LF209-15 Blood and Circulation

21/22

Department
Life Sciences
Level
Undergraduate Level 2
Module leader
Mark Wall
Credit value
15
Module duration
5 weeks
Assessment
Multiple
Study location
University of Warwick main campus, Coventry

Description

Introductory description

The overall aim of the module is to describe the haematological system (blood and the tissues and organs associated with it) and the cardiovascular system (CVS) in an integrated manner in order to give students a good understanding of the physiology, in health and disease, of these two linked systems.

Module aims

The overall aim of the module is to describe the haematological system (blood and the tissues and organs associated with it) and the cardiovascular system (CVS) in an integrated manner in order to give students a good understanding of the physiology, in health and disease, of these two linked systems.

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

Lecture 1 and 2: Kidney structure and function Lecture 3: Cardiovascular Risk Lecture 4: Blood cells, Plasma and Serum Lecture 5: Haematopoiesis Lecture 6: Blood transfusion Lecture 7: Blood disorders Lecture 8 - Hypertension (MW) Lecture 9 - Angina Lecture 10 - Heart Failure Lecture 11

- Cardiac Arrhythmias Lecture 12 - The Pharmacology of Anti-arrhythmic drugs ECG workshop and self-directed learning

Learning outcomes

By the end of the module, students should be able to:

- The biological principles of haematology including blood structure and homeostasis (including kidney)
- The biological basis of circulation, especially cardiac and vascular processes.
- The biological basis of neurological function, including development of the central nervous system at a cellular level.
- The functioning of these systems in both health and disease including the current treatment options for specific examples.

Indicative reading list

Pocock G. and Richards. Human physiology : the basis of medicine, 3rd edn. (Oxford : Oxford University Press, 2006). Hugh-Jones N. C., Wickramsinghe S. N. and Hatton C. Lecture notes on Haematology, 7th edn. (Blackwell, 2004). Purves, D. et al. (Eds.) Neuroscience, 4th edn. (Sinauer, 2008)

Subject specific skills

Explain the basics of haematology, including the role of kidney; formation, structure and function of blood cells Understand the rationale for, and biology of, blood transfusion Understand the biology of circulation through disease processes (hypertension, myocardial infarction, angina, cardiovascular disease, heart failure, arrhythmias) Explain the current treatment options for example blood and circulatory diseases

Transferable skills

Adult learning, self-directed learning, team based learning and quantitative analysis of data.

Study

Study time

Type	Required
Lectures	15 sessions of 1 hour (10%)
Practical classes	3 sessions of 6 hours (12%)
Private study	117 hours (78%)
Total	150 hours

Private study description

self-study and directed reading

Costs

No further costs have been identified for this module.

Assessment

You do not need to pass all assessment components to pass the module.

Assessment group D1

	Weighting	Study time
Blood and Circulation ECG Workshop In-Module Laboratory	10%	
Blood and Circulation Haemotology In-Module Laboratory	20%	
Online Examination 45 min SAQ Paper / 45 Min Essay Paper ~Platforms - Moodle	70%	

- Online examination: No Answerbook required

Assessment group R1

	Weighting	Study time
Re-Assessment Exam 45 min SAQ Paper / 45 Min Essay Paper	100%	

- Answerbook Green (8 page)
- Students may use a calculator

Feedback on assessment

Face-to-face feedback and cohort level feedback

Past exam papers for LF209

Availability

Courses

This module is Core for:

- Year 2 of UBSA-C1B9 Undergraduate Biomedical Science
- Year 2 of ULFA-C1A3 Undergraduate Biomedical Science (MBio)
- Year 2 of ULFA-C1A7 Undergraduate Biomedical Science with Industrial Placement (MBio)
- Year 2 of ULFA-CB18 Undergraduate Biomedical Science with Placement Year