

MODULE DESCRIPTOR

Module Title

Fundamental Blood Sciences			
Reference	PL3501	Version	2
Created	September 2023	SCQF Level	SCQF 9
Approved	June 2023	SCQF Points	15
Amended	September 2023	ECTS Points	7.5

Aims of Module

To provide students with the ability to apply the principles of clinical biochemistry, haematology and the essential features of transfusion science to the diagnosis, treatment and monitoring of disease.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Discuss the methods used for investigations of haematopoiesis and haemostasis, incorporating appropriate management systems.
- 2 Discuss preparation, storage and appropriate use of blood components, demonstrating knowledge of genetics, inheritance, structure and role of red cell antigens.
- 3 Discuss the laboratory investigations of cardiovascular, gastrointestinal, renal, and liver disorders, and how pregnancy can be confirmed and monitored.
- 4 Evaluate results from the analysis of blood.

Indicative Module Content

Haematology: Haematopoiesis and haemostasis, basic morphology. Transfusion Science: Main blood group systems, effective blood bank practice and component preparation. Clinical Biochemistry: Clinical Endocrinology; thyroid function tests. Clinical chemistry of the kidney and related disorders; role of kidney in homeostasis of nitrogen, renal function tests, creatinine, gout and aminoaciduria's. Cardiovascular disease; platelet functions, thromboses and atherosclerosis. Liver disease; liver function tests, jaundice. Gastroenterology; gastric and duodenal function tests. Clinical chemistry of pregnancy and lactation; pregnancy tests. Analytical Techniques: Sample selection and quality assurance, manual and automated methods of investigations; cell identification and counting, haemoglobinometry, haematinic and haemoglobin variants, coagulation tests, serological techniques and compatibility testing.

Module Delivery

This is a lecture and case study oriented course supplemented with directed reading, seminars from visiting speakers and tutorial sessions.

Indicative Student Workload

	Full Time	Part Time
Contact Hours	30	N/A
Non-Contact Hours	120	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	N/A
<i>Actual Placement hours for professional, statutory or regulatory body</i>		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type:	Examination	Weighting:	70%	Outcomes Assessed:	1, 2, 3
Description:	A closed book examination consisting of two sections: Section A will be one of three pre-seen case studies; Section B will consist of essay questions.				

Component 2

Type:	Practical Exam	Weighting:	30%	Outcomes Assessed:	4
Description:	Unseen, 'spotter's test' examination.				

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

The first grade represents Component 1 (EX1) and is weighted as major. A minimum of grade D is required to pass this component of assessment. The second grade, Component 2 (PE1), is weighted as minor. A minimum of grade D is required to pass this component of assessment. A minimum of Module Grade D is required to pass the module. Non-submission of either component will result in an NS grade.

Module Grade	Minimum Requirements to achieve Module Grade:
A	AA, AB
B	AC, AD, BA, BB, BC, CA
C	BD, CB, CC, CD, DA, DB
D	DC, DD
E	AE, AF, BE, BF, CE, CF, DE, DF, EA, EB, EC, ED, EE, EF, FA, FB, FC, FD
F	FE, FF
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	Successful completion of Stage 2 of the course, or equivalent.
Corequisites for module	None.
Precluded Modules	None.

ADDITIONAL NOTES

In accordance with the BSc (Hons) Biomedical Science/BSc (Hons) Applied Biomedical Science Course Specification and IBMS Criteria and Requirements for Degree Accreditation Criteria 4.2 (v), students must achieve a pass mark in all assessment components for modules that cover the clinical laboratory sciences subject areas.

INDICATIVE BIBLIOGRAPHY

- 1 AHMED, N. *Clinical Biochemistry*. 2nd Edition, 2016: Oxford University Press.
- 2 BURTIS, C.A. AND ASHWOOD, E.R. *Tietz: Fundamentals of Clinical Chemistry*. 6th Edition, 2008: Saunders.
- 3 LUXTON, R. *Clinical Biochemistry*. 2nd Edition, 2008: Scion Publishing Ltd.
- 4 PRICE, C.P., St JOHN, A. AND HICKS, J.M. *Point of Care Testing*. 2nd Edition, 2006: American Association of Clinical Chemistry.
- 5 MOORE, G., KNIGHT, G. and BLANN, A. *Haematology*. 3rd Edition, 2021: Oxford University Press.
- 6 KNIGHT, R. *Transfusion and Transplantation Science*. 2nd Edition, 2018: Oxford University Press.
- 7 OVERFIELD, J., DAWSON, M. AND HAMER, D. *Transfusion Science*. 2nd Edition, 2008: Scion Publishing Ltd.
- 8 HALL, A., SCOTT, C. AND BUCKLAN, M. *Clinical Immunology*. 2nd Edition, 2016: Oxford University Press.