

Graduate Diploma of Science (GDSI) - GradDipSci

CRICOS code (International applicants): 031448M

	On-campus * + ^ # @	External * @
Start:	Semester 1 (February) Semester 2 (July)	Semester 1 (February) Semester 2 (July)
Campus:	Ipswich, Toowoomba	-
Fees:	Commonwealth supported place Domestic full fee paying place International full fee paying place	Commonwealth supported place Domestic full fee paying place International full fee paying place
Residential school:		Ipswich (Mandatory)
Standard duration:	1 year full-time, 2 years part-time	
Program articulation:	To: ; Master of Science ; Master of Science (Research)	

Footnotes

- * Please refer to the Program Structure for further information on mode of offer for each specialisation.
The Applied Data Science specialisation is available to international on-campus students at USQ Toowoomba (only if students have completed [\(STA8170 Statistics for Quantitative Researchers or STA2300\)](#) and [CSC1401 Foundation Programming](#) or equi

Applied Data Science specialisation

This specialisation is designed to provide an opportunity for graduates from all disciplines to gain skills and knowledge in handling data which are commonly known as Big Data, as well as producing and interpreting data analytics. The aim of this program is to provide students with a career path in the Data Science area or an opportunity for advancement in their career.

Environment and Sustainability specialisation

This specialisation provides graduates with knowledge of selected basic concepts and skills associated with environmental and climate science and the broad area of sustainability. The program aims to produce graduates with knowledge and skills for the integration of social, environmental and economic research within an interdisciplinary planning and policy framework and to provide capacity for the sustainable management of natural resources, businesses and communities.

Mathematics and Statistics specialisation

This specialisation aims to provide graduates with skills in key areas of mathematics or statistics that relate to the needs of their profession or industry, including teaching.

Physics and Astronomy specialisation

This specialisation is designed to provide an opportunity to gain knowledge and skills in physics and astronomy and develop scientific research skills. The program provides professional development in science for those in educational or science communication careers.

Sport and Exercise specialisation

This specialisation aims to provide graduates with the opportunity to develop and extend their knowledge and skills relevant to health, fitness and sports performance across the lifespan to an advanced level. The specialisation is designed to meet personal achievement goals or provide for career opportunities within the health, sports and fitness industry such as sports coaches, personal trainers, sports development officers or a range of other roles.

General specialisation

This specialisation enables students who have completed at least 8 courses with at least 4 courses at level 8 from courses within other Graduate Diploma of Science specialisations to exit from the [MSCN Master of Science](#).

Program objectives

On completion of the program graduates should be able to:

- Synthesise an understanding of a complex body of advanced knowledge in a discipline of science.
- Apply established theories to a body of advanced knowledge or practice in a relevant science discipline.
- Critically analyse, evaluate and consolidate on complex advanced information, problems, concepts and theories applicable to a relevant science discipline.
- Interpret and transmit advanced knowledge, skills and ideas, both individually and collaboratively, to a range of audiences.
- Display autonomy, responsibility, adaptability and ethical practise in decision-making and engage in lifelong learning through critical reflection in a range of professional and cultural contexts.

Australian Qualifications Framework

The Australian Qualifications Framework (AQF) is a single national, comprehensive system of qualifications offered by higher education institutions (including universities), vocational education and training institutions and secondary schools. Each AQF qualification has a set of descriptors which define the type and complexity of knowledge, skills and application of knowledge and skills that a graduate who has been awarded that qualification has attained, and the typical volume of learning associated with that qualification type.

This program is at AQF Qualification Level 08. Graduates at this level will have advanced knowledge and skills for professional or highly skilled work and/or further learning.

The full set of levels criteria and qualification type descriptors can be found by visiting www.aqf.edu.au.

Admission requirements

To be eligible for admission, applicants must satisfy the following requirements:

- Completion of an Australian university three year Bachelor degree in any area, or equivalent.
Or
equivalent professional work experience, as determined through the [Credit and Exemption Procedure](#).
- English Language Proficiency requirements for Category 3.

