<tr>
<td>FOSE/STAT 1000 Level Option Set</td>
<td>10</td>
<td>FOSE/STAT 1000 Level Option Set II</td>
<td>10</td>
</tr>
</tbody>
</table>

**Year 2 Session 1**

<table>
<thead>
<tr>
<th>Year 2 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST2999 LANTITE</td>
</tr>
<tr>
<td>EDST2000</td>
</tr>
<tr>
<td>EDUC 2620</td>
</tr>
<tr>
<td>MATH2010</td>
</tr>
<tr>
<td>CHEM2401</td>
</tr>
<tr>
<td>CHEM2601</td>
</tr>
</tbody>
</table>

**Year 3 Session 1**

<table>
<thead>
<tr>
<th>Year 3 Session 2</th>
<th>FIVE UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST3140</td>
<td>Introduction to the Secondary Curriculum</td>
</tr>
<tr>
<td>MATH 3000 Level Option Set</td>
<td>10</td>
</tr>
<tr>
<td>MATH 3000 Level Option Set</td>
<td>10</td>
</tr>
<tr>
<td>FOSE3000</td>
<td>Making Science work for you and Society (CAPSTONE)</td>
</tr>
</tbody>
</table>

**Year 4 Session 1**

<table>
<thead>
<tr>
<th>Year 4 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST4010</td>
</tr>
<tr>
<td>EDTE4300</td>
</tr>
<tr>
<td>EDTE4340</td>
</tr>
<tr>
<td>EDST4120</td>
</tr>
</tbody>
</table>

* Students who wish to complete this degree in four years may follow this pattern of study. Application for a credit overload will be necessary in Year 3, Session 2.

Seek advice early in your program if you would prefer an alternate pattern.
2.9 Major in Physics

2.9.1 Prerequisites for first year Physics and Mathematics units

Students who do not meet the HSC prerequisites for PHYS1010 and MATH1010 may seek to enrol in MATH1000 *Introduction to Mathematical Modelling*. This unit is an elementary unit designed for Engineering, Mathematics and Physics students whose mathematics background has not met the recommended standard for students entering these programs.

As there is no elective space in this double degree, students will need to contact ask.mq.edu.au for assistance in making room in their program for MATH1000 and for academic advice on an alternate pattern of study. Due to the offering patterns in the degree, students requiring this prerequisite unit be unable to complete this degree in four years.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS1010 Modern Mechanics</td>
<td>(HSC Advanced Mathematics Band 4 and above or Extension 1 Band E2 and above or Extension 2) or MATH1000 or MATH130 or WFMA003 or WFMA0003</td>
</tr>
<tr>
<td>MATH1010 Calculus and Linear Algebra</td>
<td>(HSC Advanced Mathematics Band 4 and above or Extension 1 Band E2 and above or Extension 2) or MATH130 or MATH1000 or WFMA003 or WFMA0003 or WMAT123 or WMAT1000</td>
</tr>
<tr>
<td>MATH1015 Calculus and Linear Algebra I (Advanced)</td>
<td>(HSC Mathematics Extension 1 Band E3 and above or HSC Mathematics Extension 2) or admission to BMathSci or BAdvSc in Advanced Mathematics or BActStud or BActStudBSc or BAppFinBActStud or BActStudBProfPrac or BActStudProfPrac(Hons)</td>
</tr>
</tbody>
</table>
2.9.2 Suggested Pattern of Study – Major in Physics with a minor in Mathematics

This pattern of study will meet NESA subject content requirements to teach Mathematics/Physics as a first teaching subject.

Note: The prerequisite for MATH1010 is (HSC Advanced Mathematics Band 4 and above or Extension 1 Band E2 and above or Extension 2) or MATH130 or MATH1000 or WFMA003 or WFMA0003 or WMAT123 or WMAT1000.

Students who do not meet the prerequisite for MATH1010 should contact the Arts team via ask.mq.edu.au to arrange for space to be added to their study plan to allow them to take MATH1000 prior to starting the major.

