

# Welcome to CSE

O-week welcome for students in a range of science-related degrees



**Bachelor of Advanced Science**

**Bachelor of Environmental Science & Management**

**Bachelor of Science**

**Presented by: Dr Murray Davies (Course Coordinator BSc)**

# Welcome to the College of Science and Engineering (CSE)

If you are here today, you are studying one of

- Bachelor of Advanced Science
- Bachelor of Science
- Bachelor of Environmental Science and Management



# What to expect today



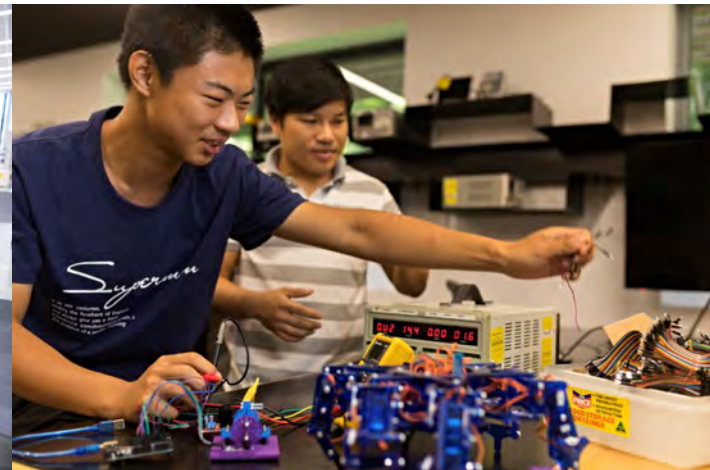
The Science Place – Building 142

- **General introduction to the College of Science and Engineering**
- **Overview of what you can expect from your studies**
- **Study plans**
- **Where to go for help on subject choices**
- **Where to go for help on other matters**
- **Meet your course or major advisor**



# The JCU difference

- We believe science and engineering should be experienced, not just taught.
- We are committed to providing our students with real world skills.
- Students get hands-on experiences through research projects in labs, the field and working with our industry partners.
- Over 50 subjects in CSE have a field work component.



# CSE Dominates Research at JCU

JCU is ranked No. 1 in the world for **marine biology**, and No. 2 in the world for **biodiversity conservation** research. We are ranked *above world average* in most science areas despite our small size.

As far as JCU is concerned, **CSE is the research college.**

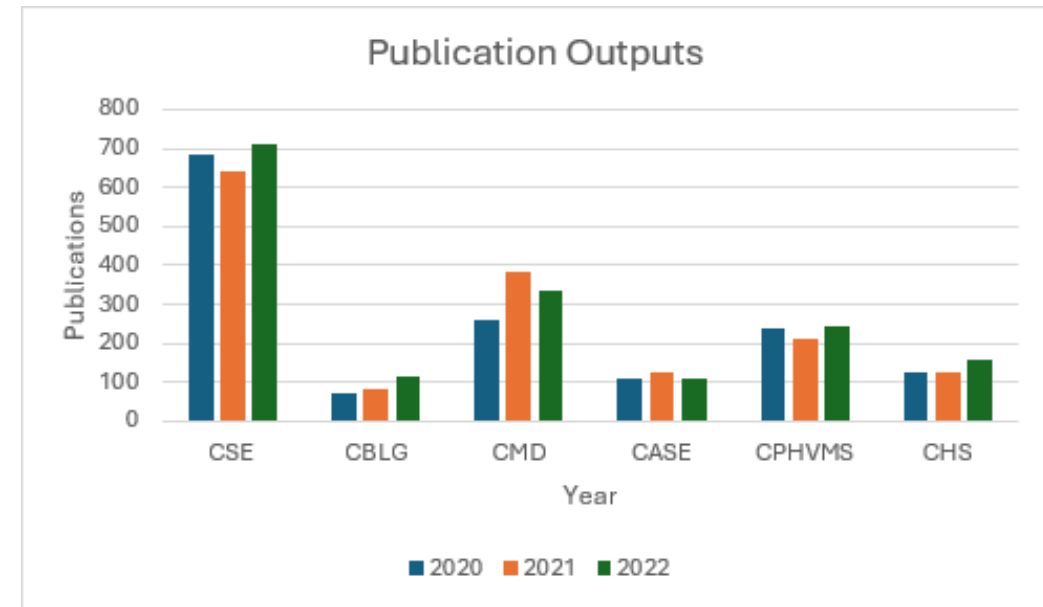


Figure courtesy of Prof. D. Jerry

## ***What does this mean for you as new students?***

It means that your lecturers are research active and are experts with knowledge about the newest discoveries and innovations in their fields.