All students are required to satisfy the applicable [English language requirements](#).

If students do not meet the English language requirements they may apply to study a University-approved [English language program](#). On successful completion of the English language program, students may be admitted to an award program.

Program fees

Commonwealth supported place

A Commonwealth supported place is where the Australian Government makes a contribution towards the cost of a students' higher education and students pay a [student contribution amount](#), which varies depending on the courses undertaken. Students are able to calculate the fees for a particular course via the [Course Fee Finder](#).

Commonwealth Supported students may be eligible to defer their fees through a Government loan called [HECS-HELP](#).

Domestic full fee paying place

Domestic full fee paying places are funded entirely through the full fees paid by the student. Full fees vary depending on the courses that are taken. Students are able to calculate the fees for a particular course via the [Course Fee Finder](#).

Domestic full fee paying students may be eligible to defer their fees through a Government loan called [FEE-HELP](#) provided they meet the residency and citizenship requirements.

Australian citizens, Permanent Humanitarian Visa holders, Permanent Resident visa holders and New Zealand citizens who will be resident outside Australia for the duration of their program pay full tuition fees and are not eligible for [FEE-Help](#).

International full fee paying place

International students pay full fees. Full fees vary depending on the courses that are taken and whether they are studied on-campus, via distance education/online. Students are able to calculate the fees for a particular course via the [Course Fee Finder](#).

Program structure

All specialisations within the program consist of eight units of study taken from the specialisation tables. At least four units must be at Level 8.[IS8rm18.229 1297ao8 1297.538er297ao8 4f2p 1817\(1S8rm18.229 1297ao8 1297.538er21](#)

Environment and Sustainability		Online only	
Mathematics and Statistics (Semester 1 full-time or part-time; Semester 2 part-time only) @	Toowoomba	Online	depending on chosen approved courses
Physics and Astronomy		Online only	
Sport and Exercise	Toowoomba or Ipswich		some courses have mandatory residential schools which will be held at the Ipswich campus.
General	Toowoomba	Online	depending on chosen approved courses

Footnotes

Some approved courses for selection have mandatory or highly recommended residential schools and students enrolled externally must be able

Program Coordinator via usq.support@usq.edu.au. This specialisation is not suitable for international on-campus students.

Semester 1	Semester 2
CLI8001 Climate Risk	CLI3302 Adaptation to Climate Change
CLI8204 Global Environmental Systems	CLI8205 Climate and Sustainability
CLI8002 Climate, Human and Environmental Health and Disaster Management *	CLI8003 Climate, Food, Water and Energy Security *

Footnotes

* Two unit course

Applied Data Science specialisation

This specialisation consists of eight courses which are all available on-campus and online.

Semester 1	Semester 2	Either Semester
CSC8500 Advanced Relational Database Design and Technology **	CSC8001 Introduction to Data Science and Visualisation	CSC1401 Foundation Programming *
STA8005 Multivariate Analysis for High-Dimensional Data	CSC8002 Big Data Management	CIS8008 Business Intelligence
CSC8004 Data Mining		STA8170 Statistics for Quantitative Researchers *

Footnotes

** This course will be replaced by CSC8450 in 2022

* Semester 1 entry is only available if students have completed ([STA8170](#) or [STA2300](#)) and [CSC1401](#) in their previous study.

Environment and Sustainability specialisation

This specialisation consists of the following eight core courses which are all available in online mode. Students may vary their enrolment on the basis of prior studies or professional requirements with the approval of the Program Coordinator via usq.support@usq.edu.au. This specialisation is not suitable for international on-campus students.

