

BIOMEDICAL AND BEHAVIOURAL SCIENCES

UNDERGRADUATE COURSES

- ▶ Bachelor of Science
- ▶ Bachelor of Science Advanced (Honours) – Research
- ▶ Bachelor of Science Advanced (Honours) – Global Challenges
- ▶ 11 Double Degrees with a Bachelor of Science
- ▶ Bachelor of Applied Data Science
- ▶ Bachelor of Applied Data Science Advanced (Honours)

ANATOMY AND DEVELOPMENTAL BIOLOGY

Anatomy and developmental biology explores the development of an adult organism from a single cell. It explores the topics classical embryology, body structure and design, gene expression and molecular mechanisms of development, organogenesis, birth defects, stem cell biology, regenerative biology and medicine.

BIOCHEMISTRY

Biochemistry explores the chemical components, reactions, structures and processes that form the foundation for all living matter in order to understand the molecular events that underlie biological processes.

HUMAN PATHOLOGY

Human pathology is the study of disease processes, particularly cell death, inflammation, disorders of immunity and neoplasia. A comprehensive understanding of cell injury, inflammation, wound healing, fluid and vascular disorders, growth disorders, and immunopathology are fundamental to all clinical and research disciplines.

IMMUNOLOGY

Immunology is the study of the immune system that protects us from harmful pathogens such as bacteria and viruses. Immunology provides a solid grounding in the key aspects of the immune system and its role in health and disease.

MICROBIOLOGY

Microbiology involves the study of microorganisms, including bacteria, viruses, protozoa, algae and fungi. Microbiology explores microorganisms, their diversity, structure, molecular biology and how they interact with humans and other living organisms in both harmful and beneficial ways.

PHARMACOLOGY

Pharmacology is the study of the effects of drugs on living organisms, where the term 'drug' can be defined as a chemical substance, natural or synthetic, which affects a biological system.

PHYSIOLOGY

Physiology is the study of how the body functions normally, and in dysfunction and disease. Physiology provides the answers to questions on how the body works, on what happens when we are born and develop, on how our body systems adapt when challenged by stresses such as exercise or environmental extremes, and on how body functions change in disease states.

PSYCHOLOGY

Psychology is the study of mind and behaviour and includes investigations of the brain, learning, memory, perception, reasoning, decision making, language, developmental and social processes, personality, and mental health and well-being.



EXAMPLE FIRST YEAR COURSE MAP

PHYSIOLOGY

Semester 1	BIO1011	CHM1011 OR CHM1051	MTH1020 OR MTH1030 (OR MTH1035 depending on VCE background) OR SCI1020 OR SCI1022 OR STA1010	PHS1031 (recommended) OR Another science sequence OR Science elective OR Non-science elective
Semester 2	BIO1022 OR BIO1042	CHM1022 OR CHM1052	SCI1000 Science communication to influence change	STA1010 (if not taken) OR A unit to complete that science sequence OR Science elective OR Non-science elective

Other science sequences:

Computational Science; Earth Atmosphere and Environment; Mathematics; Physics; or Psychology.



Scan here for all other first year example course maps.
monash.edu/science/current-students/manage-your-science-studies/example-by-major

POTENTIAL CAREERS

- ▶ Bioinformatician
- ▶ Biotechnologist
- ▶ Biotechnology product developer
- ▶ Cardiac physiologist
- ▶ Career counselling
- ▶ Clinical scientist
- ▶ Clinical trials coordinator
- ▶ Child psychology
- ▶ Cytogeneticist
- ▶ Forensic scientist
- ▶ Forensic psychology
- ▶ Geneticist
- ▶ Hospital scientist
- ▶ Laboratory research technician
- ▶ Microbiologist
- ▶ Medical researcher
- ▶ Neuropsychology
- ▶ Patent officer
- ▶ Pharmacologist
- ▶ Science teacher
- ▶ Sports psychology

PATHWAYS



COMPLETE A BACHELOR OF SCIENCE
3 years (full-time)



▶ **Graduate-entry Bachelor of Medical Science and Doctor of Medicine (MD)**
4 years (full-time)



▶ **Medical practitioner**



▶ **Doctor of Veterinary Medicine**



▶ **Veterinary surgeon**



COMPLETE A BACHELOR OF SCIENCE
3 years (full-time)



▶ **Graduate study in psychology**
PhD
Masters 2 years (full-time)



▶ **Psychologist**

+ 4TH YEAR PSYCHOLOGY

1 year (full-time)

- Honours in Psychology
- Graduate Diploma of Psychology Advanced (online)
- Graduate Diploma of Professional Psychology



For more information about Science as a pathway to Medicine, visit monash.edu/science/future-students/your-essential-guide-domestic-students/science-as-a-pathway-to-medicine



Your Essential Guide to Monash Science
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