It also provides students interested in research an opportunity to learn from those experts in their labs or in the field.

<https://www.jcu.edu.au/college-of-science-and-engineering/about-the-college-of-science-and-engineering>



# Bachelor of Environmental Science & Management

The BESM degree offers a holistic perspective on how biological, physical, social, economic and political spheres interact with and impact our environment.

There are 3 majors in the BESM degree:

- Biodiversity Assessment & Management
- Environmental Practice
- Land and Water Management



For more information contact the  
**BESM Course coordinator**

Jane Addison [jane.addison@jcu.edu.au](mailto:jane.addison@jcu.edu.au)

## What can I do with an Environmental Science and Management degree?

Develop solutions to environmental sustainability challenges through monitoring, analysis and policy improvements.

### Future careers

- Environmental Manager
- Biodiversity Project Officer
- Conservation Officer
- Climate Scientist
- Water Quality Specialist.

### Future growth

- Environmental Scientists in Australia are expected to number around 23,600 by 2026.  
labourmarketinsights.gov.au

### Median wage

- The average salary for an Environmental Manager is A\$135,526 per year.  
payscale.com/research/AU/job=Environmental\_Manager

### Did you know

- Although organic waste is considered 'natural', it breaks down to release methane, which has around 30 times more global warming potential than carbon dioxide.  
qld.gov.au/environment/management/waste

### Perks of the job

- Tackle complex environmental issues
- Champion responsible development
- Assess environmental impacts
- Build a sustainable future.

### Honour board

- Penny Whetton drove innovation in climate change projection science and reporting methods in Australia.
- Aldo Leopold shaped modern environmental ethics and is considered the founder of wildlife management.

# Bachelor of Science

The BSc is a broad degree across all Science areas.

- 10 majors
- Single or Double major
- Core and Breadth subjects
- up to 10 first year subjects
- 6 or more third year subjects

Due to its breadth the BSc can get messy, so students are strongly advised to meet with their major advisor/s or the course coordinator to discuss their options.



**Course Coordinator:** Dr Murray Davies  
E-mail: [murray.davies@jcu.edu.au](mailto:murray.davies@jcu.edu.au)





# Bachelor of Advanced Science

BAdvSc is similar to BSc (same majors & duration), **but** has a stronger focus on learning mathematical / analytical and modelling skills that are

- sought-after by employers
- useful if you want to pursue a research career

If you are enrolled in BSc you can switch to BAdvSc, if you have

- completed your 1<sup>st</sup> year of BSc
- GPA > 5.5 (Credit/Distinction Average)
- passed SC1109 (instead of SC1102), and ideally picked subjects MA1000, CH1020 (if no high school chemistry) & MA1003



**If you want to keep your options open, include these subjects in BSc study plan!**



**Course Coordinator:** Dr Martijn van de Pol

E-Mail: [martijn.vandepol@jcu.edu.au](mailto:martijn.vandepol@jcu.edu.au)



# Core Subjects in CSE Degrees

Subject	BESM	BSc	BAdvSci
SC1101- Science, Technology & Truth	Core	Core	Core
SC1102 /9 – Modelling Natural Systems	Core	Core	Core
SC2202 / 9 – Quantitative Methods in Science	Core (option)	Core	Core
SC3008/3 – Professional Placement (WIL)	Core (option)	Core	Core

In the BSc and BAdvSci students must also take two breadth subjects in first year\* and a skills subject (2<sup>nd</sup> year BSc, 3<sup>rd</sup> year BAdvSci).

\*Students taking a double major, unless it is MB/ZE, MB/AQ or ZE/AQ, don't need to take additional breadth subjects as these are covered by the two majors.

