Module specification

When printed this becomes an uncontrolled document. Please access the Module Directory for the most up to date version by clicking on the following link: Module directory

Refer to the module guidance notes for completion of each section of the specification.

Module code	SCI544
Module title	Advanced Laboratory Skills for the Biomedical and Life Sciences (ALSBLS)
Level	5
Credit value	20
Faculty	FSLS
Module Leader	Tbc
HECoS Code	100265
Cost Code	GANG

Programmes in which module to be offered

Programme title	Is the module core or option for this programme
BSc (Hons) Biomedical Science	Core
BSc (Hons) Biochemistry	Core

Pre-requisites

None

Breakdown of module hours

Learning and teaching hours	8 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	22 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
Total active learning and teaching hours	**30** hrs
Placement / work based learning	170 hrs
Guided independent study	0 hrs
Module duration (total hours)	200 hrs

For office use only	
Initial approval date	14/10/2020
With effect from date	01/09/2022
Date and details of revision	
Version number	1

Module aims

To introduce students to advanced Biomedical & Life Science laboratory techniques, to develop an understanding of Regulatory Issues, Health and Safety, and the application of academic knowledge in a Pathology Laboratory context.

Students will gain experience of applying and developing skills in an appropriate and relevant setting to make them increasingly responsible for their own learning and encourage them to value and evaluate learning through experience.

Module Learning Outcomes - at the end of this module, students will be able to:

1	Critically evaluate the links between the theoretical concepts in biomedical sciences and development of practical skills.
2	Apply understanding of practical clinical skills and analysis in the different fields of biomedical science.
3	Design and evaluate a standard operating procedure (SOP) and explain their importance in biomedical science.
4	Critically reflect upon and evaluate the processes involved in the clinical laboratory, working as a team and self-management, and interpret and apply concepts and principles of good laboratory practice in the workplace.

Assessment

Indicative Assessment Tasks:
Assessment 1: Laboratory Practical Report (notebook) (60%, 2400 word equivalent), assessing learning outcomes 1, 2 and 4.
Assessment 2: Clinical Report – Standard Operating Procedure (SOP) from one of the clinical areas covered during the module (40%, 1600 word equivalent), assessing learning outcome 3.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1, 2, 4	Report	60%
2	3	Report	40%

Derogations

For Biomedical Science students (only):

This module must be passed at or above 40%.
Compensation for failure is not permitted for this module and other “core” biomedical science modules across the programme.

Learning and Teaching Strategies

The module will comprise of laboratory practical sessions, lectures and seminars. Appropriate use will be made of text and electronic resources (VLE).

Formative assessment will be provided in dedicated seminar sessions focussing on data interpretation and discuss the importance of standard operating procedures (SOPs) in clinical tests.

Formative Assessment: Laboratory report (notebooks) will be checked and signed at the end of each day. There will also be informal feedback from the individual supervisors as the module progresses. Students will be expected to attend all preparation and laboratory sessions.

Indicative Syllabus Outline

Support lecture programme (which will include, lectures, seminars and interviews).

IBMS - Certificate of Competence Portfolio, IBMS Specialist Portfolio, Health & Safety (COSHH, Risk Assessments), NEQAS (Quality Control), ISO15189-Medical Laboratory Accreditation.

Programme will include Standard Operating Procedures (SOPs), Clinical Statistics, Record Keeping/Clinical Audits and Research Issues

The laboratory sessions will cover the following Pathology disciplines:

- Clinical Biochemistry
- Immunology
- Haematology & Blood Transfusion Medicine
- Medical Microbiology
- Histology & Cytopathology
- During the self-study period, students will be expected to complete a laboratory book, write up their laboratory reports and to read and complete the appropriate sections of their IBMS Certificate of Competence portfolios.

Indicative Bibliography:

Please note the essential reads and other indicative reading are subject to annual review and update.

Essential Reads

Bonner, P., & Hargreaves, A. (2011). *Basic bioscience laboratory techniques: A pocket guide* (1st ed.) [electronic book]. Chichester, United Kingdom: Wiley-Blackwell.

Other indicative reading

IBMS (2017). Registration Portfolio: Laboratory Training Logbook (V.4.1, 2017). London, United Kingdom: IBMS.
Reed, R., Weyers, J., & Jones, A.(2016). *Practical skills in biomolecular science.* (5th ed.). Harlow, United Kingdom: Pearson Education.
Fook, J., & Gardner, F. (2007). *Practising critical reflection: A handbook*. *(Latest Ed.)*. Oxford, United Kingdom: Oxford University Press.
Websites:
Institute of Biomedical Sciences (IBMS) (http://www.ibms.org/).

Employability skills – the Glyndŵr Graduate

Each module and programme is designed to cover core Glyndŵr Graduate Attributes with the aim that each Graduate will leave Glyndŵr having achieved key employability skills as part of their study. The following attributes will be covered within this module either through the content or as part of the assessment. The programme is designed to cover all attributes and each module may cover different areas. Click here to read more about the Glyndwr Graduate attributes

Core Attributes
Engaged
Creative
Enterprising
Ethical

Key Attitudes
Commitment
Curiosity
Resilience
Confidence
Adaptability

Practical Skillsets
Digital Fluency
Organisation
Leadership and Team working
Critical Thinking
Emotional Intelligence
Communication