

LF131-15 Health and community

24/25

Department

Life Sciences

Level

Undergraduate Level 1

Module leader

Robert Spooner

Credit value

15

Module duration

10 weeks

Assessment

100% exam

Study location

University of Warwick main campus, Coventry

Description

Introductory description

This module examines the links between health and our community. It takes contamination of food and water as a starting point and continues with emerging infections, and the discovery and misuse of antimicrobials. The epidemiological techniques used to track infections can be adapted to non-infectious disease, which is explored before examining the issue of ageing at both population and individual levels. The teaching then returns to microbiology and concludes with the less everyday subject of bioterrorism.

[Module web page](#)

Module aims

At the end of this module, students should have gained an appreciation of the requirements for and the methods of control of contamination of food and water. An understanding of the most prevalent infections in this context will be gained, and this will be extended into the area of emerging and re-emerging infections. An integrated understanding of the use and misuse of antibiotics will be obtained through the presentation of their use and the link between resistance and some re-emerging infections. Students should understand that non-infectious diseases and ageing are a burden to society. The potential misuse of organisms for bioterrorism will complete the objective of placing health issues in the context of impact on communities.

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.

1. Food- and water-borne infections: food and water microbiology, Hurdle and HACCP control and the microbiome
2. Emerging infectious agents: viral, bacterial emerging disease and the effect of environmental
3. Antimicrobials: discovery and resistance mechanisms
4. The epidemiology of non-infectious disease
5. Ageing
6. Bioterrorism

Learning outcomes

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

- 1. Gain an appreciation of the requirements for and the methods of control of contamination of food and water. 2. Understand emerging and re-emerging infections. 3. Gain an integrated understanding of the use and misuse of antibiotics, their generic structures and their modes of action. 4. Understand the effect that ageing has on society, the mechanisms that lead to ageing and dietary interventions to increase healthspan. 5. Understand potential misuse of organisms for bioterrorism in the context of impact on communities.

Subject specific skills

Short Answer Exam Questions: these will be graded on a student's ability to recall scientific information under exam conditions on topics covered during the module. The exam will be short answer questions, covering concepts and core information that underscore them:

- a. Demonstrate clear understanding of the scientific topic
- b. Demonstrate understanding of the main scientific concepts covered in the module learning objectives
- c. Demonstrate lateral integration / assimilation of concepts and topics covered in multiple lectures

Exam Essays: these will be graded on a student's ability to recall scientific information under exam conditions on topics covered during the module. A good essay will:

- a. Demonstrate clear understanding of the scientific topic
- b. Demonstrate independent thought and deep understanding
- c. Specifically answer the set question using information from multiple lectures and sources
- d. Be structured and formatted in a way that demonstrates understanding and logical flow
- e. Use multiple sources to construct complex scientific arguments and integrating these to build and develop the student's own scientific conclusions.

Transferable skills

1. Independent Learning
 2. Self-directed and group based learning
 3. Adult learning
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Study

Study time

| Type | Required |
|---------------|-----------------------------|
| Lectures | 24 sessions of 1 hour (16%) |
| Private study | 126 hours (84%) |
| Total | 150 hours |

Private study description

Self directed learning and revision for the final exam

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 B

| | Weighting | Study time |
|-------------|-----------|------------|
| Examination | 100% | |

Feedback on assessment

Examination marks provided

[Past exam papers for LF131](#)

Availability

Courses

This module is Optional for:

- UBSA-C1B9 Undergraduate Biomedical Science
 - Year 1 of C1B9 Biomedical Science
 - Year 1 of C1B9 Biomedical Science
 - Year 1 of C1B9 Biomedical Science
- ULFA-C1A3 Undergraduate Biomedical Science (MBio)
 - Year 1 of C1A3 Biomedical Science
 - Year 1 of C1B9 Biomedical Science
- Year 1 of ULFA-C1A7 Undergraduate Biomedical Science with Industrial Placement (MBio)
- ULFA-CB18 Undergraduate Biomedical Science with Placement Year
 - Year 1 of CB18 Biomedical Science with Placement Year
 - Year 1 of CB18 Biomedical Science with Placement Year
 - Year 1 of CB18 Biomedical Science with Placement Year