Please check current requirements in the online University Handbook before enrolling.

<table>
<thead>
<tr>
<th>Year 1 Session 1</th>
<th>cp</th>
<th>Year 1 Session 2</th>
<th>cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST1000 Exploring Australian Education: Social and Historical Contexts</td>
<td>10</td>
<td>EDST1010 Learning and Development: An Introduction for Educators</td>
<td>10</td>
</tr>
<tr>
<td>PHYS1010 Modern Mechanics</td>
<td>10</td>
<td>PHYS1020 Electric and Magnetic Interactions</td>
<td>10</td>
</tr>
<tr>
<td>MATH1010 Calculus and Linear Algebra I</td>
<td>10</td>
<td>MATH1020 Calculus and Linear Algebra II OR MATH1025 Calculus and Linear Algebra II (Advanced)</td>
<td>10</td>
</tr>
<tr>
<td>MATH1015 Calculus and Linear Algebra I (Advanced)</td>
<td>10</td>
<td>FOSE/STAT 1000 Level Option Set</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Session 1</th>
<th>Year 2 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST2999 LANTITE Ensure that you have met the standard for both literacy and numeracy by the end of your second year of study. See paragraph 1.2.1 for full information regarding LANTITE and its requirements</td>
<td>0</td>
</tr>
<tr>
<td>EDST2000 The Practice of Teaching: Inclusive Education (10 days)</td>
<td>EDST3170 Indigenous Education</td>
</tr>
<tr>
<td>EDUC 2620 Education: The Learner</td>
<td>PHYS2020 Electromagnetism and Relativity</td>
</tr>
<tr>
<td>PHYS2010 Classical and Quantum Oscillations and Waves</td>
<td>PHYS2030 The Structure of Matter</td>
</tr>
<tr>
<td>MATH2010 Calculus and Linear Algebra III</td>
<td>MATH2020 Vector Calculus and Complex Analysis OR MATH2110 Mathematical Modelling and Differential Equations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Session 1</th>
<th>Year 3 Session 2 * FIVE UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST3140 Introduction to the Secondary Curriculum</td>
<td>EDST3010 Practice of Teaching: Classroom Management and Assessment in the Secondary School (10 days)</td>
</tr>
<tr>
<td>PHYS3010 Advanced Electromagnetism and Optics</td>
<td>EDTE4330 Science in the Secondary School I</td>
</tr>
<tr>
<td>FOSE3000 Making Science work for you and Society (CAPSTONE)</td>
<td>EDTE4290 Mathematics in the Secondary School I</td>
</tr>
<tr>
<td>PHYS3180 Condensed Matter and Statistical Physics</td>
<td>PHYS3140 Advanced Quantum Mechanics and Quantum Optics</td>
</tr>
<tr>
<td></td>
<td>PHYS3810 PACE: Professional Experience in Physics and Astronomy (PACE)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Session 1</th>
<th>Year 4 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST4010 Practice of Teaching: ICT in the Secondary School (30 days)</td>
<td>EDST4020 Practice of Teaching: Culturally and Linguistically Diverse Secondary Classrooms (30 days)</td>
</tr>
<tr>
<td>EDTE4300 Mathematics in the Secondary School II</td>
<td>EDST4180 Transitioning to the Secondary Teaching Profession</td>
</tr>
<tr>
<td>EDTE4340 Science in the Secondary School II</td>
<td>EDST4200 Using and Interpreting Educational Data</td>
</tr>
<tr>
<td>EDST4120 Adolescent Development and Classroom Practice</td>
<td></td>
</tr>
</tbody>
</table>

* Students who wish to complete this degree in four years may follow this pattern of study. Application for a credit overload will be necessary in Year 3, Session 2.

