

Guide to choosing the appropriate level one mathematics and statistics unit for your course

Clayton

You must complete at least one of the following level 1 mathematics or statistics units (if not already taken as part of a level 1 approved sequence) – SCI1022, SCI1020, STA1010, MTH1020 and MTH1030/MTH1035. The unit you choose will depend on your mathematics background and interests. You must complete this requirement within the first 48 credit points of your science course, or within the first 72 credit points of your science double degree course.

Information on double degrees:

If you are in the following double degree courses: [B2023](#) Bachelor of Commerce and Bachelor of Science or [E3007](#) Bachelor of Engineering (Honours) and Bachelor of Science you are exempt from completing the mathematics and statistics unit because those courses include a corresponding mathematics requirement, that is: ETC1000 (Business and economic statistics) and ENG1005 (Engineering mathematics). Please check you meet the pre-requisites for the level one mathematics and statistics units as follows:

Unit code	Unit title	Pre-requisites
SCI1022	Introduction to scientific coding	No Year 12 prerequisite
SCI1020	Introduction to statistical reasoning	No Year 12 prerequisite
STA1010	Statistical methods for science	VCE Mathematical methods 3 and 4 (or equivalent) or SCI1020
MTH1020	Analysis of change	VCE Mathematical Methods units 3 and 4 with a raw study score of at least 25 (or equivalent) or MTH1010
MTH1030	Techniques for modelling	Specialist Mathematics units 3 and 4 with a raw study score of at least 30 (or equivalent) or MTH1020
MTH1035	Techniques for modelling (advanced)	VCE Specialist Mathematics with an ATAR score of 95 or above; a VCE raw study score of 35 or above in Specialist Mathematics (or equivalent); a HD in MTH1020; or by approval of the Head of School of Mathematics. This unit is an alternative to MTH1030 if you have a strong mathematical foundation. MTH1035 will follow the same curriculum as MTH1030 but will cover additional more advanced material.

Note: SCI1020 is not an option for your level one mathematics and statistics unit if you are enrolled in [S3002](#) Bachelor of Science Advanced - Research (Honours)

The following table assists you with choosing the recommended or required level one mathematics and statistics unit for your science course, depending on which science major/s you are completing.

Areas of study**	Level one mathematics and statistics unit recommended/ required for major
Biological and life sciences	
Ecology and conservation biology	SCI1020 or STA1010 recommended
Genetics and genomics	SCI1020 or STA1010 recommended SCI1022 recommended for students with an interest in bioinformatics and programming
Plant sciences	SCI1020 or STA1010 recommended
Zoology	SCI1020 or STA1010 recommended

Biomedical and behavioural sciences	
Anatomy and developmental biology	SCI1020 or STA1010 recommended
Biochemistry	SCI1020 or STA1010 recommended
Human pathology	SCI1020 or STA1010 recommended
Immunology	SCI1020 or STA1010 recommended
Microbiology	SCI1020 or STA1010 recommended
Molecular biology	SCI1020 or STA1010 recommended
Pharmacology	SCI1020 or STA1010 recommended
Physiology	SCI1020 or STA1010 recommended
Psychology	SCI1020 or STA1010 recommended

Earth and environmental sciences	
Climate and atmospheric science	<p>MTH1030/MTH1035* required for EAE3121 and EAE3152 (core units for weather and climate stream and elective units in general stream)</p> <p>SCI1022, SCI1020, STA1010, MTH1020 or MTH1030/MTH1035 recommended for general stream (if not doing EAE3121 and EAE3152) and climate change science stream</p>
Environmental earth science	SCI1022, SCI1020, STA1010, MTH1020 or MTH1030/MTH1035 recommended
Environmental science	<p>SCI1020, STA1010 or SCI1022 recommended</p> <p>SCI1020 or STA1010 recommended for ecology stream</p>
Geographical science	SCI1022, SCI1020, STA1010, MTH1020 or MTH1030/MTH1035 recommended
Geosciences	SCI1022, SCI1020, STA1010, MTH1020 or MTH1030/MTH1035 recommended

Mathematical and computational sciences	
Applied mathematics	MTH1030/MTH1035* required
Computational science	MTH1030/MTH1035* and MAT1830 required
Financial and insurance mathematics	MTH1030/MTH1035* required
Mathematical statistics	MTH1030/MTH1035* required
Mathematics	MTH1030/MTH1035* required
Pure mathematics	MTH1030/MTH1035* required
Physical and chemical sciences	
Astrophysics	MTH1030/MTH1035* required
Chemistry	SCI1022, SCI1020, STA1010, MTH1020 or MTH1030/MTH1035 recommended
Physics	MTH1030/MTH1035* required

*Depending on your year 12 back ground you may need to do MTH1020 before MTH1030. In some case students may need to do MTH1010, MTH1020 and then MTH1030.

** Availability of majors – please refer to this [table](#) for the availability and location of majors, minors and extended majors per discipline.

Malaysia

Areas of study***	Level one mathematics and statistics unit
All majors at Monash Malaysia <ul style="list-style-type: none">• Applied microbiology• Biotechnology• Genomics and bioinformatics• Medicinal chemistry• Psychology• Tropical environmental biology	SCI1020

*** Availability of majors – please refer to this [table](#) for the availability and location of majors, minors and extended majors per discipline.