

PROGRAM PLAN


BACHELOR OF MATHEMATICS

PROGRAM OPTION:
DOUBLE MAJOR PATHWAY

START DATE:
Semester 1, 2016 - Semester 1, 2020

LOCATION:
Callaghan

This Program Plan is an enrolment guide to ensure you are on track to graduate. If at any time you wish to vary from this program plan seek advice from your Academic Program Advisor to ensure you remain on track.

 [PROGRAM HANDBOOK](#)
 [COURSE HANDBOOK](#)

NAME:
STUDENT NO.:

COURSE STATUS KEY

C = Completed
En = Enrolled
NS = Not Started

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|--------|------------|---|------------------------------------|---|--|------------|---|--|--|---|--|----------------|----------------|----------------|
| YEAR 1 | SEMESTER 1 | MATH1110 Mathematics for Engineering, Science and Technology 1 <i>(MATH1210 no longer offered)</i> | PROGRAMMING DIRECTED COURSE | ELECTIVE 1000/2000/3000 Level | ELECTIVE 1000/2000/3000 Level | SEMESTER 2 | MATH1800 Mathematical Modelling | STAT1300 Fundamentals of Statistics <i>(replaces STAT2010 Fundamentals of Statistics)</i> | MATH1120 Mathematics for Engineering, Science and Technology 2 <i>(MATH1220 no longer offered)</i> | ELECTIVE 1000/2000/3000 Level | | | | |
| | | CORE | DIRECTED | ELECTIVE | ELECTIVE | | CORE | CORE | CORE | ELECTIVE | | | | |
| | | YEAR 2 | | SEMESTER 1 | MATH2310 Calculus of Science and Engineering | | MAJOR 1 | ELECTIVE 1000/2000/3000 Level | MATH2340 Linearity and Continuity 1 <i>(if you have completed both MATH1210 and MATH1220 you will complete an elective instead of MATH2340)</i> | SEMESTER 2 | MATH2350 Linearity and Continuity 2 <i>(replaces MATH2320 Linear Algebra)</i> | MAJOR 1 | MAJOR 2 | MAJOR 2 |
| | | CORE | MAJOR | | ELECTIVE | | CORE | CORE | MAJOR | | MAJOR | MAJOR | | |
| YEAR 3 | SEMESTER 1 | MAJOR 1 3000 level | MAJOR 1 3000 level | MAJOR 2 3000 level | MAJOR 2 3000 level | SEMESTER 2 | MAJOR 1 3000 level | MAJOR 1 3000 level | MAJOR 2 3000 level | MAJOR 2 3000 level | | | | |
| | | MAJOR | MAJOR | MAJOR | MAJOR | | MAJOR | MAJOR | MAJOR | MAJOR | | | | |

PROGRAM PLAN

BACHELOR OF MATHEMATICS

To be eligible to graduate make sure you have completed 240 units (10 units = 1 course unless otherwise specified) which meet the following criteria:

- Core courses* – 70 units (20 units of your Core courses are also counted towards your Major).
- Directed - one 10 unit programming directed course.
- Major 1 – 60 units (20 units of Core Courses are also included in the major for a total of 80 units)
- Major 2 - 60 units (20 units of Core Courses are also included in the major for a total of 80 units). **Each major must contain at least 60 units of unique courses.**
- Electives* – 40 units visit the [Course Handbook](#) to see a list of available Electives or choose from the Suggested Electives on the [Program Handbook](#).
- Students must not exceed 100 units at 1000 level.
- Students must take a minimum of 60 units at 3000 level.
- The duration of this program is 3 year full-time (40 units per semester) or part-time equivalent.
- The maximum time to complete this program is 8 years.

** The Standard and Alternate Pathways have now been removed from the program. If you have completed both MATH1210 and MATH1220 you will complete an elective instead of MATH2340, you will complete a total of 60 units of core courses and 50 units of electives. Please refer to the transition documents for further information.*



Some courses have assumed knowledge and/or requisites, please refer to the individual [Course Handbook](#). Please refer to the [Program Handbook](#) for specific information on program structure. If you are intending varying from this program plan please seek advice from your [Academic Program Advisor](#).

PROGRAM PLAN

BACHELOR OF MATHEMATICS

DIRECTED PROGRAMMING COURSE

DIRECTED COURSES

Complete 10 units from:

ENGG1003: Introduction to Procedural Programming
INFT1004: Introduction to Programming
SENG1110: Object Oriented Programming

APPLIED MATHEMATICS MAJOR

DIRECTED COURSES – 2000 LEVEL

Complete 20 units from:

MATH2242: Complex Analysis (*replaces MATH3242, you cannot enrol if you have completed MATH3242*)
MATH2330: Analysis (*no longer offered*)
MATH2350: Linearity and continuity 2 (*if you have completed both MATH2320 and MATH2330 you cannot enrol in MATH2350*)
MATH2800: Ordinary Differential Equations