Semester 1	Semester 2
REN8101 Environment, Society and Sustainability	REN8202 Conservation for Sustainable Futures
CLI8204 Global Environmental Systems	CLI8205 Climate and Sustainability
CLI3301 Climate and Environment Risk Assessment	REN8203 Sustainability Science
SCI8103 Research Fundamentals and Ethics	And one of: <ul style="list-style-type: none"> • REN3301 Biodiversity and Conservation • REN3302 Sustainable Resource Use

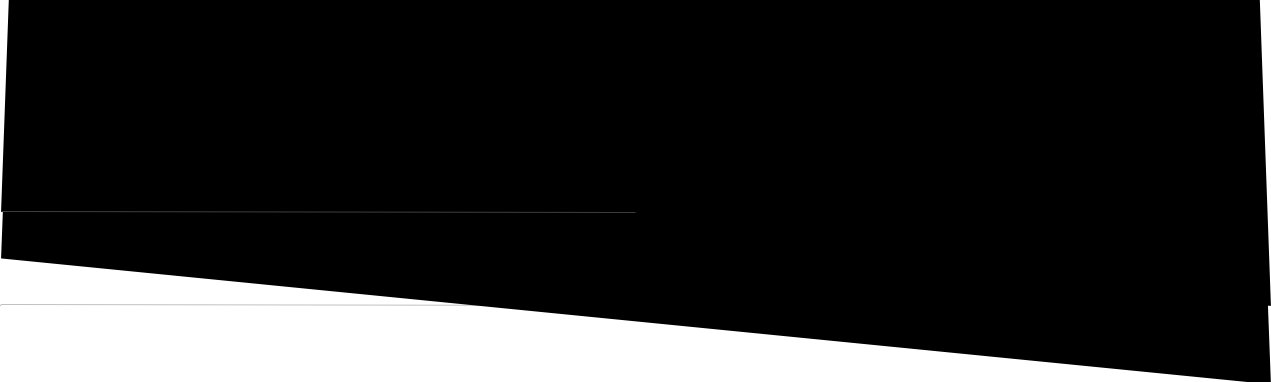
Mathematics and Statistics specialisation

This specialisation consists of eight units of study. The courses studied will depend on the student's background in mathematics.

Students without [MAT1102](#) (S1) and [STA8170](#) (S1, S2) may not be able to complete in one year.

Students must complete eight courses from the following table. At least four courses must be at Level 8. Students may seek approval from the Discipline Coordinator to enrol in courses not listed in this table.

Semester 1 Courses



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[Redacted]	
[Redacted]	

Articulation

Graduate Diploma of Science students may articulate to the [Master of Science](#) coursework program with further completion of eight courses, as required by that program.

A student successfully completing all courses in the Graduate Diploma of Science program will receive full credit towards the [Master of Science](#) in the same specialisation. Students intending to continue with the Master of Science must apply for separate admission and may EITHER graduate with a Graduate Diploma of Science and receive full credit as exemptions into the Master of Science, OR choose not to graduate with the Graduate Diploma, in order to transfer their grades, maintain their GPA and articulate into the Masters of Science and ultimately qualify from this higher award only. Students who wish to transfer their grades and maintain their GPA into the Master of Science, must advise the Faculty in writing (usq.support@usq.edu.au) of their intention to articulate and this must occur prior to completion of the Graduate Diploma of Science.

Graduate Diploma of Science students may articulate to the [Master of Science \(Research\)](#) program if they meet other requirements for entry into that program. Students must advise the Faculty in writing (usq.support@usq.edu.au) of their intention to articulate to the [Master of Science \(Research\)](#) and should seek the advice of the Program Coordinator with respect to transfer or application for course exemptions prior to graduation from the Graduate Diploma of Science.

Exit points

Students may exit with the [Graduate Certificate of Science](#) if the courses completed satisfy the requirements of a Graduate Certificate of Science specialisation.

Sport and Exercise specialisation - students may exit with the [Graduate Certificate of Sport and Exercise](#) if the courses completed satisfy the requirements of the Graduate Certificate of Sport and Exercise.

