

LF209-15 Blood and Circulation

26/27

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 primary function of the cardiovascular system is to deliver blood to the tissues, providing essential nutrients for metabolism and removing waste products (mostly via the kidneys). Dysfunction of this system underlies a number of commonly occurring diseases, which are treated by some of the most widely prescribed drugs.

This module builds on first-year physiology material to describe the haematological system in health and disease, kidney structure and function and cardiovascular risk, cardiovascular pathology and its treatment.

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.

Material covered in the module includes kidney structure and function, haematology and blood disorders (including topics such as clotting, blood groups, leukaemia etc), cardiovascular risk (including lipid pathways and statins) and cardiovascular pathology (including diseases such as angina, myocardial infarction, cardiac arrhythmias and their treatment).

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 functioning of these systems in both health and disease including the current treatment options for specific examples.

Indicative reading list

[Reading lists can be found in Talis](#)

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	114 hours (78%)
Total	147 hours

Private study description

Self-directed study and 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 D4

	Weighting	Study time	Eligible for self-certification
In-class assignment 1 Blood and Circulation ECG Workshop	10%	1 hour 30 minutes	No
In-class assignment 2 Blood and Circulation Haematology task sheet	12%		No
In-class assignment 3 Blood and Circulation Haematology abstract	8%		Yes (extension)
Closed-book computer-based end-of-year examination In-person locally-timetabled closed-book computer-based end-of-year examination	70%	1 hour 30 minutes	No

Assessment group R4

	Weighting	Study time	Eligible for self-certification
In-person Examination - Resit	100%		No
Section A: short answer questions. Section B: longer questions (may be essays, data-led or scenario-based).			

Feedback on assessment

Face-to-face feedback and cohort level feedback

[Past exam papers for LF209](#)

Availability

Post-requisite modules

If you pass this module, you can take:

- LF320-15 Advanced Cardiovascular Medicine

Courses

This module is Optional for:

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