Students in all 3 degrees who lack the Maths pre-requisite must take MA1020 (TR1-3) and the Chemistry pre-requisite must take CH1020 (TR1,2).

# BSc / BAdvSci Core Subjects

	Core	Study Period
Level 1 subjects	SC1101 – Science, Technology & Truth	TR1
	SC1102 / <b>SC1109</b> – Modelling Natural Systems	TR3
	Breadth subject (select from list 1 on study plan)	
	Breadth subject (select from list 1 on study plan)	
	<b>MA1000 – Mathematical Foundations</b>	TR1, TR2
	<b>MA1003 – Mathematical Techniques</b>	TR2, TR3
Level 2 subjects	SC2202 / <b>SC2209</b> – Quantitative Methods in Science	TR1, TR3
	Skills subject (select from list 2 on study plan)	
Level 3 subjects	Work integrated Learning SC3008 / SC5008 / <b>SC3003</b>	
	<b>Advanced skills subject (select from list 1 on study plan)</b>	

Plan your studies. Check subjects for prerequisites. Consult with your major advisor as required. **BAdvSci subjects are in red.**

# Major Structures in the BSc & BAdvSci

Each major comprises 8 subjects. They are made up as

- First year - 2 subjects
- Second year – 3 subjects
- Third year – 3 subjects

Aquaculture, Marine Biology and Zoology & Ecology have the same first year major subjects in the major.

The first year subjects in each major count as Breadth subjects for other majors.

## Majors

Aquaculture  
Chemistry  
Data Science  
Environmental Earth Science  
Geology  
Marine Biology  
Mathematics  
Molecular & Cell Biology  
Physics  
Zoology & Ecology

Bioinformatics will commence as a major in 2026



# SC3008: Professional Placement / Work Integrated Learning

## Science placement information

Your science placement gives you the opportunity to put what you have learned in the labs and classrooms into real-world practice.

### PREPARING FOR YOUR PLACEMENT

It's important to be prepared to get the best out of your student placement.

As part of this preparation, a compulsory introductory session will be held with the College Student Placements and Projects team in collaboration with JCU's Careers and Employability team. This will be scheduled in your first week of the study period in which your placement will take place.

You will find out:

- What employers want and expect



## Employability Edge

The Employability Edge program is a series of self-paced modules designed to assist you with career exploration, enhance your employability, and support your transition into professional employment. The modules explore contemporary career development and employability practices to help you succeed in an increasingly complex and competitive labour market. Dive in, download the activity books, and get the employability edge.

### Employability Edge Modules

- You and Your Career
- Boost Your Skills
- Master Written Applications
- Contemporary Recruitment Processes
- 21<sup>st</sup> Century Work Ready

Taken by BSc, BAdvSci and BESM

# Withdrawing from Subjects

Most full-time students take 4 subjects per study period. If you are finding that this is too much, then you have until **Census date (TR1 February 20, 2025)** to withdraw without incurring a financial liability. After that time, you will have to pay for the subject (e.g. HECS or fees).

You can withdraw before **TR1 March 7, 2025** without affecting your academic standing or GPA.

Please think carefully about which subjects you drop in terms of degree progression. For example, if you are taking MA1020 then don't drop it because SC1102 has it as a pre-requisite and this will potentially cost you a whole year.

These are things best addressed by discussions with your academic advisor (NOT the student centre).

# Study Plans - This will link to BSc / BAdvSci

- Search for study plans from the JCU Home Page.
- The search icon is at top right of the home page.
- CSE study plans come up first.
- Alternately the College has a home page and the study plans can be accessed from “Student Resources” there.

The screenshot shows the James Cook University Australia website with a search bar containing 'study plans'. The search results show 10,957 results. The first result is 'My Study Plan' with a link to [www.jcu.edu.au/pathways-to-university/jcu-prep/my-study-plan](http://www.jcu.edu.au/pathways-to-university/jcu-prep/my-study-plan). The second result is '2025 Study Plans' with a link to [www.jcu.edu.au/college-of-science-and-engineering/student-resources/2025-study-plans](http://www.jcu.edu.au/college-of-science-and-engineering/student-resources/2025-study-plans). The '2025 Study Plans' result is circled in red. The 'Related searches for study plans' section includes 'What is a Study Plan?'.