Seek advice early in your program if you would prefer an alternate pattern.
2.10 Major in Astronomy and Astrophysics

2.9.1 Prerequisites for first year Physics and Mathematics units

Students who do not meet the HSC prerequisites for PHYS1010 and MATH1010 may seek to enrol in MATH1000 Introduction to Mathematical Modelling. This unit is an elementary unit designed for Engineering, Mathematics and Physics students whose mathematics background has not met the recommended standard for students entering these programs.

As there is no elective space in this double degree, students will need to contact ask.mq.edu.au for assistance in making room in their program for MATH1000 and for academic advice on an alternate pattern of study. Due to the offering patterns in the degree, students requiring this prerequisite unit be unable to complete this degree in four years.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS1010 Modern Mechanics</td>
<td>(HSC Advanced Mathematics Band 4 and above or Extension 1 Band E2 and above or Extension 2) or MATH1000 or MATH130 or WFMA003 or WFMA0003</td>
</tr>
<tr>
<td>MATH1010 Calculus and Linear Algebra</td>
<td>(HSC Advanced Mathematics Band 4 and above or Extension 1 Band E2 and above or Extension 2) or MATH130 or MATH1000 or WFMA003 or WFMA0003 or WMAT123 or WMAT1000</td>
</tr>
<tr>
<td>MATH1015 Calculus and Linear Algebra I (Advanced)</td>
<td>(HSC Mathematics Extension 1 Band E3 and above or HSC Mathematics Extension 2) or admission to BMathSci or BAdvSc in Advanced Mathematics or BActStud or BActStudBSoc or BAppFinBActStud or BActStudBProfPrac or BActStudProfPrac(Hons)</td>
</tr>
</tbody>
</table>
### 2.10.2 Suggested Pattern of Study – Major in Astronomy and Astrophysics with a minor in Mathematics

This pattern of study will meet [NESA subject content requirements](#) to teach Mathematics/Physics as a first teaching subject.

**Note:** The prerequisite for MATH1010 is (HSC Advanced Mathematics Band 4 and above or Extension 1 Band E2 and above or Extension 2) or MATH130 or MATH1000 or WFMA003 or WFMA0003 or WMAT123 or WMAT1000.

Students who do not meet the prerequisite for MATH1010 should contact the Arts team via ask.mq.edu.au to arrange for space to be added to their study plan to allow them to take MATH1000 prior to starting the major.

Please check current requirements in the online [University Handbook](#) before enrolling.

