



**MACQUARIE**  
University

**Department of Educational Studies**  
**Primary Teacher Education Program**  
**Specialisations in Mathematics and**  
**Science for Intending Primary Teachers**  
**2017**

Bachelor of Arts  
with the degree of Bachelor of Education (Primary)

This information must be read in conjunction with the Primary Teacher Education Program Student Guide.

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## Section 1 Specialisation in Mathematics and Science for intending primary Teachers

The Department of Educational Studies has developed specialisations in mathematics and science for the BABEd(Primary). Students in the BABEd(Primary) who have an interest in and an aptitude for mathematics or science are strongly encouraged to consider including either one of these specialisations in their program.

The specialisations consist of specific subject content requirements that must be completed. These units equate to six semester-long units of study in either mathematics or science.

Students who are considering a specialisation in mathematics or science should first contact Dr Michael Cavanagh, Professor Joanne Mulligan or Dr Anne Forbes for academic advice.

The tables on the next two pages outline suggested study patterns for these specialisations.

### 1.1 Specific Subject Content Requirements – STEM Specialisation in Mathematics

Students must complete the following specified mathematics units, equating to six semester-long units of study, within the program:

1	2	3	4	5	6
One of <ul style="list-style-type: none"> <li>▪ MATH106 or</li> <li>▪ MATH111 or</li> <li>▪ MATH130 or</li> <li>▪ MATH135 or</li> <li>▪ MATH109**</li> </ul>	One of <ul style="list-style-type: none"> <li>▪ STAT170 or</li> <li>▪ STAT175</li> </ul>	EDUC258	EDUC219 Three online ORS modules <ul style="list-style-type: none"> <li>▪ Gateway to Numeracy</li> <li>▪ Smart Budgeting and</li> <li>▪ Financial Literacy (Primary)</li> </ul>	EDTE251 and EDTE354 Fifty percent of each unit is focused on Primary mathematics curriculum studies	EDUC359 Frontiers in STEM Education

### 1.2 Specific Subject Content Requirements – STEM Specialisation in Science

Students must complete the following specified science units, equating to six semester-long units of study, within the program:

1 & 2*	3	4	5	6
Two of <ul style="list-style-type: none"> <li>▪ PHYS130 or</li> <li>▪ PHYS143 or</li> <li>▪ PHYS242** or</li> <li>▪ ASTR170** or</li> <li>▪ ASTR178**</li> <li>▪ BIOL108** or</li> <li>▪ CBMS107 or</li> <li>▪ CBMS235 or</li> <li>▪ GEOS112** or</li> <li>▪ GEOS125</li> </ul>	EDUC109**	EDUC219 Three online ORS modules <ul style="list-style-type: none"> <li>▪ Discovering Real Science</li> <li>▪ Frontiers of Real Science</li> <li>▪ Clocks in Rocks</li> </ul>	EDTE252 and EDTE455 Fifty percent of each unit is focused on Primary science curriculum studies	EDUC359 Frontiers in STEM Education

\*To meet university requirements, at least one of these science content KLA units must be a Planet unit.

\*\*Planet units (accurate at the time of publication. Check the *University Handbook* prior to enrolling.)

## Requirements and Suggested Pattern of Study – STEM Specialisation in Mathematics BABEd(Primary)

Year 1 Session 1		Year 1 Session 2	
EDUC105 - <i>Education: The Psychological Context</i>	3 cp	EDUC106 - <i>Education: The Social and Historical Context</i>	3 cp
Elective [People ] (KLA)	3 cp	<b>Elective STAT170 OR STAT175 [Planet] (KLA)</b>	<b>3 cp</b>
Elective (choice or KLA PDHPE)	3 cp	<b>Elective MATH111 OR MATH106</b> or Elective (choice or KLA PDHPE)	<b>3 cp</b>
<b>Elective MATH130 OR MATH135 OR MATH111 (KLA)</b>	3 cp	Elective (KLA Creative Arts)	3 cp
Year 2 Session 1		Year 2 Session 2	
EDUC264 - <i>Education: The Policy Context</i> or EDUC2XX	3 cp	EDUC262 - <i>Education: The Learner</i> or EDUC2XX	3 cp
EDUC260 - <i>Language, Literacy and Learning</i> (KLA)	3 cp	EDUC267 - <i>Classroom Management and Assessment</i>	3 cp
<b>EDUC258 <i>Mathematics in Schools</i></b>	3 cp	Elective (KLA)	3 cp
Elective (KLA)	3 cp	<b>EDUC219- <i>Opening real science: specialisation in primary science and mathematics</i></b>	3 cp
Year 3 Session 1		Year 3 Session 2	
<b>EDTE251 - <i>Curriculum and Teaching in Primary School 1</i></b>	3 cp	EDTE252 - <i>Curriculum and Teaching in Primary School 2</i>	3 cp
EDTE353 - <i>Curriculum and Teaching in Primary School 3</i>	3 cp	<b>EDTE354 - <i>Curriculum and Teaching in the Primary School 4</i></b>	3 cp
EDUC371 - <i>Reading Acquisition in the Primary Classroom</i>	3 cp	EDTE301 - <i>Professional Experience in the Primary School 1</i> or EDUC3XX	3 cp
EDTE301 - <i>Professional Experience in the Primary School 1</i> or EDUC3XX	3 cp	TEP248 - <i>Key Competencies in Inclusive Education</i>	3 cp
Year 4 Session 1		Year 4 Session 2	
EDTE455 - <i>Curriculum and Teaching in the Primary School 5</i>	3 cp	EDTE456 - <i>Curriculum and Teaching in Primary School 6</i> (Capstone)	3 cp
EDTE403 - <i>Professional Experience in the Primary School 2</i> (PACE)	3 cp	EDTE404 - <i>Professional Experience in the Primary School 3</i> (PACE)	3 cp
EDUC3XX	3 cp	EDUC399- <i>Professional Capability: Policy, Theory, Pedagogy</i> (Capstone)	3 cp
EDUC Any level	3 cp	<b>EDUC359- <i>Frontiers in Science Technology Engineering and Mathematics (STEM) Education</i></b>	3 cp