James Cook University Australia

Future Students Current Students Research and Teaching Partners and Community

Browse Study areas

study plans

1 - 10 of 10,957 search results for **study plans** where 7,588 match all words and 3,369 match some words. 289 very similar results included.

**Results**

**My Study Plan**

[www.jcu.edu.au/pathways-to-university/jcu-prep/my-study-plan](http://www.jcu.edu.au/pathways-to-university/jcu-prep/my-study-plan)

My **Study Plan**. Required fields are marked with an asterisk ( \* ). Please provide your email so we can send you a copy of your **study plan**. ... Diploma, University - Bachelors Degree or higher. Which area do you want to **study**? --

**2025 Study Plans**

[www.jcu.edu.au/college-of-science-and-engineering/student-resources/2025-study-plans](http://www.jcu.edu.au/college-of-science-and-engineering/student-resources/2025-study-plans)

2025 **Study Plans**. Bachelor of Advanced Science. Bachelor of Engineering (Honours).

**2024 Study Plans**

[www.jcu.edu.au/college-of-science-and-engineering/student-resources/2024-study-plans](http://www.jcu.edu.au/college-of-science-and-engineering/student-resources/2024-study-plans)

2024 **Study Plans**.

**What is a Study Plan?**

**Refine your search**

**Category**

Research 100  
Student Life 11

**File**

pdf 1,211  
docx 121  
html 16  
xlsx 5  
pptx 5  
doc 4

**Related searches for study plans**



## COLLEGE OF SCIENCE AND ENGINEERING

About CSE

CSE Research

VegeMap

Internet of Things

Fish Passage Planning and Design

CSE publications

Student Resources

Work Integrated Learning

2020 Study Plans

2021 Study Plans

2022 Study Plans

2023 Study Plans

2024 Study Plans

2025 Study Plans

Our teams

## 2025 Study Plans

Bachelor of Advanced Science

Bachelor of Engineering (Honours)

Bachelor of Engineering (Honours) - Bachelor of Information Technology

Bachelor of Engineering (Honours) - Bachelor of Science

Bachelor of Environmental Science and Management

Bachelor of Information Technology

Bachelor of Marine Science

Bachelor of Science

Bachelor of Science - Bachelor of Laws

Master of Engineering (Professional)

Master of Information Technology

Master of Information Technology - Master of Business Administration

Master of Science

Master of Science (Professional)

# Study Plans

Illustrated is the first Marine Biology single major in the Bachelor of Science.

You should have been sent a study plan given your major. It may have been colour coded. If so:

- Core subjects for the degree are coloured dark blue.
- Core subjects for the major are coloured light blue.

Where applicable prerequisites are indicated.

## Bachelor of Science (Marine Biology)

Useful study planning/enrolment resources:

[Subject Search](#)  
[Academic Calendars](#)  
[Class Registration](#)  
[Enrolment Resources](#)

The information in the study planner is current at the time of creation may be subject to future change.

If you would prefer a part-time study plan, please adjust the below study planner; reviewing subject prerequisites to ensure you are on track for course completion.

The College of Science and Engineering will be offering some subjects in Block 3 and Block 4 (see the [Academic Calendar](#) for Block 3 and 4 dates). International students must maintain enrolment in subjects across the whole Trimester 2 period (May – August) and can do this by enrolling in a combination of TR2, Block 3 and/or Block 4 subjects.

