

# THE GOOD UNIVERSITIES GUIDE 2020

## SCIENCE & MATHEMATICS

This is a detailed profile of the science and mathematics field of study. It lists the range of specialisations available and compares degree-level courses. We examine the institutions that get the best ratings, based on real student experience and graduate outcome data, which will help you decide the right university for your educational journey.



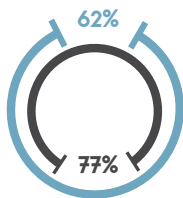
# SCIENCE & MATHEMATICS

If you have a passion for discovery and problem-solving, you might consider one of the many courses available in science and mathematics. Related courses and occupations include computing and information technology, engineering and technology, mathematics, surveying, various health fields and veterinary science.

## FULL-TIME EMPLOYMENT

UNDERGRADUATE POSTGRADUATE

Proportion of students who have secured a full-time job within four months of graduating.



## NUMBER OF STUDENTS



**13,270**  
UNDERGRADUATE  
INTERNATIONAL

**101,231**  
UNDERGRADUATE

**22,446**  
POSTGRADUATE



## MEDIAN GRADUATE SALARY

**\$58,400**  
UNDERGRADUATE

**\$78,300**  
POSTGRADUATE

Data has been sourced from the Graduate Outcomes Survey. Results are pooled to represent graduates who completed the survey in 2018, 2017 and 2016. Graduates complete the Graduate Outcomes Survey approximately four months post-graduation.

## WHAT CAN I DO?



Accountancy and Finance



Agricultural Engineering



Banking



Microbiology



Surveying



Meteorology



# FIVE-STAR UNIVERSITIES

## SCIENCE & MATHEMATICS

EDUCATIONAL EXPERIENCE	GRADUATE EMPLOYMENT	LEARNER ENGAGEMENT	LEARNING RESOURCES
BOND 96.4%	CDU 82.9%	BOND 90.9%	BOND 95.5%
NOTRE DAME 93.2%	CSU 79.7%	NOTRE DAME 79.6%	SUNSHINE COAST 93.8%
SUNSHINE COAST 88.4%	UNSW 72.7%	QUT 69.5%	DEAKIN 93.1%
FEDERATION 86.3%	NOTRE DAME 70.4%	FEDERATION 69.0%	FLINDERS 92.7%
ANU 84.6%	QUEENSLAND 68.3%	RMIT 68.9%	FEDERATION 90.8%
JCU 84.5%	MACQUARIE 68.2%	CSU 68.6%	QUEENSLAND 90.6%
FLINDERS 84.5%	MONASH 67.3%	JCU 68.6%	USQ 90.4%
QUT 84.3%	SYDNEY 66.7%	SOUTHERN CROSS 68.4%	CANBERRA 90.4%
TASMANIA 83.8%	SOUTHERN CROSS 66.7%	WOLLONGONG 67.9%	CSU 90.4%
ECU 83.8%	<b>NATIONAL AVERAGE = 61.6%</b>	FLINDERS 67.8%	MACQUARIE 90.1%
DEAKIN 83.7%		ECU 67.5%	ANU 90.1%
<b>NATIONAL AVERAGE = 81.0%</b>		<b>NATIONAL AVERAGE = 62.1%</b>	MONASH 89.8%
			<b>NATIONAL AVERAGE = 87.8%</b>
MEDIAN STARTING SALARY	SKILLS DEVELOPMENT	STUDENT SUPPORT	TEACHING QUALITY
CURTIN \$66,100	BOND 93.6%	BOND 90.4%	BOND 96.4%
MONASH \$65,000	NOTRE DAME 90.5%	NOTRE DAME 89.0%	NOTRE DAME 91.3%
QUEENSLAND \$64,500	ECU 87.9%	FEDERATION 84.0%	SUNSHINE COAST 90.1%
CDU \$64,000	FLINDERS 86.2%	USQ 83.1%	FEDERATION 89.9%
UNSW \$63,000	SUNSHINE COAST 84.6%	ECU 83.0%	ANU 88.4%
FLINDERS \$62,600	JCU 84.4%	CSU 83.0%	JCU 87.4%
UNE \$62,600	QUT 83.4%	QUT 81.2%	TASMANIA 87.2%
USQ \$62,600	ANU 82.9%	FLINDERS 81.0%	FLINDERS 86.8%
<b>NATIONAL AVERAGE = \$58,400</b>	ACU 82.8%		
	CANBERRA 82.8%		
	LA TROBE 82.8%		
	RMIT 82.6%		
	<b>NATIONAL AVERAGE = 80.0%</b>	<b>NATIONAL AVERAGE = 73.7%</b>	<b>NATIONAL AVERAGE = 83.4%</b>

WHAT TO STUDY

**WHAT DO THESE NUMBERS MEAN?** The ratings above represent the top 20 per cent of results for each measure in this particular field of study. For overall institution results, see the ratings section at the front of the guide.

# SCIENCE & MATHEMATICS

## SCIENCES

The following are just some of the science majors you can study:

- Astronomy
- Biotechnology
- Chemistry
- Food science and technology
- Geology
- Marine science
- Medical science
- Meteorology
- Physics
- Zoology

If you have a passion for discovery and problem-solving, you might consider one of the many courses available in the sciences. Despite our comparatively small population, Australia has produced some of the world's best scientific researchers who regularly make ground-breaking discoveries, greatly adding to both Australian and global knowledge and capabilities.