<table>
<thead>
<tr>
<th>Year 1 Session 1</th>
<th>cp</th>
<th>Year 1 Session 2</th>
<th>cp</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST1000 Exploring Australian Education: Social and Historical Contexts</td>
<td>10</td>
<td>EDST1010 Learning and Development: An Introduction for Educators</td>
<td>10</td>
</tr>
<tr>
<td>PHYS1010 Modern Mechanics</td>
<td>10</td>
<td>PHYS1020 Electric and Magnetic Interactions</td>
<td>10</td>
</tr>
<tr>
<td>MATH1010 Calculus and Linear Algebra I OR MATH1015 Calculus and Linear Algebra I (Advanced)</td>
<td>10</td>
<td>MATH1020 Calculus and Linear Algebra II OR MATH1025 Calculus and Linear Algebra II (Advanced)</td>
<td>10</td>
</tr>
<tr>
<td>FOSE/STAT 1000 Level Option Set</td>
<td>10</td>
<td>FOSE/STAT 1000 Level Option Set II</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Session 1</th>
<th>Year 2 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST2999 LANTITE</td>
<td>Ensure that you have met the standard for both literacy and numeracy by the end of your second year of study. See paragraph 1.2.1 for full information regarding LANTITE and its requirements</td>
</tr>
<tr>
<td>EDST2000 The Practice of Teaching: Inclusive Education (10 days)</td>
<td>PHYS2020 Electromagnetism and Relativity</td>
</tr>
<tr>
<td>EDUC 2620 Education: The Learner</td>
<td>ASTR2020 Observational Astronomy</td>
</tr>
<tr>
<td>PHYS2010 Classical and Quantum Oscillations and Waves</td>
<td>MATH2020 Vector Calculus and Complex Analysis OR MATH2110 Mathematical Modelling and Differential Equations</td>
</tr>
<tr>
<td>MATH2010 Calculus and Linear Algebra III</td>
<td>EDST3170 Indigenous Education</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Session 1 * FIVE UNITS</th>
<th>Year 3 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST3140 Introduction to the Secondary Curriculum</td>
<td>EDST3010 Practice of Teaching: Classroom Management and Assessment in the Secondary School (10 days)</td>
</tr>
<tr>
<td>ASTR3010 Astrophysics of Radiation and Stars</td>
<td>EDTE4330 Science in the Secondary School 1</td>
</tr>
<tr>
<td>ASTR3110 Data Science Techniques in Astrophysics</td>
<td>EDTE4290 Mathematics in the Secondary School I</td>
</tr>
<tr>
<td>FOSE3000 Making Science work for you and Society (CAPSTONE)</td>
<td>ASTR3020 Extragalactic Astronomy and Cosmology</td>
</tr>
<tr>
<td>PHYS3180 Condensed Matter and Statistical Physics (PACE)</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Session 1</th>
<th>Year 4 Session 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDST4010 Practice of Teaching: ICT in the Secondary School (30 days)</td>
<td>EDST4020 Practice of Teaching: Culturally and Linguistically Diverse Secondary Classrooms (30 days)</td>
</tr>
<tr>
<td>EDTE4300 Mathematics in the Secondary School II</td>
<td>EDST4180 Transitioning to the Secondary Teaching Profession</td>
</tr>
<tr>
<td>EDTE4340 Science in the Secondary School II</td>
<td>EDST4200 Using and Interpreting Educational Data</td>
</tr>
<tr>
<td>EDST4120 Adolescent Development and Classroom Practice</td>
<td>10</td>
</tr>
</tbody>
</table>

* Students who wish to complete this degree in four years may follow this pattern of study. Application for a [credit overload](#) will be necessary in Year 3, Session 1.

Seek advice early in your program if you would prefer an alternate pattern.
Section 3
Professional Experience Units

In the undergraduate degree programs, Professional Experience (PEX) begins in the second year of full-time study. While in schools, the Teacher Education Student (TES) works with, and is supervised by, an experienced Supervising Teacher (ST) who acts as a mentor. Students are also allocated a Tertiary Supervisor (TS) who may visit the school to meet with TES and liaise between ST and unit convenors. Full information is available on the Professional Experience website.

Pattern of Professional Experience in Schools

<table>
<thead>
<tr>
<th>Year of Study</th>
<th>Professional Experience Unit</th>
<th>Professional Experience Days</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 2</td>
<td>EDST2000  Practice of Teaching: Inclusive Education</td>
<td>10</td>
<td>S1</td>
</tr>
<tr>
<td>Year 3</td>
<td>EDST3010  Practice of Teaching: Classroom Management and Assessment in the Secondary School</td>
<td>10</td>
<td>S2</td>
</tr>
<tr>
<td>Year 4</td>
<td>EDST4010  Practice of Teaching: ICT in the Secondary School</td>
<td>30</td>
<td>S1</td>
</tr>
<tr>
<td>Year 4</td>
<td>EDST4020  Practice of Teaching: Culturally and Linguistically Diverse Secondary Classrooms</td>
<td>30</td>
<td>S2</td>
</tr>
</tbody>
</table>
Plan your own course worksheet

First teaching subject  ____________________________(Academic Major)

Additional teaching subject or Minor Study __________________________

<table>
<thead>
<tr>
<th></th>
<th>2022 S1</th>
<th>2022 S2</th>
<th>2022 S3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2023 S1</th>
<th>2023 S2</th>
<th>2023 S3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2024 S1</th>
<th>2024 S2</th>
<th>2024 S3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2025 S1</th>
<th>2025 S2</th>
<th>2025 S3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Units contributing to the Academic Minor and/or NESA second teaching subject content requirements

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>