	TRIMESTER 1	TRIMESTER 2	TRIMESTER 3
2025	SC1101:03 Science Technology and Truth	MA1020:03 Preparatory Mathematics (or any Level 1, 2 or 3 or 5 subject if already satisfied via previous study)	SC1102:03 Modelling Natural Systems <i>PREREQ: MA1020 or MA0020 or Senior Mathematics or equivalent</i> <b>OR</b> SC1109:03 Modelling Natural Systems – Advanced <sup>^</sup> <i>PREREQ: MA1000</i>
	<b>Major</b> BS1007:03 Introduction to Biodiversity	CH1020:03 Preparatory Chemistry (or any Level 1, 2 or 3 or 5 subject if already satisfied via previous study)	<b>Major</b> BS1001:03 Introduction to Biological Processes
	Elective from <b>List 1 (Breadth Subjects)</b> <b>OR</b> Second Major Subject (depending on chosen structure)		Elective from <b>List 1 (Breadth Subjects)</b> <b>OR</b> Second Major Subject (depending on chosen structure)

<sup>^</sup>Note: SC1109 is compulsory in the Advanced BSc Program and should be taken instead of SC1102 if you are considering that pathway.

# Trimesters

In 2025 CSE is teaching in three trimesters. Students will under normal circumstances take 8 subjects across the three trimesters in each year. This will normally mean a maximum of 3 subjects in any single trimester. Four subjects can be taken in a single trimester with permission.

Trimester 2 has been singled out as when most subjects with significant field work components take place. These are for 2<sup>nd</sup> and 3<sup>rd</sup> year subjects.

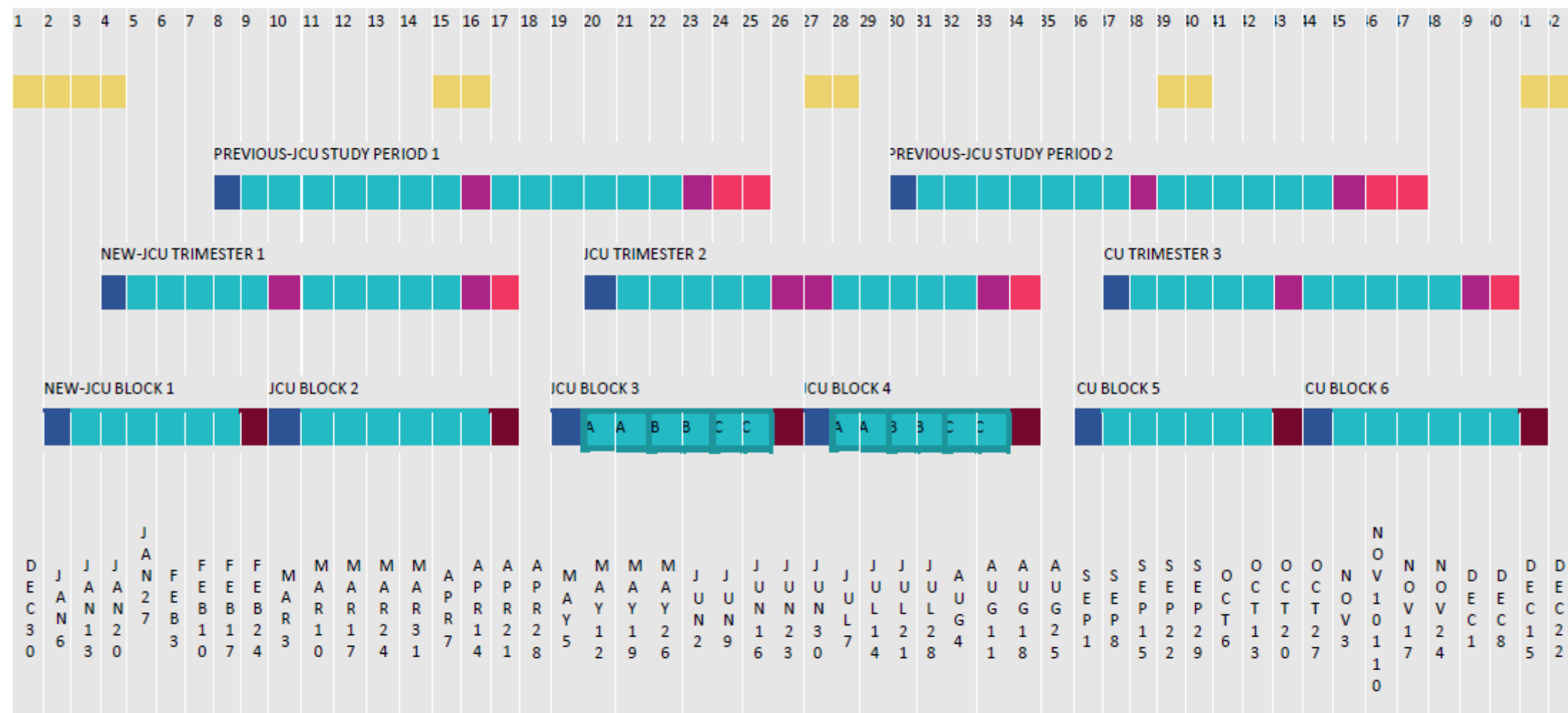
Some trimester 2 subjects have been designated block subjects. This means that they run in a shortened window of either 6 weeks (blocks 3 and 4) or 2 weeks blocks (3A, 3B, 3C, 4A, 4B, 4C).

