

Liverpool John Moores University

Title: PRACTICAL AND LEARNING SKILLS FOR BIOMOLECULAR SCIENCE PROGRAMMES
Status: Definitive
Code: **4001GNBMOL** (101554)
Version Start Date: 01-08-2011

Owning School/Faculty: Pharmacy & Biomolecular Sciences
Teaching School/Faculty: Pharmacy & Biomolecular Sciences

Team	Leader
Amanda Reid	Y
Kehinde Ross	
Mark Murphy	
Anne Humphreys	
Suzanne McColl	
George Sharples	

Academic Level: FHEQ4 **Credit Value:** 12.00 **Total Delivered Hours:** 43.00
Total Learning Hours: 120 **Private Study:** 77

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	24.000
Online	6.000
Practical	8.000
Workshop	4.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	Examination	60.0	1.00
Report	AS2	Coursework: Practical write ups & log book record	40.0	

Aims

To facilitate the effective study in Biomolecular Sciences by providing a foundation in laboratory techniques, laboratory skills and study skills.

Learning Outcomes

After completing the module the student should be able to:

- 1 Use simple numerical and mathematical skills in relation to laboratory procedures and basic chemical and biochemical calculations.
- 2 Use information technology (e.g. word processing, spreadsheets, email, internet and subject specific programmes)
- 3 Interpret written instructions, perform routine laboratory tasks and analyse both given data and practical results.
- 4 Demonstrate knowledge of basic biomolecular methods.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

EXAM	1	3	4	
Practical Report	1	2	3	4

Outline Syllabus

Study Skills: The learning process, types of learner, strategies for study & revision, time management, working in groups, organisation and leadership. The presentation of written material including graphical & tabular presentation of data. Oral presentation.

Numeracy: Algebra, powers, orders of magnitude and logarithmic scales.

Expression of results, significant figures, linear equations. Basic statistics.

Concepts linked to basic laboratory calculations on concentration, amount, dilution, pH and buffers.

Information Technology: Introduction to the University PC network and University webpages. Wordprocessing and spreadsheets. email & the world wide web.

General Laboratory Skills: Introduction to Health & Safety. Record keeping - the laboratory note book. Practical sessions will highlight laboratory skills such as; the use of basic laboratory equipment;

preparation of solutions & dilutions and the measurement of concentration; the measurement of pH;

Lecture material may include: study skills; health & Safety; basic laboratory procedures; basic numeracy; basic statistics; spectroscopy; pH and buffers; chromatography; centrifugation; electrophoresis

Learning Activities

Lectures, practicals, workshops & I.T. sessions

References

Course Material	Book
Author	Reed, R., Holmes, D., Weyers, J., & Jones, A.
Publishing Year	2003
Title	Practical Skills in Biomolecular Sciences
Subtitle	
Edition	2nd edition
Publisher	Pearson: Prentice Hall
ISBN	0 130 45142 8

Course Material	Book
Author	Wilson, K & Walker, J.
Publishing Year	2000
Title	Principles & Techniques of Practical Biochemistry
Subtitle	
Edition	5th edition
Publisher	Cambridge University Press
ISBN	052165873X

Course Material	Book
Author	Barnes, R.
Publishing Year	2005
Title	Successful Study for Degrees
Subtitle	
Edition	5th edition
Publisher	London: Routledge
ISBN	0415327997

Course Material	Book
Author	Northedge, A.
Publishing Year	2005
Title	The Good Study Guide
Subtitle	
Edition	
Publisher	Milton Keynes: Open University Press
ISBN	0749259744

Course Material	Book
Author	Maber, J.
Publishing Year	1999
Title	Data Analysis for Biomolecular Sciences
Subtitle	
Edition	

Publisher	Longman
ISBN	0582305950

Notes

An introduction to essentially practical skills and procedures used in modern day laboratories. Some emphasis will be placed on study skills and the integrated use of information technology in analysing laboratory data.