DIRECTED COURSES – 3000 LEVEL

Complete 40 units from:

MATH3120: Algebra
MATH3170: Number Theory
MATH3205: Fourier Analysis
MATH3210: Directed Studies in Mathematics (*no longer offered*)
MATH3242: Complex Analysis (*replaced by MATH2242, cannot enrol in both*)
MATH3700: Partial Differential Equations
MATH3800: Optimisation (*no longer offered*)
MATH3820: Numerical Methods
MATH3840: Optimisation in Business and Industry (*no longer offered*)
MATH3850: Industrial Project (*no longer offered*)
STAT3030: Generalised Linear Models
STAT3040: Time Series Analysis
STAT3100: Systems Thinking for an Integrated Workforce
STAT3120: Applied Bayesian Methods (*no longer offered*)
STAT3170: Surveys and Experiments (*no longer offered*)
STAT3800: Deterministic and Stochastic Optimisation

PURE MATHEMATICS MAJOR

DIRECTED COURSES – 2000 LEVEL

Complete 20 units from:

MATH2242: Complex Analysis (*replaces MATH3242, you cannot enrol if you have completed MATH3242*)
MATH2330: Analysis (*no longer offered*)
MATH2350: Linearity and continuity 2 (*if you have completed both MATH2320 and MATH2330 you cannot enrol in MATH2350*)
MATH2600: Introduction to Modern Mathematical Computation (*course no longer offered*)
MATH2800: Ordinary Differential Equations

DIRECTED COURSES – 3000 LEVEL

Complete 40 units from:

MATH3010: Logic and Set Theory (*no longer offered*)
MATH3120: Algebra
MATH3170: Number Theory
MATH3180: Topology (*no longer offered*)
MATH3205: Fourier Analysis
MATH3210: Directed Studies in Mathematics (*no longer offered*)
MATH3242: Complex Analysis (*replaced by MATH2242, cannot enrol in both*)
MATH3510: Combinatorics and Graph Theory (*no longer offered*)
MATH3700: Partial Differential Equations
MATH3820: Numerical Methods
STAT3030: Generalised Linear Models
STAT3040: Time Series Analysis
STAT3100: Systems Thinking for an Integrated Workforce
STAT3120: Applied Bayesian Methods (*no longer offered*)
STAT3170: Surveys and Experiments (*no longer offered*)
STAT3800: Deterministic and Stochastic Optimisation

PROGRAM PLAN

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STUDIES IN MATHEMATICS AND STATISTICS MAJOR

DIRECTED COURSES

Complete 20 units, including at least one of MATH2330 or MATH2350 or STAT2000 from:

MATH2330: Analysis (*no longer offered*)

MATH2350: Linearity and continuity 2 (*if you have completed both MATH2320 and MATH2330 you cannot enrol in MATH2350*)

MATH2600: Introduction to Modern Mathematical Computation (*no longer offered*)

MATH2800: Ordinary Differential Equations

STAT2000: Applied Statistics and Research Methods

STAT2020: Predictive Analytics

DIRECTED COURSES

Complete 40 units from:

MATH3120: Algebra

MATH3170: Number Theory

MATH3180: Topology (*no longer offered*)

MATH3205: Fourier Analysis

MATH3210: Directed Studies in Mathematics (*no longer offered*)

MATH3242: Complex Analysis (*no longer offered*)

MATH3400: Research Topics in Mathematics (*no longer offered*)

MATH3510: Combinatorics and Graph Theory (*no longer offered*)

MATH3700: Partial Differential Equations

MATH3800: Optimisation (*no longer offered*)

MATH3820: Numerical Methods

MATH3840: Optimisation in Business and Industry (*no longer offered*)

MATH3850: Industrial Project (*no longer offered*)

STAT3010: Statistical Inference (*no longer offered*)

STAT3030: Generalised Linear Models

STAT3040: Time Series Analysis

STAT3100: Systems Thinking for an Integrated Workforce

STAT3120: Applied Bayesian Methods (*no longer offered*)

STAT3170: Surveys and Experiments (*no longer offered*)

STAT3800: Deterministic and Stochastic Optimisation

STAT3990: Topics in Statistics (*no longer offered*)

STATISTICS MAJOR

COMPULSORY COURSES

Complete the following compulsory courses:

STAT2000: Applied Statistics and Research Methods

STAT2020: Predictive Analytics

STAT3010: Statistical Inference (*no longer offered – if you have not completed STAT3010, you need to complete STAT2300*)

DIRECTED COURSES

Complete 30 units from:

STAT3030: Generalised Linear Models

STAT3040: Time Series Analysis

STAT3100: Systems Thinking for an Integrated Workforce

STAT3120: Applied Bayesian Methods (*no longer offered*)

STAT3170: Surveys and Experiments (*no longer offered*)

STAT3800: Deterministic and Stochastic Optimisation