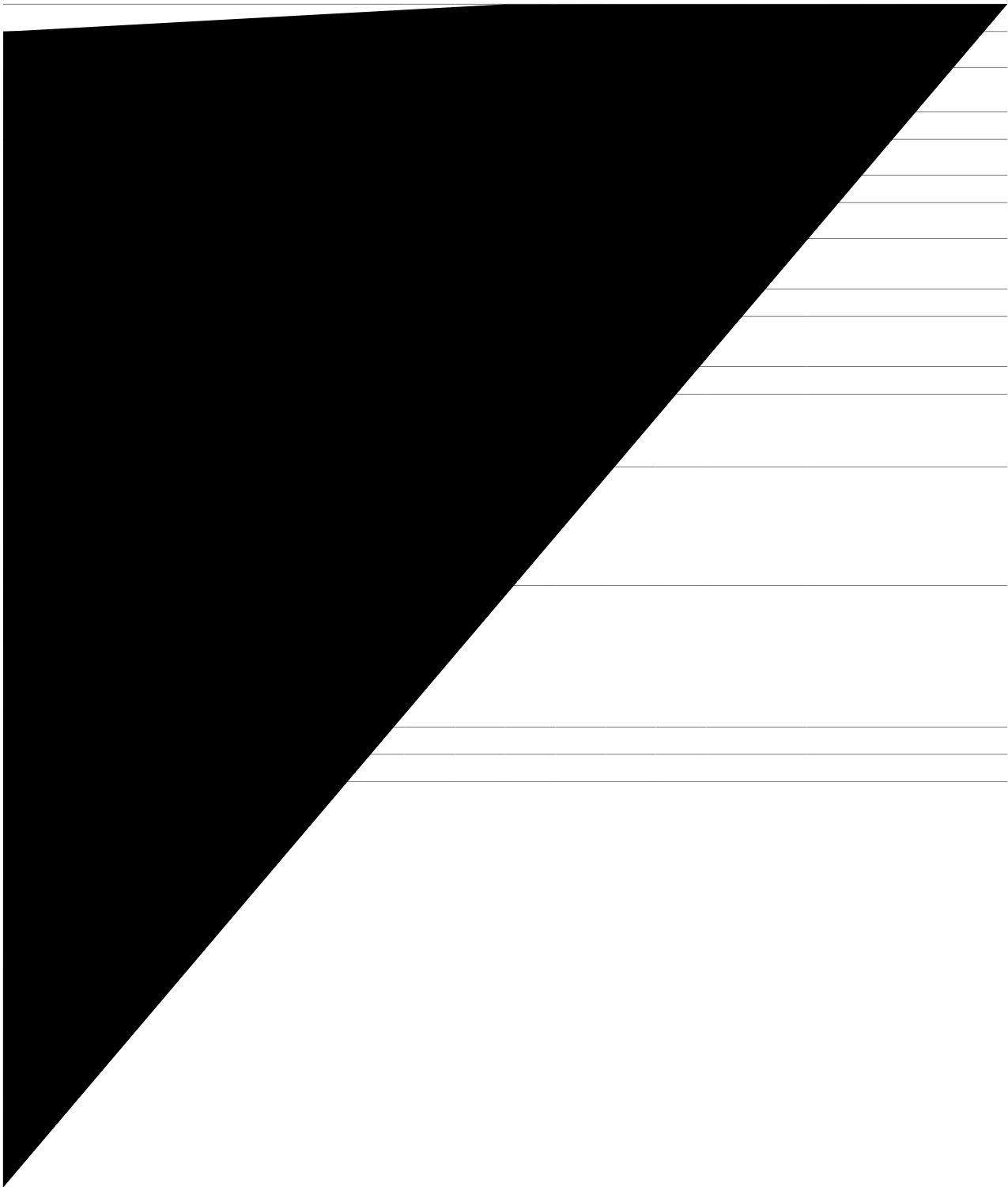
Students should consult the Program Coordinator via usq.support@usq.edu.au should they wish to exit to ensure they satisfy requirements for the Graduate Certificate.

Credit

Exemptions/credit will be assessed based on the [USQ Credit and Exemption Procedure](#).

