

LF314-15 Laboratories and Assessments for Neuroscience

22/23

Department

Life Sciences

Level

Undergraduate Level 3

Module leader

Daniel Franklin

Credit value

15

Module duration

30 weeks

Assessment

Multiple

Study location

University of Warwick main campus, Coventry

Description

Introductory description

Subject specific laboratory classes and a small group tutorial programme.

Module aims

To complete the development of students' research and transferrable skills through a program of laboratory and tutorial activities (continuation of programs in Years 1 and 2).

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

Students will complete the third year of a laboratory and tutorial-based skills program. The key aims of the year 3 program are to embed final year level literature and practical research skills. This will be achieved through a combination of tutorial set tasks, some of which are formative, some summatively assessed, and laboratory classes.

Learning outcomes

By the end of the module, students should be able to:

- Students should be able to design experiments
- Students should be able to navigate ethical approval
- A theoretical knowledge of neurobiology
- A practical knowledge of neurobiology
- Consolidation of knowledge from neuroscience lectures
- A comprehensive overview of complex mammalian biology
- Understand current experimental techniques
- Understanding experimental design
- Written communication skills
- Oral communication skills
- Use of scientific databases
- Ability in critical analysis
- Ability to formulate and test hypotheses
- Team working skills

Subject specific skills

- a. Demonstrate clear understanding of the scientific topic
- b. Contain evidence of extended reading and lateral integration of material not covered in the lectures
- c. Demonstrate independent thought and deep understanding
- d. Specifically answer the set question using information from multiple lectures and sources
- e. Be structured and formatted in a way that demonstrates understanding and logical flow
- f. Use multiple sources to construct complex scientific arguments and integrating these to build and develop the student's own scientific conclusions.

Transferable skills

1. Critical appraisal of source material
2. Self directed learning
3. Adult learning

Study

Study time

| Type | Required |
|-----------|----------------------------|
| Tutorials | 12 sessions of 1 hour (8%) |
| Total | 150 hours |

| Type | Required |
|-------------------|-----------------------------|
| Practical classes | 50 sessions of 1 hour (33%) |
| Private study | 88 hours (59%) |
| Total | 150 hours |

Private study description

Labs - data analysis and report writing.

Tutorials - preparation of material for each contact session, and assessment reports.

Costs

No further costs have been identified for this module.

Assessment

You do not need to pass all assessment components to pass the module.

Assessment group A

| | Weighting | Study time |
|--|------------------|-------------------|
| Neuroscience lab - experimental design test In-lab test | 4% | |
| Neuroscience lab - electrophysiology skills | 8% | |
| Neuroscience lab - immunohistochemistry skills | 8% | |
| Neuroscience lab - behavioural assessment | 4% | |
| Neuroscience lab - group discussion | 16% | |
| Neuroscience lab - written manuscript | 40% | |
| Experimental design 1 | 10% | |
| Ethical approval tutorial | 10% | |

Assessment group R

| | Weighting | Study time |
|--------------------------|------------------|-------------------|
| Module is not reassessed | 100% | |

Feedback on assessment

Written individual feedback

Availability

Courses

This module is Core for:

- Year 3 of ULFA-B140 Undergraduate Neuroscience (BSc)
- Year 3 of ULFA-B142 Undergraduate Neuroscience (MBio)
- Year 3 of ULFA-B143 Undergraduate Neuroscience (with Industrial Placement) (MBio)