Only one 1<sup>st</sup> year subject, MB1110, is running as a block subject (Block 4) in 2025.



# 2025 JCU Academic Calendar

College of Science & Engineering



## Key


Orientation/Welcome Teaching Recess/Vacation/Exam prep Exams Assessments AUS School Holidays

The College of Science & Engineering will be teaching our undergraduate and postgraduate subjects and courses in Trimester format from 2025. Please note, there are a handful of research-based subjects that will remain in semester mode for teach out, but the majority of subjects will move across to trimester format.


# Personal Support for your Transition to Uni

## CURRENT STUDENTS

Enrolment 

Fees & Financial Support 

Class Registration 

Assessment and results 

Support 

Student Success Officers


Support Services at JCU

Personal Support

Student Mentor Program

Community Health Services

Ask Us



Academic Calendars 

Student Life 

Learning Online 

## Personal Support

You may be feeling overwhelmed from your studies, stressed from work or you could be dealing with something difficult in your personal life. Whatever it is, we have a number of free student support services available to help you. Check the table below to find who can help.

Student Success Officers	
Equity Contact Officers	
AccessAbility	
Counselling	
Safety and Wellbeing	
JCU Student Association	
Sexual Misconduct Officers	
Chaplaincy	
Mental Health and Wellness	

# Learning Support for your Transition to Uni

[Future Students](#)[Current Students](#)[Research and Teaching](#)[Partners and Community](#)[Home](#)[The Learning Centre](#)[Services for students](#)

## CURRENT STUDENTS

[Enrolment](#)[Fees & Financial Support](#)[Class Registration](#)[Assessment and results](#)[Support](#)[Academic Calendars](#)[Student Life](#)[Learning Online](#)[The Learning Centre](#)[Preparing for your studies](#)[During the study period](#)[Exams](#)[Services for Staff](#)[Services for students](#)[Downloads and webinars](#)[Forms](#)[Safety](#)

## Services for students

The Learning Centre provides services intended to support the success of all students at JCU. This includes supporting the student's transition to university, aiding the development of the students' independent learning skills, and the provision of integrated peer support strategies. Some of the ways in which student are supported include:

- Sharing transition strategies to help students adjust to university life.
- Developing study skills such as organisation and planning, time management, and study strategies.
- Learning strategies to understand, plan, write and refine their assessment tasks, and to prepare for quizzes, tests, and exams.
- Supporting numeracy (maths and statistics) and literacy (reading and comprehension) and language development for English as Second Language (ESL) students (writing and oral language).
- Promoting and enabling positive peer relationships.

The Learning Centre provides advice for students through individual consultations, Peer Assisted Study Sessions, and student mentors. **Individual consultations** can be accessed through the Peer Advice Desk, Learning Advisors and Studiosity. PASS classes and student mentors provide group and peer level support throughout the study periods.

