LF255-15 Clinical Microbiology

23/24

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 (10%)
Practical classes	1 session of 1 hour (1%)
Other activity	10 hours (7%)
Private study	124 hours (83%)
Total	150 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
In-Module Assessment	30%	30 hours
Online Examination	70%	45 hours
45 min short answer paper / 45 min essay paper		

	Weighting	Study time
~Platforms - Moodle		

- Online examination: No Answerbook required

Assessment group R1

	Weighting	Study time
In-person Examination - Resit 45 min SAQ paper / 45 min essay paper	100%	

- 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:

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

This module is Optional for:

- UBSA-3 Undergraduate Biological Sciences
  - Year 2 of C100 Biological Sciences
  - Year 2 of C100 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)
- UBSA-C1B9 Undergraduate Biomedical Science
  - Year 2 of C1B9 Biomedical Science

    - Year 2 of C1B9 Biomedical Science
    - Year 2 of C1B9 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)
- ULFA-CB18 Undergraduate Biomedical Science with Placement Year
    - Year 2 of CB18 Biomedical Science with Placement Year
    - Year 2 of CB18 Biomedical Science with Placement Year
    - Year 2 of CB18 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)