Sport and Exercise specialisation:

to graduate outlined above in the Program Structure. If unsure about a suitable enrolment pattern, students should contact the Program Coordinator via usq.support@usq.edu.au



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	Vb^o	Pb j	Vb^o	Pb j	Vb^o	Pb j	
CLI8204 Global Environmental Systems					1	1	
CLI8002 Climate, Human and Environmental Health and Disaster Management *					1	1	
CLI3302 Adaptation to Climate Change					1	2	
CLI8205 Climate and Sustainability					1	2	
CLI8003 Climate, Food, Water and Energy Security *					1	2	

Footnotes

* Two unit course.

Applied Climate Science specialisation recommended enrolment pattern - part-time S1 or S2 entry

Students are able to enrol in any offered mode of a course (on-campus, external or online), regardless of the program mode of study they enrolled in.

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	Vb^o	Pb j	Vb^o	Pb j	Vb^o	Pb j	
CLI8001 Climate Risk					1	1	
CLI8204 Global Environmental Systems					1	1	
CLI8003 Climate, Food, Water and Energy Security *					1	2	
CLI8002 Climate, Human and Environmental Health and Disaster Management *					2	1	
CLI8205 Climate and Sustainability					2	2	
CLI3302 Adaptation to Climate Change					2	2	

Footnotes

* Two unit course

Applied Data Science specialisation recommended enrolment pattern - fullied Data S.116 445.

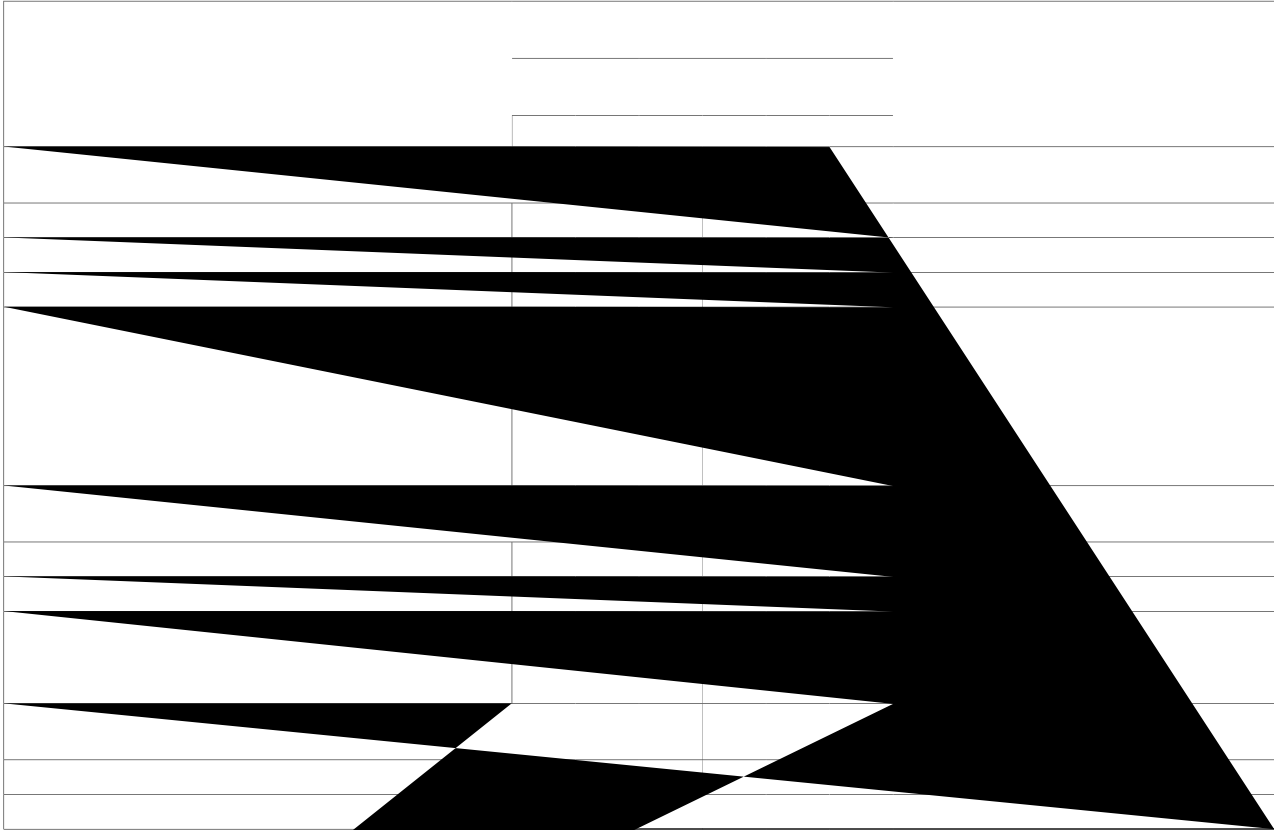
Applied Data Science specialisation recommended enrolment pattern - part-time S1 entry (without CSC1401 and STA8170 (or STA2300) in previous study)

