Bachelor of Advanced Science

Physics & Mathematics

2027 ENTRY

Useful study planning / enrolment resources

Course and Subject Handbook	Academic Calendars	Class Registration	Enrolment Resources

Attention International Student visa holders: To remain compliant with your enrolments requirements as a Student visa holder you are required to enrol in at least one On-Campus, Multi-Modal or WIL subject offering in each compulsory study period and you cannot enrol in more than one third (33%) of your total course load through online or distance learning. To complete your course within your CoE duration students must maintain sufficient subject enrolment. If you are receiving US Federal Aid, there are further compliance considerations. Please contact financialaid@jcu.edu.au to confirm compliance of your subject selections.

Student Resources: If you require advice about your study plan, choosing electives, or which subjects to enrol in, please contact your major advisor or degree coordinator (CSE Course and Major Advisors). For information on available elective subject options please also refer to the Study Area guide (JCU STUDY AREA GUIDE — College of Science & Engineering).

Intensive on-campus requirements: Subjects labelled with *Intensive on-campus requirements involve mandatory on-campus or fieldwork attendance with extended hours over a dedicated face-to-face period. Please check the face-to-face dates for the subject in the subject handbook and do not enrol in subjects with overlapping face-to-face dates. For more information, see the CSE Student Guide to Succeeding in Trimester 2 Intensives on the CSE Student Resources webpage.

How to read this planner

PREREQ Prerequisite information **ONLINE** Online offering **PLACEMENT** Placement requirement **INTENSIVE** Intensive on-campus requirement

2027

TRIMESTER 1	TRIMESTER 2	TRIMESTER 3
MA1000:03 Mathematical Foundations **PREREQ:** MA1020 or MA0020 or BR0202 or High school subjects: Mathematical Methods or Specialist Mathematics (or equivalent such as Maths B or Maths C)	*CH1020:03 Preparatory Chemistry **OR** Any Level 1, 2, 3 or 5 subject if already satisfied via previous study	MA1003:03 Mathematical Techniques **PREREQ:** MA1000 or MA1011 or MA1009
SC1101:03 Science, Technology and Truth	**Physics Major** PH1005:03 Newtonian Physics **PREREQ:** Maths B or MA1020 or MA0020 or MA1000 or MA1008 OR admission to 116209, 116409 or 116309. Allow concurrent for MA1020, MA1000 and MA1008	SC1109:03 Modelling Natural Systems-Advanced **PREREQ:** MA1000 or MA1009
Mathematics Major Elective from List 1 (Breadth Subjects)		**Physics Major** PH1007:03 Fundamental Physics **PREREQ:** ((Maths B or equivalent or MA1020 or MA0020) and PH1005) or (Physics and Maths C)

*If you have satisfied the Chemistry requirement via previous study, please contact enrolments@jcu.edu.au.

2028

TRIMESTER 1	TRIMESTER 2	TRIMESTER 3
SC2209:03 Quantitative Methods in Science-Advanced **PREREQ:** MA1003 and (SC1109 plus 6 credit points of other Level 1 subjects) or admission in 116409	**Physics Major** PH2019:03 Electromagnetism and Optics **PREREQ:** (EG1012 or PH1005) and MA1003	**Physics Major** PH2002:03 Classical Mechanics **PREREQ:** MA1003 and PH1005 and (PH1006 or PH1007 or (EG1012 and EG1011))
Physics Major PH2048:03 Medical and Radiation Physics **PREREQ:** MA1003 and PH1005 and (PH1007 or (EG1010 and EG1011 and EG1012))	**Mathematics Major** MA2211:03 Discrete Mathematics **PREREQ:** Maths B OR MA1020 OR MA0020	**Mathematics Major** MA2210:03 Linear Algebra **PREREQ:** MA1000
Mathematics Major MA2000:03 Mathematics for Scientists and Engineers **PREREQ:** MA1003		**Mathematics Major** Elective from **List 1 (Breadth Subjects)**

2029

TRIMESTER 1	TRIMESTER 2	TRIMESTER 3
Physics Major PH3021:03 Physics of the Earth, Solar System, and Universe **PREREQ:** PH1005 and (PH1007 or EG1010 and EG1011 and EG1012)	**Physics Major** PH3002:03 Advanced Quantum Physics **PREREQ:** MA2000	SC3003:03 Science Research Internship **PREREQ:** Admission to BAdvSc plus 15 credit points of AQ, BC, BS, BZ, CH, EV, EA, MA, MB, PH or SC Science Level 2 subjects **OR** SC3008:03 Professional Placement **PREREQ:** Students must have successfully completed 12 second year credit points.
Mathematics Major MA3211:03 Mathematical Modelling of Dynamic Systems **PREREQ:** MA2000	**Mathematics Major** MA3212:03 Optimisation and Operations Research **PREREQ:** MA2000	**Physics Major** PH3008:03 Statistical Mechanics and Transport **PREREQ:** MA2000 and PH1005 and (PH1007 or EG1010 and EG1011 and EG1012)
Select 3 credit points of subjects from **List 1 (Advanced Skills Subjects)**		**Mathematics Major** MA3210:03 Probability and Stochastic Processes **PREREQ:** MA2000

Course handbook

Bachelor of Advanced Science	Physics Major Mathematics Major

Course Notes

The Physics Major is only available with a Trimester 1 commencement. Students must select MA2000 as their Advanced Skills subject

Award Title	Bachelor of Advanced Science
Abbreviation	BAdvSc
Credit Points	72
AQF Level	Level 7 – Bachelor Degree
Location	Townsville Bebegu Yumba, Cairns Nguma-bada
Division	Academy
College	College of Science and Engineering
Expected Time to Complete	3 Years
Maximum Time to Complete	9 Years
Maximum Leave of Absence	3 Years
CRICOS Code	092515M