

MODULE DESCRIPTOR

Module Title

Haematology and Transfusion Science

Reference	AS4901	Version	5
Created	August 2021	SCQF Level	SCQF 10
Approved	May 2011	SCQF Points	30
Amended	August 2021	ECTS Points	15

Aims of Module

To provide students with the ability to explain diseases of the blood, interpret data obtained from the analysis of blood and understand the essential features of transfusion science.

Learning Outcomes for Module

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

- 1 Discuss the quality management systems required of an automated laboratory.
- 2 Discuss the diseases caused by abnormalities of bone marrow, blood cells and plasma components and explain the nature and clinical importance of the main human blood groups.
- 3 Discuss the methods and/or procedures used for haematological investigation and transfusion science and interpret results obtained from analysis of blood cells and coagulation factors.
- 4 Discuss the operational procedures and good practices that are in place to meet the needs of the Transfusion Science Service in Scotland.
- 5 Discuss the significance of histocompatibility and immunogenetics in transplantation and blood transfusion.

Indicative Module Content

Haematological diseases: anaemias, haematological malignancies, haemorrhagic and thrombotic diseases. Transfusion science: main blood group systems, transfusion reactions, haemolytic disease of foetus and newborn. Effective blood bank practice and component preparation. Histocompatibility and immunogenetics: evolution, function, and genetics; role in transplantation and blood transfusion. Analytical techniques: sample selection and quality, manual and automated methods of investigations: cell identification and counting, haemoglobinometry, haematinic and haemoglobin variants, coagulation tests. Haemagglutination and serological techniques: antibody screening, compatibility testing, antenatal care and the use of prophylactic anti-D. Methods for HLA typing, including serological and molecular techniques.

Module Delivery

This is a lecture based course supplemented with tutorials and practical laboratory sessions, e-learning and case studies involving interpretation of clinical laboratory data.

Indicative Student Workload

	Full Time	Part Time
Contact Hours	48	N/A
Non-Contact Hours	252	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	300	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, 4, 5
Description:	Essay questions				

Component 2

Type:	Coursework	Weighting:	30%	Outcomes Assessed:	3
Description:	Analysis of clinical laboratory data or images.				

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

The first grade represents Component 1 (EX1) weighted as major and the second, Component 2 (EX2), weighted as minor. A minimum of Module Grade D is required to pass the module, with compensation of grade E in Component 1 or Component 2 permitted. 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, AE, BA, BB, BC, CA
C	BD, BE, CB, CC, CD, DA, DB
D	CE, DC, DD, DE, EA, EB, EC
E	AF, BF, CF, DF, 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	Students should be familiar with the physiology of the vascular system, the principles of molecular biology and genetics and clinical immunology.
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

- 1 MOORE, G., KNIGHT, G. and BLANN, A. *Haematology*. Current Ed. Oxford University Press.
- 2 KNIGHT, R. *Transfusion and Transplantation Science*. Current Ed. Oxford University Press.
- 3 OVERFIELD, J., DAWSON, M. and HAMER, D. *Transfusion Science*. Current ed. Scion Publishing Ltd.
- 4 HOFFMAN, V. and MOSS, P. *Essential Haematology*. Current Ed. Wiley Blackwell.
- 5 HALL, A., SCOTT, C., and BUCKLAND, M. *Clinical Immunology*. Current Ed. Oxford University Press.