UNIVERSITY of BRADFORD

Module Descriptor

Module Details	
Module Title	Laboratory and Professional Skills 1
Module Code	BIS4018-B
Academic Year	2024/5
Credits	20
School	School of Chemistry and Biosciences
FHEQ Level	FHEQ Level 4

Contact Hours	
Type	Hours
Directed Study	148
Laboratories	21
Lectures	10
Tutorials	10
Practical Classes or Workshops	11

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Academic Year

Module Aims

Scientists are not only responsible for routine testing required for healthcare decisions, but they are also fundamental for furthering our understanding of disease and pioneering new treatments. To be able to work effectively, scientists must possess not only key laboratory skills but also keen inquiry, evaluation and critical analysis skills.

This module supports the Biomedical Science programme by developing learners? practical, literacy, numerical and data handling skills. The module also furthers understanding of professional standards in Biomedical Science and facilitates the acquisition of core personal transferable skills (PLO2-5).

This module will support those students seeking technical knowledge, practical and professional skills to support their employment in research or routine testing laboratories.

Outline Syllabus
Academic content: Laboratory health and safety Laboratory skills: cell counting methods (manual and automated), light spectrophotometry, balances, pH meter, micropipettes, centrifugation methods. Writing skills Mathematical skills for laboratory scientists Plagiarism Planning a project & time management Generation of reliable data Data handling, analysis and interpretation workshops Approaches to assessments and examinations. Presentations skills: how to reach your audience. Careers sessions Employability and enterprise skills: Biomedical technique knowledge and understanding Communication skills Data handling Data analysis and interpretation Planning and time management Critical thinking Team work Reflective practice

Learning Outcomes	
Outcome Number	Description
01	Select appropriate techniques to design and carry out experiments to collect, analyse and effectively communicate data.
02	Demonstrate understanding of laboratory health and safety requirements and how to work in accordance with laboratory safety protocols.Demonstrate understanding of laboratory health and safety requirements and how to work in accordance with laboratory safety protocols.
03	Perform basic mathematical calculations relevant to laboratory practice using correct scientific units and terminology with an ability to interconvert units.
04	Demonstrate awareness of experimental limitations and the requirements for reliable data generation.
05	Apply reflective practice.

Learning, Teaching and Assessment Strategy

The LTA strategy encompasses education for employability and equal opportunities for learners.
Lectures to cover key information for all learners including health and safety, communication skills, experimental design and quality assurance
.
Laboratories to support students to gain necessary experimental competencies and to conduct a mini-project.

Tutorials for structured small group work including feedback on draft assessments, and pastoral care.
Workshops for applied experience of common software packages, plagiarism training and COSHH forms
Private study will be facilitated and supported via the use of the VLE which will provide coursework advice and feedback, and revision support.

The skills eportfolio is continually assessed and includes a log of demonstrated practical skills, laboratory reports, reflection on performance, health and safety training, equality and diversity and unconscious bias training. The skills eportfolio will also include a chemical information leaflet to assess understanding of the health and safety aspects of laboratory work and how they are risk assessed.

The maths for scientists computer-based test will facilitate the consolidation of numeracy skills relevant to the field.

At the end of the academic year students will present their mini projects in a group poster session. Students who are required to undertake supplementary assessment will produce an individual poster.

Mode of Assessment

Type	Method	Description	Weighting
Summative	Coursework - Written	Skills eportfolio	60%
Summative	Computerised examination	Maths for scientists computerised exam	20%
Summative	Presentation	Poster presentation.	20%

Reading List

To access the reading list for this module, please visit https://bradford.rl.talis.com/index.html

Please note:
This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.
