postgraduate coursework programs in molecular biology

Advances in molecular biology have transformed biological research and driven the extensive growth in the biotechnology industry. These rapid increases in molecular medicine and technology have created a high demand for skilled molecular biologists across the world.

Molecular biology is the study of the structure and function of genes and the proteins they encode, including genome sequencing, recombinant DNA technology and macromolecular structure determination.

Molecular biology is used to understand the interactions between the various systems of a cell, including interactions between DNA, RNA and protein biosynthesis and how these interactions are regulated.

Our postgraduate programs will give you advanced theoretical and practical training in molecular biology through lectures, workshops, extended research projects and directed study.

You will also be trained in research methodology in molecular biology and have the opportunity to undertake a major individual research project. The molecular biology suite of programs is highly flexible to ensure that your previous study, experience, and interests are catered for.

UQ Advantage
You will receive extensive hands-on laboratory experience while learning the most advanced theory and research from some of Australia’s leading molecular biology educators.

www.uq.edu.au/study
**Career opportunities**
Career opportunities span a range of industries including:

- biotechnology
- food manufacturing and processing
- pharmaceuticals
- environment/government
- pathology and hospital laboratories
- research laboratories
- research higher degree
- science communication (journalism)

**Program structure**

**Graduate Certificate in Molecular Biology**
- 8 units (half year full-time or part-time equivalent)

**Graduate Diploma in Molecular Biology**
- 16 units (1 year full-time or part-time equivalent)

**Master of Molecular Biology**
- 16 units (1 year full-time or part-time equivalent)
- 24 units (1.5 years full-time or part-time equivalent)
- 32 units (2 years full-time or part-time equivalent)

**Sample courses:**

- Introduction to the molecular biology laboratory
- Bioinformatics and genomics for molecular biologists
- Advanced molecular biology laboratory
- Advanced protein technology
- Immunology and infectious diseases

Also as part of the programs students will be able to undertake further research training through courses relating to scientific writing, and research laboratory-based projects ranging in length from 2 units to 16 units dependent on program.

**Entry requirements**

**Graduate Certificate in Molecular Biology**
Bachelor degree in the same discipline (such as genetics, molecular biology, biochemistry, biotechnology, biological chemistry or similar).

**Graduate Diploma in Molecular Biology**
Bachelor degree in the same discipline (such as genetics, molecular biology, biochemistry, biotechnology, biological chemistry or similar).

**Master of Molecular Biology (#16)**
Bachelor degree in the same discipline (such as genetics, molecular biology, biochemistry, biotechnology, biological chemistry or similar); or a Graduate Certificate; or Graduate Diploma in Molecular Biology plus a postgraduate qualification incorporating a significant research project or research experience.

**Master of Molecular Biology (#24)**
Bachelor degree in the same discipline (such as genetics, molecular biology, biochemistry, biotechnology, biological chemistry or similar); or a Graduate Certificate; or Graduate Diploma in Molecular Biology.

**Master of Molecular Biology (#32)**
Bachelor degree in the same discipline (such as genetics, molecular biology, biochemistry, biotechnology, biological chemistry or similar); or a Graduate Certificate; or Graduate Diploma in Molecular Biology.

It is expected that The University of Queensland will be able to offer 24 and 32 unit research extensive Masters programs that include enhanced and extended research training. The entry requirements for these program will be similar to the 16 unit program detailed above for the 24 unit research extensive program and similar to the 24 unit program above for the 32 unit research extensive program.

**How to apply**
Information about application procedures can be found at [www.future-students.uq.edu.au/apply](http://www.future-students.uq.edu.au/apply)

**Time of publication:** Every effort has been made to ensure the accuracy of information in this document at the time of publication. The authoritative source of program and course information is the UQ Courses and Programs website at uq.edu.au/study. Where any conflict of information exists, the rules and associated course lists approved by the UQ Senate shall apply.

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Chris Weir had offers to study elsewhere and had visited other top universities overseas, but chose UQ for his postgraduate coursework because of its reputation and its cultural diversity.

“I had offers to do graduate studies at Sydney, Melbourne and Monash Universities, but chose UQ partly because of the way my Master of Molecular Biology program was structured and because I could see that it would prepare me well if I wanted to pursue doctoral studies,” Chris said.

“My Master of Molecular Biology program involved both advanced coursework and research. The equipment I used is better than many other places I have visited, and the staff are very professional, approachable and respectful of cultural, religious and gender diversity. I can honestly say that UQ’s reputation in science is well-deserved.”

Since graduating from the Master program Chris has been awarded a prestigious PhD canditature at the Walter and Eliza Hall Institute of Medical Research.

Chris Weir
Postgraduate Coursework in Molecular Biology graduate