



**Approval to Undertake a  
MEDN3007 or MEDN8007  
Computational Biomedicine Research Project**

**Application Instructions to student:**

This form should be completed when you wish to enrol in MEDN3007 (6 or 12 units) or MEDN8007 (6 or 12 units)

1. Complete **Sections A and B** of this form; get your proposed Supervisor and Course Convener to sign **Section C** and to also read the attached course outline and what it entails.
2. Submit the completed form electronically with your request to enrol via the following link: <https://students.science.anu.edu.au/program-admin/requesting-permission-enrol>. Please provide copies of relevant Academic Transcripts with your enrolment form.
3. Your application will be assessed and, if approved, you will be given access to enrol in this course.
4. Once approved enrol through ISIS.

Please note: Permission from the course convener to enrol in this course does not necessarily mean the course will satisfy degree program requirements.

## SECTION A: STUDENT ENROLMENT DETAILS

Family Name:	Given Name:
Uni ID:	Date:
Course Code:	Unit Value:
Sem/Session:	Year:

## SECTION B: RESEARCH PROJECT DETAILS

<b>Research Project Title</b>
<b>Brief Project Summary</b> (please provide an outline of the proposed special topic. Attach extra pages if necessary)

## SECTION C: APPROVAL TO COMMENCE RESEARCH PROJECT

**Supervisor please read:**

1. I/We agree to supervise this project and
2. Accept responsibility and obligations detailed in the appended abbreviated course description

Supervisor name: .....

Supervisor signature: ..... Date: ..... / ..... /.....

**Signature required by Group Leader (if different from Supervisor)**

Group Leader name: .....

Group Leader signature: ..... Date: ..... / ..... /.....

**Course Convenor:**

Convenor signature: ..... Date: ..... / ..... /.....

1. I agree to the above student being issued with permission to undertake this course
2. Additional comments:

# COMPUTATIONAL BIOMEDICINE PROJECT

MEDN3007 (6 or 12 units) or MEDN8007 (6 or 12 units)

**OFFERED IN:** Semester 2

**CONVENOR:** Eduardo Eyras (Eduardo.eyras@anu.edu.au)

**WEB PAGES:** <https://programsandcourses.anu.edu.au/2023/course/MEDN3007>

<https://programsandcourses.anu.edu.au/2023/course/MEDN8007>

## PRE-REQUISITES FOR ENROLMENT:

MEDN3007: Completed a minimum of 72 units of tertiary study.

MEDN8007: Bachelor's Degree or International equivalent in a science, technology, engineering or mathematics subject.

## ASSUMED KNOWLEDGE:

Sufficient knowledge and experience in the development of software for data analysis will be required for this course. It is recommended to have successfully completed one or more courses on algorithms, programming, and data analysis, such as:

[COMP1730](#) Programming for scientists

[COMP1100](#) Programming as problem-solving

[MATH3407](#) Bioinformatics and Biological Modelling

[BIOL2202](#) Experimental design and analysis in biology

[BIOL3157](#) Bioinformatics and its applications

[COMP3600](#) Algorithms

**TO ENROL:** Students must request an enrolment form by emailing JCSMR HDR Student Administration to receive an application form that must be first completed by the student and supervisor before it is assessed by the convener. Please provide copies of relevant Academic Transcripts when submitting your enrolment form.

## LEARNING OUTCOMES:

1. Plan and pursue a guided investigation and evaluation of computational methods to address biomedical research questions.
2. Systematically apply relevant theory and methods and draw evidence-based conclusions to biomedical problems using computational technologies.
3. Explain concepts in computational biology and develop a translational application.
4. Demonstrate accurate and efficient use of computational methodologies to solve biomedical problems.

5. Demonstrate capacity for scientific reasoning through the application of basic concepts in computational biology and their communication to academic audiences.

#### **TYPE OF PROJECTS:**

For a list of potential projects, please visit the websites of the Centre for Computational Biomedical Sciences:

<https://jcsmr.anu.edu.au/study/talo-computational-biology-talent-accelerator/potential-internship-projects>

The Shine-Dalgarno Centre of RNA Innovation:

<https://jcsmr.anu.edu.au/research/centres/sdcric>

The Eccles Institute of Neuroscience

<https://jcsmr.anu.edu.au/research/divisions/eccles-institute-neuroscience>

The John Curtin School of Medical Research

<https://jcsmr.anu.edu.au/research/groups>

#### **CHOICE OF SUPERVISOR:**

Students need to contact/email staff to discuss project opportunities and their interest/availability to serve as a supervisor. Do your homework beforehand. Look at their websites and succinctly summarise in your email what interests you about their research and ask to meet up with them (face-2-face or via Zoom).

Students are also welcome to seek advice and guidance from the course convener.

#### **COURSE ASSESSMENT ITEMS AND WORKLOAD:**

Indicative Assessment

1. Project Proposal (10%)
2. Software Output (20%)
3. Final Report (50%)
4. Oral Presentation (20%)

This course is available as 6 or 12 unit course.

The expected workload if taken as a 6 unit course will consist of approximately 130 hours throughout the semester including approximately 65 hours of team meetings, event preparation and self-directed study, including developing skills in developing and/or using software tools, and 65 hours of computational design and data analysis. Students are expected to actively participate and contribute towards group scientific discussions, presentations in group meetings, and attend school seminars.

## **RESPONSIBILITY OF SUPERVISORS:**

Supervisors must be available to advise throughout the entire project and:

1. Meet with the student within the first three weeks of the semester to complete a Candidate and Supervisor Expectations Report.
2. Should maintain regular contact with the student via arranged meeting times that are mutually convenient (a discussion point in the Expectations Report).
3. Assist the student with the planning and preparation of their research and their Research Project.
4. Provide advice and feedback during the seminar preparation.
5. Ensure the Occupational Health and Safety and any other specialised training requirements are met by the student.