[Peer Advisors](#)[Learning Advisor Consultation](#)[Studiosity – 24/7 online support](#)[PASS](#)[Mentor Program](#)

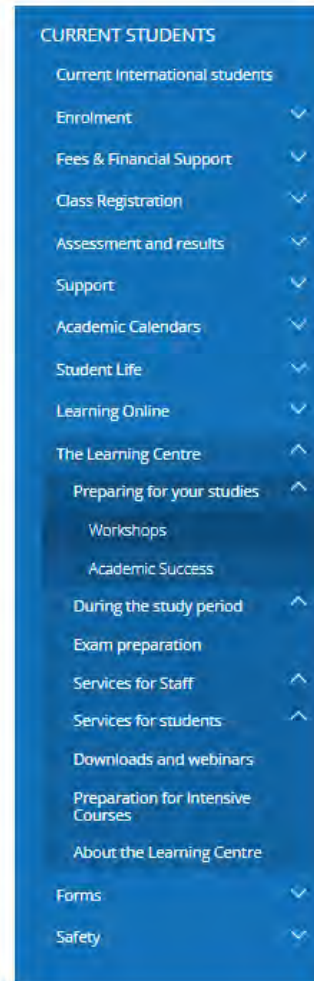
<https://www.jcu.edu.au/students/learningcentre/services-for-students>



# Learning Support for your Transition to Uni

There are workshops for  
Maths (24/01/2025) 9-11 am (134-010)  
Chemistry (24/01/2025) 1-3 pm (134-010)

Type **orientation workshops** into the JCU search function.



## Workshops

Position yourself for success! The Learning Centre offers a range of workshops that will assist you with your university studies.

For all University orientation events the JCU Orientation team has a [Personalised Orientation Planner](#) available [here](#).



Workshop Testimonials – The Learning Centre

### Workshop testimonials

Hear JCU students discuss the benefits of attending activities and courses

## Upcoming Learning Centre Workshops

### TRIMESTER 1 2025

#### Maths Refresher (online)

**When:** 20 January 5.30pm-7pm | **Where:** [Online](#) — [Register Here](#)

This course is designed to build confidence and competence in students returning to maths or in need of a refresher. After a short overview of basic skills, you will be able to work through modules at your own pace with support and guidance from our experienced facilitators, who will be on hand to assist you through the modules. Please download and bring with you a copy of each workbook to the workshop to enhance your learning.

[Maths Refresher Workbook 1 \(PDF, 1249 KB\)](#) | [Maths Refresher Workbook 2 \(PDF, 1278 KB\)](#)

#### Academic Skills Essentials (online)

**When:** 21 January 5.30pm-7pm | **Where:** [Online](#) — [Register Here](#)

This workshop provides insights into essential skills needed to succeed in your degree: time management and assessment planning.

#### Basic Statistics (online)

**When:** 22 January 3pm-4.30pm | **Where:** [Online](#) — [Register Here](#)

Revise basic statistics concepts that will support future learning throughout your degree. You will learn about collecting, organising, analysing and interpreting information.

# The Learning Centre

Preparing for your  
studies

- Orientation workshops
- Peer learning assistants
- Learning advisors
- Online resources
- Studiosity
- PASS
- Study planning
- Assessment planning

For more info:





# The Learning Centre

Book an appointment >

Appointments are 30 minutes long and are currently offered on campus or remotely via video conferencing.

## Learning Advisors can assist with:

- Planning your study time
- Understanding your assignment requirements
- Planning and structuring assignments
- Developing academic reading and research skills
- Providing feedback on assessments before you submit them
- Developing your numeracy skills (maths and statistics)
- Preparing for exams



# Academic Advisors – for the best course advice

Aquaculture



Kelly Condon

Chemistry



Murray Davies

Data Science



Carla Ewels

Environmental Earth  
Science



Karen Joyce

Geology



Helen McCoy-West

Marine Biology



Allison Paley

Mathematics



Sophie Raynor

Molecular & Cell Biology



Lionel Hebbard

Physics



Sara Brice

Zoology & Ecology



Megan Higgie

# Meet your Advisors Now

We divide into smaller groups for information specific to majors and individual degree programs.

A couple of our Academic Advisors are away today. Please find the people who have graciously stepped in to cover for them.

## BESM & Environmental Earth Science



Alana Grech

## Aquaculture



Mark Cyrus

## Geology



Ioan Sanislav

## Molecular & Cell Biology



Alanna Sorenson

## Marine Biology



Mia Hoogenboom



Mike Kingsford