BS121-30 Laboratories & Assessed Work

21/22

Department
Life Sciences
Level
Undergraduate Level 1
Module leader
Daniel Franklin
Credit value
30
Module duration
25 weeks
Assessment
Multiple
Study location
University of Warwick main campus, Coventry

Description

Introductory description

Tutorial programme:
To provide academic support for the principle core module LF104 and BS129 via problem based learning small group teaching.
To introduce and develop fundamental study skills.
To identify and support individual pastoral care needs and introduce the referral pathway.

Laboratories:
To develop confidence in fundamental laboratory skills and techniques, be able to follow protocols for handling/setting up equipment, generate good quality data, identify and apply appropriate data presentation, interpretation and analysis.

Module web page

Module aims

Students will have learned how to conduct scientific investigations and communicate scientifically in an appropriate style, through lab reports, essays and oral communication.

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.

1. A series of experiments in biochemistry, molecular biology, bacterial and eukaryotic genetics and physiology.
2. A program of tutorials providing guidance and support for development of scientific writing, speaking, researching and problem-solving skills in the context of subject matter drawn from the core lecture modules LF104 and BS129
3. An extended essay on a biological topic

Learning outcomes

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

- Research given topics in the primary literature and consolidate relevant information to present a well-structured scientific essay.
- Understand and evidence by key concepts fundamental to the core modules LF104 and BS129
- Research given topics using lecture content and primary literature to develop and deliver a short oral presentations. The imagery, content accuracy and the delivery style will be appropriate to the topic and audience.
- Understand key concepts fundamental to the core modules LF104 and BS129
- Show development in their critical analytical skills
- Understand the scientific process to perform a hypothesis driven simple experiments, with due regard to appropriate accuracy and detail.
- Develop their scientific writing style and understanding of the need for accuracy in the generation of data, its presentation and analysis with the aim of producing a well-structured scientific report

Indicative reading list

Recent/current editions of

Berg, Tymoczko and Stryer. Biochemistry

Lodish et al Molecular Biology of the Cell

Brock, Biology of Microorganisms

Subject specific skills

research given topics in the primary literature and consolidate relevant information to present a well-structured scientific essay.

research given topics using lecture content and primary literature to develop and deliver a short oral presentations. The imagery, content accuracy and the delivery style will be appropriate to the

topic and audience.

understand key concepts fundamental to the core modules LF104 and BS129

show development in their critical analytical skills

LABORATORIES

understand and evidence by key concepts fundamental to the core modules LF104 and BS129

understand the scientific process to perform a hypothesis driven simple experiments, with due regard to appropriate accuracy and detail.

develop their scientific writing style and understanding of the need for accuracy in the generation of data, its presentation and analysis with the aim of producing a well-structured scientific report

Transferable skills

Adult learning, self directed learning, team based learning, presentation skills, report production, quantitative skills

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Study

Study time

Type	Required
Tutorials	18 sessions of 1 hour (6%)
Practical classes	12 sessions of 6 hours (24%)
Private study	210 hours (70%)
Total	300 hours

Private study description

210 hrs of self directed learning, preparation for sessions and production of assessed work / 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 A2

	Weighting	Study time
Experiment 3 - Intro to Microbiology	6%	
Experiment 4 - Growth curve	6%	
Experiment 5 - Endospores	6%	
Experiment 6 - Beta-galactosidase	6%	
Experiment 7 - Allosteric regulation 1	6%	
Experiment 8 - Allosteric regulation 2	6%	
Experiment 9 - Properties of enzymes	6%	
Experiment 10 - Structural features of proteins	6%	
Experiment 11 - Physiology lab	6%	
Experiment 12 - Neuroscience lab	6%	
Christmas vacation essay	5%	
Individual oral presentation	5%	
Group poster presentation	10%	
Easter vacation extended essay	20%	

Assessment group R

	Weighting	Study time
This module cannot be reassessed.	100%	

Feedback on assessment

Written feedback on submitted work via Moodle for labs and tutorial work. Oral feedback is given for formative tutorial work.

Availability

Courses

This module is Core for:

- UBSA-3 Undergraduate Biological Sciences
  - Year 1 of C100 Biological Sciences
  - Year 1 of C100 Biological Sciences
- Year 1 of ULFA-C1A1 Undergraduate Biological Sciences (MBio)
- Year 1 of ULFA-C113 Undergraduate Biological Sciences (with Placement Year)
- Year 1 of ULFA-C1A5 Undergraduate Biological Sciences with Industrial Placement (MBio)
- UBSA-C1B9 Undergraduate Biomedical Science

    - Year 1 of C1B9 Biomedical Science
    - Year 1 of C1B9 Biomedical Science
    - Year 1 of C1B9 Biomedical Science
- ULFA-C1A3 Undergraduate Biomedical Science (MBio)
    - Year 1 of C1A3 Biomedical Science
    - Year 1 of C1B9 Biomedical Science
- Year 1 of ULFA-C1A7 Undergraduate Biomedical Science with Industrial Placement (MBio)
- ULFA-CB18 Undergraduate Biomedical Science with Placement Year
    - Year 1 of CB18 Biomedical Science with Placement Year
    - Year 1 of CB18 Biomedical Science with Placement Year
    - Year 1 of CB18 Biomedical Science with Placement Year
- Year 1 of ULFA-B140 Undergraduate Neuroscience (BSc)
- Year 1 of ULFA-B142 Undergraduate Neuroscience (MBio)
- Year 1 of ULFA-B143 Undergraduate Neuroscience (with Industrial Placement) (MBio)
- Year 1 of ULFA-B141 Undergraduate Neuroscience (with Placement Year) (BSc)