Students are able to enrol in any offered mode of a course (on-campus, external or online), regardless of the program mode of study they enrolled in.

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Environment and Sustainability specialisation recommended enrolment pattern - full-time S1 or S2 entry

Students are able to enrol in any offered mode of a course (on-campus, external or online), regardless of the program mode of study they enrolled in.



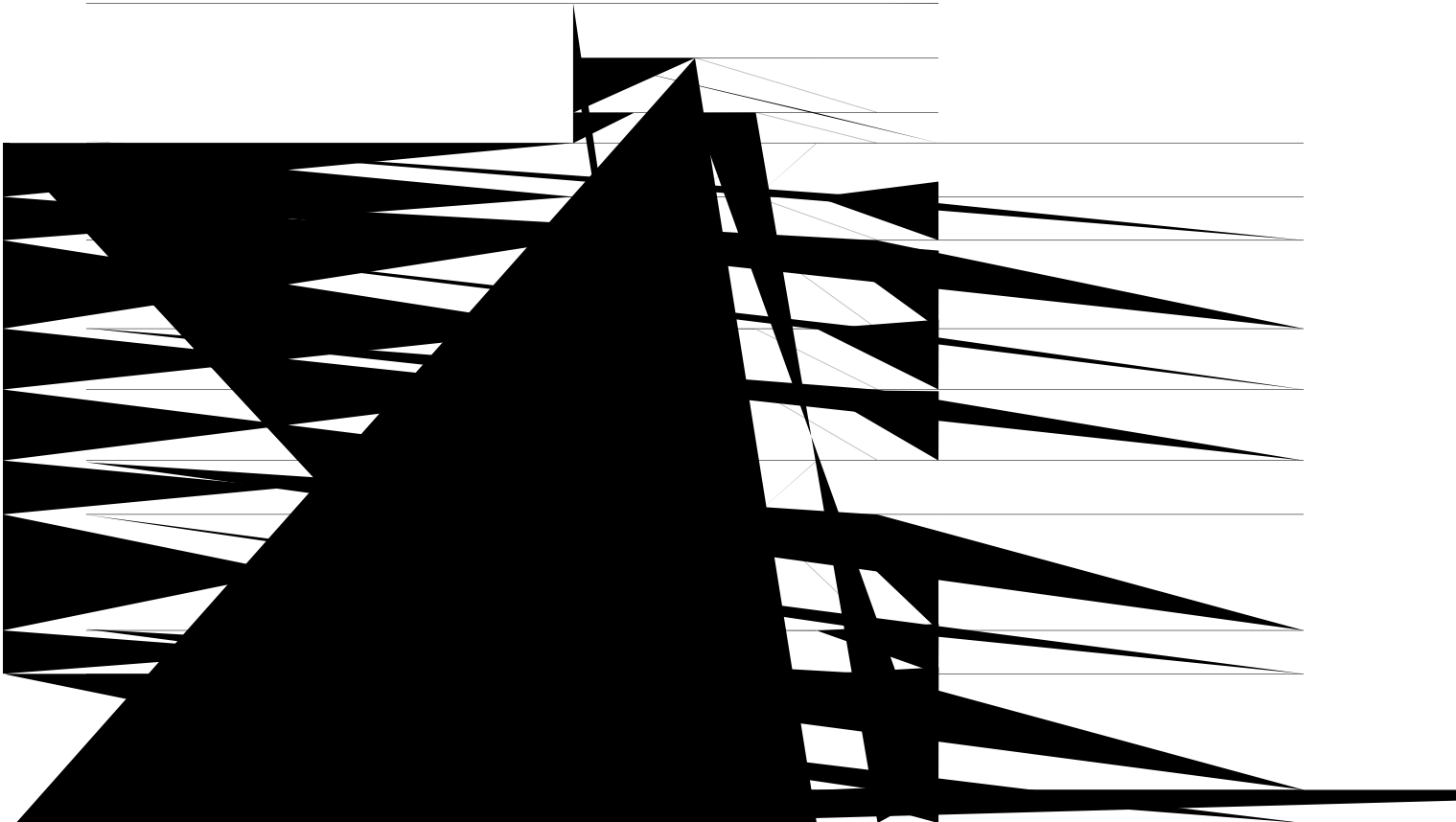
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CLI8204 Global Environmental Systems					2	1	
CLI8205 Climate and Sustainability					2	2	
REN8203 Sustainability Science					2	2	Pre-requisite: REN8101 or REN8202 or REN3302 or REN3301 or CLI8204 or CLI8205 or ECO8011

