Department of Chemistry and Biomolecular Sciences

Major in Biomolecular Science


Dr Louise J Brown  @dr_ljbrown
Biomolecular Sciences
Study of how molecules work in living organisms

We focus on the molecular basis of the world and life, may these be:
chemical compounds, DNA, proteins or cells

Putting this into practice, our research and teaching help to discover new compounds, biomarkers to disease and help keep the planet clean and healthy
Degree Programs

Major in Biomolecular Sciences
Study of how molecules work in living organisms

Advanced programs in Chemistry and in Biomolecular Sciences are available

Combination of the two majors provides you with bankable skills in the workplace
CBMS Units at 100 Level

- CBMS101 Introductory Chemistry (S1) OR
- CBMS102 General Chemistry (S1) AND
- CBMS103 Organic and Biological Chemistry

Major in Chemistry

Major in Biomolecular Sciences

Other Major (e.g. Biology, Marine Science, Env. Science, Physics)
CBMS Units at 200 Level

- CBMS215 Microbiology
- CBMS223 Biochemistry
- CBMS224 Molecular Biology
CBMS Units at 300 Level

ELECTIVES

• Protein Discovery and Analysis
• Cell Biology and Biochemistry
• Molecular Biology and Genomics
• Molecular and Medical
• Biotechnology, Functional Proteomics
• Medicinal Chemistry

PLUS

• CBMS330 Capstone – Synthetic Biology
Capstone Unit (Synthetic Biology)

• Skills, training and mentoring facilitating the transition from academia to the professional workplace (project work, how to put together an attractive CV, mock interviews, international iGEM competition etc)
Job opportunities for graduates

- Biotechnology and pharmaceutical industry
- Food and Feed industry
- Industrial waste management
- Quality control: chemical, microbial
- Hospital and Medical labs
- Analytical chemistry labs
- Research organisations (e.g. Victor Chang, CSIRO)
- Universities
- Environmental agencies
- Government agencies
- Patent law
- Education
- Science journalism
- Technical sales and service

Starting salaries $45-65K
Biomolecular Science Research:

- **Bio-organic and medicinal chemistry:** drug discovery and design
- **Biochemistry:** metabolic processes in the cell, metabolic engineering
- **Proteomics:** study of the thousands of types of proteins found in all life forms, e.g. cancer biomarkers
- **Genomics:** vaccine / drug discovery, disease diagnostics, bioremediation
- **Biotechnology:** e.g. developing micro-organisms for production of commercially relevant proteins for biopharma and industry
- **Synthetic Biology:** engineering of biology for new purposes
Facilities and specialised instrumentation
Research Training @MQ – Mres to PhD

It’s all about your research environment....