Bachelor of Engineering (Honours)[Embedded]- Bachelor of Science

2027 ENTRY

Electrical and Electronic Engineering & Physics

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
EG1000:03 Engineering 1	MA1003:03 Mathematical Techniques **PREREQ:** MA1000 OR MA1011 OR MA1009	EG1011:03 Statics and Dynamics **PREREQ:** PH1005
EG1002:03 Computing and Sensors	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	EG1010:03 Process Engineering
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)	**Engineering Major** CP1407:03 Introductory Machine Learning and Data Science	EG1012:03 Electric Circuits

*Studying all EG Level 1 subjects in 1st year is recommended as this provides the required knowledge to determine your major pathway (for a total of 9 subjects this year) This choice also allows for a lighter 7-subject load in your final year when completing your thesis.

2028

TRIMESTER 1	TRIMESTER 2	TRIMESTER 3
SC1101:03 Science, Technology and Truth	**Science Major** MA2211:03 Discrete Mathematics **PREREQ:** Maths B or MA1020 or MA0020	**Engineering Major** CP1404:03 Programming II **PREREQ:** CP1801 or CP1401 or CP1200 or EG1002 or CP2200 or SC1201
Engineering Major CC2511:03 Digital Logic and Embedded Systems **PREREQ:** EG1002 or CP1404 or CP1401 or admittance into Master of Engineering (Professional)	**Science Major** Select a 3 credit point Level 1, 2 or 3 Science subject	**Science Major** PH1007:03 Fundamental Physics **PREREQ:** ((Maths B or equivalent or MA1020 or MA0020) and PH1005) or (Physics and Maths C)
MA2000:03 Mathematics for Scientists and Engineers **PREREQ:** MA1003		**Engineering Major** EE2300:03 Electronics and Circuit Design **PREREQ:** EG1012

2029

TRIMESTER 1	TRIMESTER 2	TRIMESTER 3
SC2202:03 Quantitative Methods in Science **PREREQ:** SC1102 or SC1109 or admission to Bachelor of Business and Environmental Science or admission to 116209, 116309 or 116409 Offered TR1, TR3 **OR** SC2209:03 Quantitative Methods in Science-Advanced **PREREQ:** MA1003 and ((SC1109 plus 6 credit points of other Level 1 subjects) or admission in 116409)	**Engineering Major** EE2201:03 Circuit Theory **PREREQ:** EG1012 and MA2000. Allow concurrent enrolment for MA2000	**Science Major** PH2002:03 Classical Mechanics **PREREQ:** MA1003 AND PH1005 AND (PH1006 OR PH1007 OR (EG1012 AND EG1011))
Science Major PH2048:03 Medical and Radiation Physics **PREREQ:** MA1003 AND PH1005 AND (PH1007 OR (EG1010 AND EG1011 AND EG1012))	**Engineering Major** PH2019:03 Electromagnetism and Optics **PREREQ:** (EG1012 or PH1005) and MA1003	**Engineering Major** EE3400:03 Power System Analysis **PREREQ:** EE2201 or admittance into Master of Engineering (Prof)
Science Major PH3021:03 Physics of the Earth, Solar System, and Universe **PREREQ:** PH1005 and (PH1007 or EG1010 and EG1011 and EG1012)	Select 3 credit points of any Level 2, 3 or 5 Science Subject	

2030

VAC WORK (Dec-Feb)	TRIMESTER 2	TRIMESTER 3
Time available for work placements with engineering employers	**Science Major** PH3002:03 Advanced Quantum Physics **PREREQ:** MA2000	**Engineering Major** EE3600:03 Automation and Control Systems **PREREQ:** (EG1012 and MA2000) or admittance into Master of Engineering (Professional)
BLOCK 2 (Mar-Apr) EG3000:03 Introduction to Systems Engineering and Project Management **PREREQ:** EG1000 and EG1002 and EG1010 and EG1011 and EG1012 and MA1000 and MA1003 and (PH1005 or EG1001) or 36 credit points	**Engineering Major** EE3010:03 Digital Signal Processing **PREREQ:** At least 48 credit points from subjects in Bachelor of Engineering or Admission to Master of Engineering (Professional)	**Engineering Major** EE3700:03 Communications Systems Principles **PREREQ:** EE2201
BLOCK 2 (Mar-Apr) **Engineering Major** EE3300:03 Electronics Applications **PREREQ:** EE2300 or admittance into Master of Engineering (Prof)	**Engineering Major** CC3501:03 Embedded Systems Design and Interfacing **PREREQ:** (CC2511 and CP1404 and EE2300) or admittance into Master of Engineering (Professional)	**Science Major** PH3008:03 Statistical Mechanics and Transport **PREREQ:** MA2000 AND PH1005 AND (PH1007 OR EG1010 AND EG1011 AND EG1012)

2031

VAC WORK (Dec-Feb)	TRIMESTER 2	TRIMESTER 3
Time available for work placements with engineering employers	EG4011:03 Thesis Part 1 of 2 **PREREQ:** 60 credit points	EG4012:03 Thesis Part 2 of 2 **PREREQ:** EG4011
BLOCK 2 (Mar-Apr) **Engineering Major** EE4500:03 Electrical and Electronic Systems Design Project **PREREQ:** 48 credit points in Bachelor of Engineering, Bachelor of Engineering-Bachelor of Science, or Bachelor of Engineering-Bachelor of Information Technology	**Engineering Major** EE4400:03 Renewable System Integration **PREREQ:** EE3400 or admittance into Master of Engineering (Prof)	Select 3 credit points of any Level 2, 3 or 5 Science Subject *Recommended students complete SC3003:03 Science Research Internship or SC3008:03 Professional Placement
BLOCK 2 (Mar-Apr) **Engineering Major** EE4600:03 Control System Design **PREREQ:** EE3600 or admittance into Master of Engineering (Prof)	**Engineering Major** EE4310:03 Power Electronics **PREREQ:** EE2201 and EE3600	

Course handbook

Bachelor of Engineering (Honours)[Embedded] – Bachelor of Science	Electrical and Electronic Engineering Physics

Award Title	Bachelor of Engineering (Honours) – Bachelor of Science
Abbreviation	BEng(Hons)-BSc
Credit Points	120
AQF Level	Level 8 - Bachelor Honours Degree
Location	Townsville Bebegu Yumba, Cairns Nguma-bada
Division	Academy
College	College of Science and Engineering
Expected Time to Complete	5 Years
Maximum Time to Complete	13 Years
Maximum Leave of Absence	3 Years
CRICOS Code	085380B