

LF255-15 Clinical Microbiology

21/22

Department

Life Sciences

Level

Undergraduate Level 2

Module leader

Christopher Dowson

Credit value

15

Module duration

5 weeks

Assessment

Multiple

Study location

University of Warwick main campus, Coventry

Description

Introductory description

This module will help prepare you for the Yr3 Clinical Sciences Laboratory. It builds upon an understanding of the basic microbiology given in Agents of Infectious Diseases. The module will introduce students to an applied aspect of microbiology and diagnosis of disease. The module gives a more vocational aspect to microbiology and will include a visit to a laboratory carrying out clinical microbiology work to see this in practice. The module contributes to an increasing emphasis on teaching the medical aspects of microbiology in the School. The module will introduce students to how microorganisms invade the body, disrupt human physiology and how we can use this disruption to diagnose disease. The role of the clinical microbiologist in determining the nature of the infection and subsequent treatment will be dealt with.

[Module web page](#)

Module aims

By the end of the module students will:

Understand the key aspects of human anatomy and physiology which allow microorganisms to become pathogens.

Understand the pathology of common infections.

Understand the role of microorganisms in septicaemia and the detection of such microorganisms

in blood samples.

Understand the use of antibiotics to control bacterial infections and how such antibiotics are chosen.

Understand the principles and practice of modern molecular diagnostics.

Be introduced to patient focussed diagnosis.

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.

The role of host and parasite

Clinical medical microbiology

Acute and chronic infections

Infections of the nervous system

Use of antibiotics

Clinical diagnosis and management of an example disease Adaptation and selection at work

Learning outcomes

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

- Level 5 understanding of common clinically relevant pathogens
- Level 5 understanding of the key aspects of human physiology which allow microorganisms to become pathogens
- Level 5 understanding of how microbial infections are transmitted and established
- Level 5 understanding of the diagnostic techniques used to identify infective agents
- Level 5 understanding of current treatment strategies for common infections
- Level 5 understanding of the role of clinical microbiologist in determining the nature of the infection and subsequent treatment is dealt with.

Indicative reading list

Struthers and Westran Clinical Bacteriology 2003

Students are directed to the current literature for an up-to-date appreciation of developments in this area

Subject specific skills

Understand the key aspects of human anatomy and physiology which allow microorganisms to become pathogens.

Understand the pathology of common infections.

Understand the role of microorganisms in septicaemia and the detection of such microorganisms in blood samples.

Understand the use of antibiotics to control bacterial infections and how such antibiotics are chosen.

Transferable skills

Self directed learning
Adult learning

Study

Study time

Type	Required
Lectures	15 sessions of 1 hour (7%)
Practical classes	1 session of 1 hour (0%)
Other activity	10 hours (4%)
Private study	124 hours (55%)
Assessment	75 hours (33%)
Total	225 hours

Private study description

Self directed learning and revision

Other activity description

Authentic assessment, based on a common problem or dataset researchers would deal with on a regular basis in the academic environment. This is in-line with both AQSC and RSB requirements on assessments

Costs

No further costs have been identified for this module.

Assessment

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

Students can register for this module without taking any assessment.

Assessment group D1

	Weighting	Study time	Eligible for self-certification
In-Module Assessment	30%	30 hours	No
Online Examination	70%	45 hours	No

45 min short answer paper / 45 min essay paper

~Platforms - Moodle

- Online examination: No Answerbook required

Assessment group R1

	Weighting	Study time	Eligible for self-certification
In-person Examination - Resit	100%		No

45 min SAQ paper / 45 min essay paper

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

Feedback on assessment

Final examination feedback is given to returning students as generalised feedback on what constituted a good essay; common mistakes/misconceptions and good practise are identified and shared.

[Past exam papers for LF255](#)

Availability

Courses

This module is Core optional for:

- UIPA-C1L8 Undergraduate Life Sciences and Global Sustainable Development
 - Year 2 of C1L8 Life Sciences and Global Sustainable Development
 - Year 2 of C1LB Life Sciences and Global Sustainable Development: Ecology

This module is Optional for:

- Year 2 of UBSA-3 Undergraduate Biological Sciences
- Year 2 of ULFA-C1A1 Undergraduate Biological Sciences (MBio)

- Year 2 of ULFA-C113 Undergraduate Biological Sciences (with Placement Year)
- Year 2 of ULFA-C1A5 Undergraduate Biological Sciences with Industrial Placement (MBio)
- 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
- Year 2 of ULFA-B140 Undergraduate Neuroscience (BSc)
- Year 2 of ULFA-B142 Undergraduate Neuroscience (MBio)
- Year 2 of ULFA-B143 Undergraduate Neuroscience (with Industrial Placement) (MBio)
- Year 2 of ULFA-B141 Undergraduate Neuroscience (with Placement Year) (BSc)