

The Degree of Master of Mathematical Sciences (MMathSci - 180 points)

These regulations must be read in conjunction with the General Regulations for the University.

1. Version

- (a) These Regulations came into force on 1 January 2024.
- (b) This degree was first offered in 2022.

2. Variations

In exceptional circumstances the Amo Matua, Pūhanga | Executive Dean of Engineering or delegate may approve a personal programme of study which does not conform to these Regulations.

3. The structure of the qualification

To qualify for the Degree of Master of Mathematical Sciences (MMathSci) a student must complete a total of 180 points including:

- (a) either completed with an endorsement in a single subject with:
 - i. 90 points of courses listed in Schedule S: Group 1 to these Regulations,
 - ii. 90 points of course listed under the endorsement in Schedule E: Group 1 to these Regulations.
- (b) Completed unendorsed with:
 - i. 60 points of courses listed in Schedule S: Group 2 to these Regulations,
 - ii. At least 75 points of courses listed in Schedule E: Group 1 to these Regulations,
 - iii. 45 points of courses listed in Schedule E: Group 2 to these Regulations.
- (c) Completed unendorsed with:
 - i. 45 points of courses listed in Schedule S: Group 3 to these Regulations,
 - ii. At least 75 points of courses listed in Schedule E: Group 1 to these Regulations,
 - iii. 60 points of courses listed in Schedule E: Group 2 to these Regulations.

4. Admission to the qualification

A student for the Degree of Master of Mathematical Sciences (MMathSci), before applying to enrol in the degree, must have:

- (a) qualified for a bachelor's degree in Aotearoa New Zealand, in an area which is relevant to Mathematics, Statistics, Data Science, Financial Engineering and (for the Endorsement in Data Science) Computer Science, or other relevant degree subject to approval of the Amo Matua, Pūhanga | Executive Dean of Engineering or delegate; or been admitted with Academic Equivalent Standing; and
- (b) passed 60 points in relevant 300-level courses with at least a B grade average; and
- (c) met the prerequisites as specified in the BSc (Hons) or BA(Hons) Regulations in at least one relevant subject to allow enrolment in 400-level courses, or higher, to fulfil the Group E requirements; and
- (d) been approved as a student for the degree by the Amo Matua, Pūhanga | Executive Dean of Engineering or delegate.

5. Subjects

The qualification may be awarded with an endorsement of the following subjects:

- (a) Mathematics
- (b) Statistics
- (c) Computational and Applied Mathematics
- (d) Data Science
- (e) Financial Engineering.

6. Time limits

This qualification adheres to the General Regulations for the University, unless an exemption is granted by the Amo Matua, Pūhanga | Executive Dean of Engineering or delegate, with a time limit of 36 months.

7. Transfers of credit, substitutions and cross-credits

This qualification adheres to the Credit Recognition and Transfer Regulations with no additional stipulations.

8. Progression

This qualification adheres to the General Regulations for the University with the following stipulation:

- (a) A student who fails up to 30 points for the qualification may, with the permission of the Amo Matua, Pūhanga | Executive Dean of Engineering or delegate, repeat that course or courses, or substitute another course or courses of equal weight.
 - i. A student who fails more than 30 points will be withdrawn from the qualification.
- (b) Before seeking progression to an endorsement in the qualification a student must either:
 - i. have completed 60 points of the qualification, including a minimum of 30 points of courses in the subject specified in Schedule E to these Regulations, with a GPA of 5.0 or more; or
 - ii. have completed the Postgraduate Diploma in Science, including courses in the subject specified in Schedule E to these Regulations, with a GPA of 5.0 or more; or
 - iii. been otherwise approved by the Amo Matua, Pūhanga | Executive Dean of Engineering or delegate.

9. Honours, Distinction and Merit

This qualification adheres to the General Regulations for the University and may be awarded with Distinction and Merit.

10. Exit and Upgrade Pathways to other Qualifications

- (a) There are no advancing qualifications for this degree.
- (b) A student who has not met the requirements for the MMathSci or who wishes to transfer to the Postgraduate Certificate in Science or to the Postgraduate Diploma in Science may apply to the Amo Matua, Pūtaiao | Executive Dean of Science or delegate for admission. Admission will be based on having met the requirements for entry.

Schedule S: Subject Courses for the Master of Mathematical Sciences

For full course information, go to www.canterbury.ac.nz/courses

Group 1

Pāngarau | Mathematics

Course Code	Course Title	Pts	2024	Location	P/C/R/RP/EQ
MATH697	MMathSci Thesis (Mathematics)	90	A	Campus	P: Subject to approval of the Head of Department

Tatauranga | Statistics

Course Code	Course Title	Pts	2024	Location	P/C/R/RP/EQ
STAT689	MMathSci Thesis (Statistics)	90	A	Campus	P: Subject to approval of the Head of Department

Computational and Applied Mathematics

Course Code	Course Title	Pts	2024	Location	P/C/R/RP/EQ
CAMS689	MMathSci Thesis (CAMS)	90	A	Campus	P: Subject to approval of the Head of Department

Data Science

Course Code	Course Title	Pts	2024	Location	P/C/R/RP/EQ
DATA689	MMathSci Thesis (Data Science)	90	A	Campus	P: Approval by the Head of School

Financial Engineering

Course Code	Course Title	Pts	2024	Location	P/C/R/RP/EQ
FENG689	MMathSci Thesis (Financial Engineering)	90	A	Campus	P: Approval by the Head of School.

Group 2

Course Code	Course Title	Pts	2024	Location	P/C/R/RP/EQ
MASC686	MMathSci Project	60	A	Campus	P: Subject to approval of the Head of Department.

Group 3

Course Code	Course Title	Pts	2024	Location	P/C/R/RP/EQ
MASC684	MMathSci Project (45 points)	45	A	Campus	P: Subject to approval of the Head of Department.

Schedule E: Elective Courses for the Degree of Master of Mathematical Sciences

Group 1

Pāngarau | Mathematics

60 points in MATH400–490, and 30 points in 400-level MATH/STAT/DATA410–490 or appropriate courses subject to approval of the Head of School of Mathematics and Statistics.

Tatauranga | Statistics

60 points in STAT400–490 or DATA410–490, and 30 points in 400 level MATH/STAT/DATA410–490 or appropriate courses subject to approval of the Head of School of Mathematics and Statistics.

Computational and Applied Mathematics

60 points of 400-level MATH, STAT, DATA410–490 courses or appropriate courses subject to approval of the Head of School of Mathematics and Statistics.

Data Science

15 points of 400-level MATH, STAT courses (excluding STAT562 and STAT448); 15 points of 400-level COSC courses (excluding COSC480); 15 points in the DATA425-480 courses or appropriate courses subject to approval of the Head of School of Mathematics and Statistics. And 45 points of 400-level courses in any other relevant degree subject.

Financial Engineering

At least 45 points of 400-level MATH, STAT, DATA or FENG courses; at least 30 points of 600-level FINC courses; COSC480 if the student has not previously completed a programming course otherwise 15 points in another appropriate course.

Note: Under exceptional circumstances and with agreement of the project supervisor and the Tumuaki Kura | Head of School, a student may substitute 15 points of these 400-level courses with another appropriate 400-level course.

Group 2

400-level courses in any other relevant degree subject as approved by the Tumuaki Kura | Head of School and the HOD of the relevant department.