Bachelor of Engineering (Honours)[Embedded]

Mechanical Engineering

MA1020 – Preparatory Mathematics Required

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
EG1000:03 Engineering 1	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)	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	EG1012:03 Electric Circuits
MA1020:03 Preparatory Mathematics	Select 3 credit points of any undergraduate subjects	MA1003:03 Mathematical Techniques **PREREQ:** MA1000 OR MA1011 OR MA1009

**Students that have not completed the required Mathematics learning through High School studies are unable to complete an Engineering Minor and will be required to choose MA1020 Preparatory Mathematics as one of their Undergraduate elective subjects.

2028

TRIMESTER 1	TRIMESTER 2	TRIMESTER 3
MA2000:03 Mathematics for Scientists and Engineers **PREREQ:** MA1003	**Major** CP1407:03 Introductory Machine Learning and Data Science	EG1010:03 Process Engineering
Major CS2001:03 Engineering Strength of Materials **PREREQ:** EG1011	**Major** EG2010:03 Materials Science and Engineering	**Major** ME2521:03 Dynamics of Machine Elements **PREREQ:** EG1011
	Select 3 credit points of any undergraduate subjects	**Major** ME2525:03 Machine Element Design **PREREQ:** CS2001

2029

VAC WORK (Dec-Feb)	TRIMESTER 2	TRIMESTER 3
Time available for work placements with engineering employers	**Major** ME3511:03 Dynamics and Acoustics **PREREQ:** MA2000 and ME2521	**Major** EG2008:03 Fluid Mechanics **PREREQ:** EG1011 and MA2000
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	**Major** ME3525:03 Mechanical Design and Bulk Materials Handling **PREREQ:** ME2525	**Major** EE3600:03 Automation and Control Systems **PREREQ:** (EG1012 and MA2000) or admittance into Master of Engineering (Professional)
BLOCK 2 (Mar-Apr) **Major** EG3001:03 Finite Element Analysis **PREREQ:** EG1002 and EG1011 and MA2000	**Major** ME3515:03 Advanced Manufacturing Engineering **PREREQ:** ME2525 and EG2010	**Major** ME3512:03 Heat and Mass Transfer **PREREQ:** MA2000

2030

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) **Major** ME4513:03 Advanced Fluid Mechanics **PREREQ:** CS3008 or EG2008	**Major** EG4013:03 Asset Management, Maintenance and Reliability **PREREQ:** 24 credit points of subjects	Select 3 credit points of any undergraduate subjects
BLOCK 2 (Mar-Apr) **Major** ME4515:03 Advanced Mechanical Engineering Design **PREREQ:** ME3525	**Major** ME4522:03 Thermodynamics and Energy Conversion **PREREQ:** ME2512 or EG2008	

Course handbook

Bachelor of Engineering (Honours)[Embedded]	Mechanical Engineering Major

Course Notes

Mechanical Engineering Major (Cairns students)

Students studying on the Cairns campus will be required to attend the Townsville campus for residentials in the third and fourth year of their study.

Award Title	Bachelor of Engineering (Honours)
Abbreviation	BEng(Hons)
Credit Points	96
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	4 Years
Maximum Time to Complete	11 Years
Maximum Leave of Absence	3 Years
CRICOS Code	085458G