Mathematics and Statistics specialisation recommended enrolment pattern - full-time S1 entry (with QSSSS Maths B)

Students are able to enrol in any offered mode of a course (on-campus, external or online), regardless of the program mode of study they enrolled in.

The recommended enrolment pattern for this specialisation is an example only for S1 enrolment. Students may vary or select their own pattern, keeping in mind any course pre-requisites, timetable constraints and the requirements to graduate outlined above in the Program Structure. If unsure about a suitable enrolment pattern, students should contact the Program Coordinator.

This pattern assumes students have current skills at the level of Queensland Senior Secondary School Studies Maths B or equivalent. Students without this knowledge should contact the Program Coordinator for advice and may have to study part-time.



requirements to graduate outlined above in the Program Structure. If unsure about a suitable enrolment pattern, students should contact the Program Coordinator via

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MAT8180 Mathematics/Statistics Complementary Studies A # \$ *	2	1			1	1	
MAT8190 Mathematics/Statistics Complementary Studies B # \$ *	2	2			1	2	

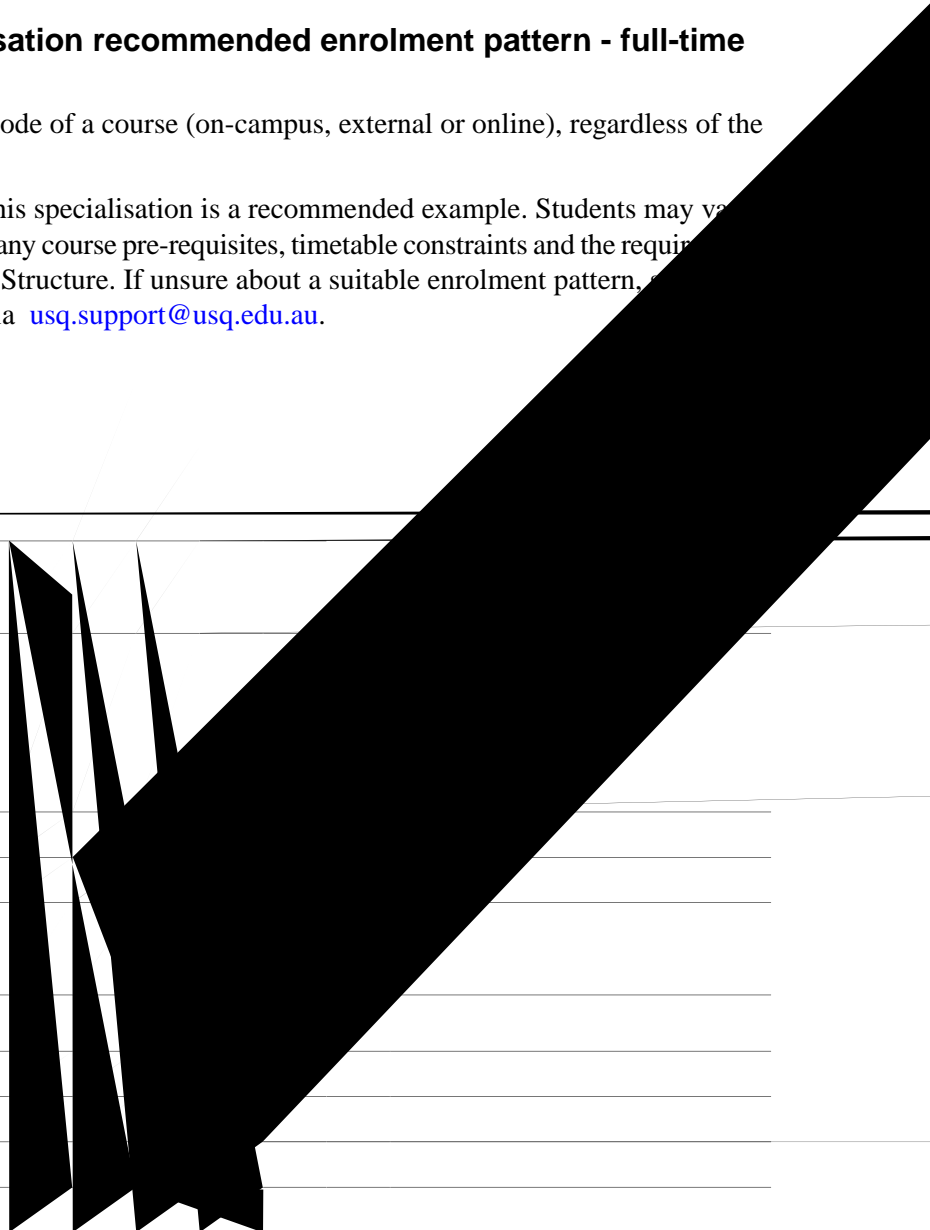
Footnotes

- ** If STA2300 has been completed previously, contact the Program Coordinator to choose an alternative course to STA8170.
- # Recommended for students wanting to teach mathematics.
- \$ Recommended for students wanting to specialise in statistics.
- ## The on-campus offering of this course will not be available in 2021
- ^ recommended for teachers wanting to improve their content knowledge in statistics.
- * This course is topic based. Students should select their topic from the course specification and email the examiner for approval prior to enrolment.
- < The on-campus offering of this course is offered in even years only.
- > The on-campus offering of this course is offered in odd—numbered years only.
- % Recommended for teachers only. Teachers wishing to improve their content knowledge in statistics should also complete [STA8005](#).
- @ This course is available subject to approval of the Program Coordinator via usq.support@usq.edu.au; and availability of a relevant placement.

Physics and Astronomy specialisation recommended enrolment pattern - full-time S1 or S2 entry

Students are able to enrol in any offered mode of a course (on-campus, external or online), regardless of the program mode of study they enrolled in.

The recommended enrolment pattern for this specialisation is a recommended example. Students may vary or select their own pattern, keeping in mind any course pre-requisites, timetable constraints and the requirements to graduate outlined above in the Program Structure. If unsure about a suitable enrolment pattern, students should contact the Program Coordinator via usq.support@usq.edu.au.



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