**NOTE: Students in the Mathematics Specialisation will be offered the opportunity to audit (i.e., attend class without enrolling in the unit) TEP429 – *Mathematics in the Secondary School 1* in Year 4 Session 1.**

\* EDUC258 must be completed by intending Mathematics teachers as it is a prerequisite to the required unit TEP429. Note that intending secondary teachers must enrol in the S1 Day offering. S3 external is available only to intending Primary teachers. It

## Requirements and Suggested Pattern of Study – STEM Specialisation in Science BABEd(Primary)

Year 1 Session 1		Year 1 Session 2	
EDUC105 - <i>Education: The Psychological Context</i>	3 cp	EDUC106 - <i>Education: The Social and Historical Context</i>	3 cp
Elective [KLA/People ]	3 cp	<b>EDUC Any level - EDUC109 – Science: Today and Tomorrow (KLA)</b>	<b>3 cp</b>
Elective (choice or KLA PDHPE)	3 cp	Elective (KLA Creative Arts)	<b>3 cp</b>
<b>Elective Science content unit (KLA) or Science content unit [KLA/Planet]*</b>	3 cp	<b>Elective Science content unit (KLA) or Science content unit [KLA/Planet]*</b>	3 cp
Year 2 Session 1		Year 2 Session 2	
EDUC264 - <i>Education: The Policy Context</i> or EDUC2XX	3 cp	EDUC262 - <i>Education: The Learner</i> or EDUC2XX	3 cp
EDUC260 - <i>Language, Literacy and Learning</i> (KLA)	3 cp	EDUC267 - <i>Classroom Management and Assessment</i>	3 cp
<b>EDUC258 Mathematics in Schools</b>	3 cp	Elective (KLA)	3 cp
Elective (KLA)	3 cp	<b>EDUC219- Opening real science: specialisation in primary science and mathematics</b>	3 cp
Year 3 Session 1		Year 3 Session 2	
EDTE251 - <i>Curriculum and Teaching in Primary School 1</i>	3 cp	<b>EDTE252 - Curriculum and Teaching in Primary School 2</b>	3 cp
EDTE353 - <i>Curriculum and Teaching in Primary School 3</i>	3 cp	EDTE354 - <i>Curriculum and Teaching in the Primary School 4</i>	3 cp
EDUC371 - <i>Reading Acquisition in the Primary Classroom</i>	3 cp	EDTE301 - <i>Professional Experience in the Primary School 1</i> or EDUC3XX	3 cp
EDTE301 - <i>Professional Experience in the Primary School 1</i> or EDUC3XX	3 cp	TEP248 - <i>Key Competencies in Inclusive Education</i>	3 cp
Year 4 Session 1		Year 4 Session 2	
<b>EDTE455 - Curriculum and Teaching in the Primary School 5</b>	3 cp	EDTE456 - <i>Curriculum and Teaching in Primary School 6</i> (Capstone)	3 cp
EDTE403 - <i>Professional Experience in the Primary School 2</i> (PACE)	3 cp	EDTE404 - <i>Professional Experience in the Primary School 3</i> (PACE)	3 cp
EDUC3XX	3 cp	EDUC399- <i>Professional Capability: Policy, Theory, Pedagogy</i> (Capstone)	3 cp
Elective (KLA)	3 cp	<b>EDUC359- Frontiers in Science Technology Engineering and Mathematics (STEM) Education</b>	3 cp

\*To meet university requirements, at least one of these science content KLA units must be a Planet unit.

### NOTE:

Students in the Science Specialisation will be offered the opportunity to audit (i.e., attend class without enrolling in the unit) EDTE433 – *Science in the Secondary School 1* in Year 4 Session 1