

# ELEC 6002 MASTER DISSERTATION IN NEUROMORPHIC ENGINEERING

**Credit Points** 40

**Legacy Code** 800234

**Coordinator** Bharath Ramesh ([https://directory.westernsydney.edu.au/search/name/Bharath Ramesh/](https://directory.westernsydney.edu.au/search/name/Bharath%20Ramesh/))

**Description** This is a 80 credit point year-long subject taken over two terms (40 credit points in each term). This subject is offered exclusively on campus for students to benefit from mentorships and regular interactions with leading researchers in the field. Students will have the opportunity to contribute towards impactful research projects, aiming at academic growth and progress. To achieve this goal, the Dissertation subject is designed for students to plan and execute a research-based project in the area of Neuromorphic Engineering. The main task in the year-long 80 credit point dissertation subject is an academic research paper that meets publishing standards and is peer-reviewed by external reviewers (getting the article published on a journal is not a completion requirement to the unit). The students shall be part of regular International Center for Neuromorphic Systems (ICNS) interactions, and benefit from supervisors in a discursive setting as the candidate makes progress.

**School** Graduate Research School

**Discipline** Electrical And Electronic Engineering And Technology

**Student Contribution Band** HECS Band 2 40cp

Check your HECS Band contribution amount via the Fees ([https://www.westernsydney.edu.au/currentstudents/current\\_students/fees/](https://www.westernsydney.edu.au/currentstudents/current_students/fees/)) page.

**Level** Postgraduate Coursework Level 6 subject

## Restrictions

Students must be enrolled in 8123 Master of Neuromorphic Engineering

## Learning Outcomes

On successful completion of this subject, students should be able to:

1. Formulate a feasible research plan designed to enhance system capabilities compared to standard sensing frameworks
2. Integrate supervisor feedback into research outcomes using critical reflective practice
3. Systemically and critically analyse data and information sources that are related to the identified research question aiming to enhance the capabilities of the neuromorphic system
4. Effectively communicate project outcomes in a final scientific presentation
5. Compose a scientific research report that synthesises research findings in an application-centred task
6. Produce a scientific article that meets publishing standards by integrating the theory & novel experimental findings

## Subject Content

- Literature view
- Research methods
- Ethics
- Portfolio
- Data collection and analysis
- Peer review
- Oral presentation
- Practical experiments
- Writing abstract
- Writing for publication

## Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/Group Task
Proposal	1000 words or equivalent	5	N	Individual
Portfolio	3000 words or equivalent	10	N	Individual
Practical	3000 words	10	N	Individual
Presentation	30 mins	10	N	Individual
Thesis (Dissertation)*words	Min 10,000	50	Y	Individual
Professional Task*	6,000 words	15	Y	Individual

Teaching Periods

## Autumn (2023)

### Penrith (Kingswood)

#### On-site

**Subject Contact** Bharath Ramesh ([https://directory.westernsydney.edu.au/search/name/Bharath Ramesh/](https://directory.westernsydney.edu.au/search/name/Bharath%20Ramesh/))

View timetable ([https://classregistration.westernsydney.edu.au/odd/timetable/?subject\\_code=ELEC6002\\_23-AUT\\_KW\\_1#subjects](https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=ELEC6002_23-AUT_KW_1#subjects))