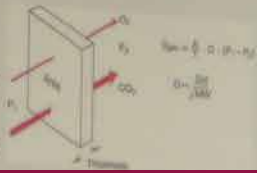


Laws of Diffusion

- Fick's Law
- Area has biggest influence, followed by thickness
- Diffusion membrane; DM



Functional Residual Capacity (FRC)

- Includes RV
- Boyle's Law
- $P_1 V_1 = P_2 V_2$
- $P_b [V_c] = P_a [V_{(FRC)}]$
- $V_{(FRC)} \approx P_1 / P_2$
- $RV = FRC - ERV$
- $TLC = VC + RV$



Lung volumes & sub-divisions

JAMES COOK UNIVERSITY
AUSTRALIA

Celebrating
50 YEARS
1970 - 2020

Bachelor of Clinical Sciences (Honours)

Pulmonary capillary blood vol.

- P_c is the
- Nominally
- inversely on exercise

$$\frac{1}{P_c} = \frac{1}{P_a} + \frac{1}{P_v}$$

Respiratory Pressure Meters



Ready today for tomorrow

jcu.edu.au



Why JCU?

A STUDENT EXPERIENCE LIKE NO OTHER

- Access to world-class teachers
- Develop skills in state-of-the-art facilities
- Achieve exceptional employment outcomes
 - Benefit from small class sizes
 - Connect with professional networks
- Support through scholarships for merit and equity
 - Discover great accommodation options

PRACTICE WITH INTEGRITY

Graduate with extensive practical knowledge. Benefiting from strong industry partnerships, JCU students work with researchers and health professionals on significant local and global challenges.

CONTEMPORARY KNOWLEDGE

Contribute to JCU's excellence in applied research. Work side by side with leading researchers in our state-of-the-art facility, the JCU Australian Institute of Tropical Health and Medicine.

READY TODAY, FOR TOMORROW

Prepare to work across many careers in health sciences. JCU students specialise in their third year and graduate knowledgeable in generalist biomedicine and clinical sciences.

SUPPORT FOR YOUR SUCCESS

Explore JCU's range of scholarships, grants and bursaries and discover the right financial assistance to achieve your goals



Bachelor of Clinical Sciences (Honours)

✔ A JCU Clinical Sciences (Honours) degree will equip you with a broader and more flexible range of skills than strictly scientific degrees. You will have the opportunity to work directly with patients while contributing valuably to clinical diagnostics and research.

✔ Gain the skills and knowledge required to provide vital scientific evidence to health professionals like general practitioners, cardiac surgeons, cardiologists and respiratory physicians. Learn the principles of medicine, chemistry, biology and experimental science and become an expert in scientific enquiry.

✔ In your third year, you will choose from specialised electives to suit your interests. In your final year, work directly with real-world patients in both urban and rural practical placements, and provide services for rural and remote communities.

✔ Become a clinical scientist and make a difference. Clinical Sciences graduates are flexible, uniquely equipped professionals who contribute valuably to both healthcare teams and scientific discovery.

COURSE DETAILS:

Locations:	Townsville
Start Dates:	February
Duration:	4 years full-time Part-time available
ATAR:	64 English (Units 3/4,C), Mathematical Methods (Units 3/4,C), Chemistry (Units 3/4,C)
OP:	16 English (4,SA), Maths B (4,SA), Chemistry (4,SA)

View the [handbook](#) for a detailed overview of available subjects, including pre-placement requirements.
Note: Information is for domestic students only.

Experience has no substitute

Learn to be a 'body detective' with a JCU Bachelor of Clinical Sciences (Honours). Develop the skills and knowledge needed to carry out patient investigations in growing fields like sleep science, respiratory and cardiac science and neurophysiology. You will spend a lot of time working with your hands, as well as your mind. Get to the bottom of troubling medical problems, using instrumentation and gaining cutting-edge technical skills while also developing people skills. Gain clinical experience in ECG, spirometry and sleep analysis in hospital laboratories with the scientists who might be your future colleagues. A JCU Clinical Sciences degree will equip you with the skills and experience you need to collaborate with patients, doctors, nurses and allied health professionals to fine-tune therapeutic management of diseases.



“The biomedicine program is really great because, in the first two years, there’s a lot of flexibility. You can learn about Medical Laboratory Sciences, Biomedicine and Clinical Science. I went more towards Clinical Sciences because it was more patient-based. I really like physiology; that was my passion, so it drew me towards Clinical Sciences.”

Justin Jones

BACHELOR OF CLINICAL SCIENCES (HONOURS)



“With JCU, the employment rate after university is pretty high. I’m from down south, so I actually moved up here quite far away from home. I also chose JCU for the facilities and the course is one of the best in Australia.”

Allysha Barry

BACHELOR OF CLINICAL SCIENCES (HONOURS)

“It is very rewarding to teach and guide students on the journey to making a difference in the clinical sciences. Our students have up-to-date and workplace-relevant learning experiences because they learn from active researchers and in partnership with clinical scientists from The Townsville Hospital. Teaching activities are designed with graduate success and employability in mind. Our students learn multidisciplinary skills in interactive practicals.”

Suzy Munns

ASSOCIATE PROFESSOR, BIOMEDICINE



Career Opportunities

JCU Clinical Sciences (Honours) graduates are multi-skilled and find employment in a large range of health industries. Many go on to higher research studies or postgraduate study in other health sciences.

Graduates pursue careers in various areas including laboratory support, public health, education and research.

You could find employment as a clinical measurements scientist, research assistant, or laboratory technician.

Clinical Sciences (Honours) graduates may use their skills and knowledge to pursue further studies in medicine, veterinary or health science fields.





JCU Accommodation

Study and live in some of the most interesting places in the world. Cairns and Townsville are on the doorstep of the Great Barrier Reef, magnificent rainforests, the savannah region and Outback Australia.

Living on-campus is a great way to make the most of your time at JCU. With five different accommodation options at JCU Townsville, housing over 1,200 students, and a new complex for 300 students at JCU Cairns, living on-campus is a great place to make new friends and immerse yourself into the JCU culture. All rooms at our on-campus residences are single board, with a single bed, study desk, chair, fan, air-conditioning and Wi-Fi. Each residence is different in regards to style of living, culture and atmosphere. There are options for fully catered or self-catered housing. Find out more at jcu.edu.au/accommodation



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James Cook University CRICOS Provider code 00117].

Contact us

Townsville: 07 4781 5255

Cairns: 07 4232 1000

Freecall (within Australia): 1800 246 446

Email: enquiries@jcu.edu.au