If you are interested in this field, you should also look at related courses in computing and information technology, engineering and technology, mathematics, surveying, the various health fields and veterinary science.

Many science courses focus on the 'pure' academic disciplines, including anatomy, biochemistry, biology, botany, chemistry, geology, microbiology, pathology, physics, physiology and zoology. The advantage of this kind of broad education is that it leaves many career options open. The downside is that you might have some trouble finding a job.

Universities vary in the extent to which they allow you to mix and match science subjects with those from other departments, just in case you were thinking of dabbling in something more vocational. That said, there are some 'applied' courses available that can help to develop your

career pathway. You could also pair science with courses like law, business or engineering through a double degree — perhaps even arts if you have strong interests in both disciplines. A double degree can expand your opportunities, providing you with a back-up in a tough job market.

## MATHEMATICS

If you are considering studying mathematics at university you've probably studied it throughout school and are reasonably proficient. You may also know of its main subdivisions: pure mathematics (subjects like differential and integral calculus, mathematical logic and linear programming, as well as areas like environmental or financial mathematics); applied mathematics (such as vector calculus, dynamics and probability); and statistics and operations research (including sampling theory, nonparametric statistical inference and stochastic processes). If you are interested in mathematics, you should also consider some of the specialisations within accounting, business and management, computing and information technology, economics, and engineering and technology. Gaining a broader qualification or combining mathematics with another area of study, such as education and training, could also make life easier when the time comes to find a job.

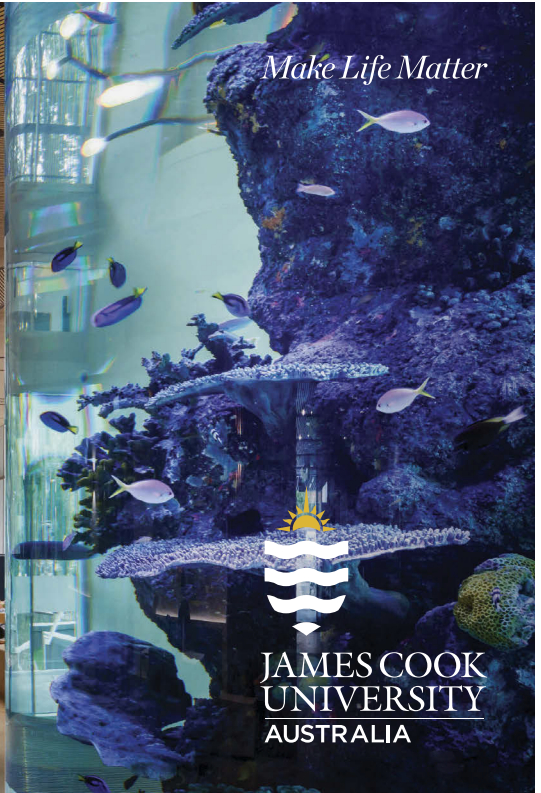
## WHERE TO STUDY

Most students contemplating a science or mathematics degree are likely to have done reasonably well in those subjects at school. This would be useful as most courses set prerequisites (often one or more of maths, chemistry, biology or physics). Science and mathematics can be tougher to get into than the humanities and social sciences, but are not too difficult overall. That said, cut-offs can vary depending on the specialisation and institution you choose.

# JCU: World-class facilities



jcu.edu.au



*Make Life Matter*

  
**JAMES COOK  
UNIVERSITY**  
AUSTRALIA

**LAUREN  
TAYLOR**



**BACHELOR OF SCIENCE, MAJORING IN MOLECULAR & CELL BIOLOGY  
JAMES COOK UNIVERSITY**

At JCU, there is a lot of opportunity for hands-on learning. Many of the science subjects integrate practical skills into their coursework to give you heaps of experience working in a lab or out in the field. I really enjoyed all the practical components as it gave me opportunities to use my knowledge in real time-situations and see the results of actual experiments. It also gives students the ability to use new equipment and tools — the laboratory facilities here at JCU are fantastic.

I also had many opportunities to hear from guest lecturers and researchers studying out in the field. They would come in and talk about their work in the real world and how it ties into what we were learning. University is a great way to meet like-minded people and form friendships that will last forever.

# Get connected to global opportunities

RMIT is a global university of technology, design and enterprise.

The university enjoys an international reputation for excellence in professional and vocational education, applied research, and engagement with the needs of industry and the community.

RMIT is a world leader in Art and Design; Architecture; Education; Engineering; Development; Computer Science and Information Systems; Business and Management; and Communication and Media Studies.

[rmit.edu.au](http://rmit.edu.au)



## TAMIKA CASSAR



### BACHELOR OF APPLIED SCIENCE (MEDICAL RADIATIONS)

RMIT

A passion for making a difference and helping others is leading to an exciting career in medical radiations for RMIT student Tamika Cassar. Inspired by practical learning – and achieving some impressive academic awards along the way – Tamika is convinced her Bachelor of Applied Science (Medical Radiations) undergraduate degree was the perfect choice.

“This field is perfect for someone like myself, who enjoys working in a team, has an interest in science, but most importantly, has a strong passion for helping people,” she said. “As research is constantly developing, we will forever be learning. I know that graduating from university will not be the end of my study. As a radiation therapist you learn every day and every year.”

Tamika’s university journey started with a science degree after completing Year 12, majoring in physiology. Since switching to RMIT to commence her Bachelor of Applied Science (Medical Radiations) degree, Tamika hasn’t looked back.