Module Specification

Immunology

Version: 2023-24, v2.0, 21 Jul 2023

Contents

Part 1: Information

Module title: Immunology

Module code: USSJXQ-15-2

Level: Level 5

For implementation from: 2023-24

UWE credit rating: 15

ECTS credit rating: 7.5

Faculty: Faculty of Health & Applied Sciences

Department: HAS Dept of Applied Sciences

Partner institutions: None

Field:

Module type: Module

Pre-requisites: None

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: This module underpins, extends and compliments the immunology content within the Studies in Biology of Disease. Individual components of the immune system are explored in detail, to enable linking together as a whole system, prior to application in a range of human disease settings and practical scenarios.

Features: Not applicable

Educational aims: See Learning Outcomes.

Outline syllabus: In this module you will examine Basic Cellular, Molecular and Clinical Immunology.
The content may include: self, non self and danger theories, antigen presentation, antigens and immunogens, molecular recognition – innate and acquired, inflammation, innate and mucosal immunity, cellular and humoral responses, roles of antibodies, effector cells, cytokines, complement, vaccines and immunization, hypersensitivity, tolerance and autoimmunity, cancer immunology and immunotherapy.

Part 3: Teaching and learning methods

Teaching and learning methods: Teaching will be in the form of interactive lectures- building up from basic immunological components to the full immune system and its application to therapy but also its contribution to a range of disease pathologies. Lectures will be interspersed with questions and quizzes to encourage active learning, and links through to practical or clinical application and real life examples. Module delivery is cognisant of visual, auditory, written and kinaesthetic learning styles and seeks to meet all these needs. Lectures are interspersed with practical classes that focus on the uses of antigen- antibody interactions in a variety of settings for clinical application. Practical videos, U-tube clips, power point slides, question sheets, lecture recordings and quizzes are employed to support self-directed learning.

Distinctive features:
Teaching style incorporates a good balance of visual, auditory, written and kinaesthetic learning (hands-on, text, pictures, figures, oral narrative and examples or anecdotes). Slides are clearly flagged to identify to students what is basic core knowledge, what is required for a second class degree, and the detail needed for first class marks. Practicals are designed to build on the student practical experience across the series and incorporate material from the lectures across the term.

Module Learning outcomes: On successful completion of this module students will achieve the following learning outcomes.

MO1 Demonstrate basic knowledge of the cellular and molecular aspects of immunology

MO2 Distinguish the role of innate, humoral and cellular mechanisms in response to a wide spectrum of pathogens and antigens

MO3 Recognise how antibodies and effector cells contribute to pathology in selected immune mediated diseases

MO4 Perform and evaluate important laboratory immunological techniques and demonstrate an understanding of their theoretical bases

MO5 Manipulate, analyse, interpret and concisely explain results derived from laboratory experiments

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 117 hours

Face-to-face learning = 33 hours

Total = 150

Reading list: The reading list for this module can be accessed at readinglists.uwe.ac.uk via the following link https://uwe.rl.talis.com/index.html

Part 4: Assessment

Assessment strategy: Assessment 1 for this module will be the production of a scientific abstract for one out of a series of practical experiments. Marks will also be awarded for completion of each practical, good lab skills and results.

Tutorials will be provided in the writing of scientific abstracts. Formative feedback will be given throughout practical classes and lectures, as well as on abstracts written for the first practical in the series. The tutorials and feedback will inform the final assessed coursework submission.

Assessment 2 is an examination. The exam will enable the students to demonstrate

a basic knowledge of cellular and molecular immunology; the role of innate, cellular and humoral responses to a spectrum of antigens (including immunogens), and how effector cells, antibodies and immune-deficiencies cause immunopathology.

Assessment tasks:

Written Assignment (First Sit)
Description: Written abstract
Weighting: 50 %
Final assessment: No
Group work: No
Learning outcomes tested: MO1, MO4, MO5

Examination (Online) (First Sit)
Description: Online examination (24 hours)
Weighting: 50 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2, MO3

Written Assignment (Resit)
Description: Written abstract
Weighting: 50 %
Final assessment: No
Group work: No
Learning outcomes tested: MO1, MO4, MO5

Examination (Online) (Resit)
Description: Online examination (24 hours)
Weighting: 50 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO1, MO2, MO3

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Applied Biomedical Science [Frenchay] BSc (Hons) 2022-23

Biomedical Science [Frenchay] BSc (Hons) 2022-23

Biomedical Science [Frenchay] MSci 2022-23

Biomedical Science [Sep][PT][Frenchay][6yrs] BSc (Hons) 2021-22

Biomedical Science {Foundation} [Sep][SW][Frenchay][5yrs] BSc (Hons) 2021-22

Biomedical Science {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2021-22

Biomedical Science [Sep][PT][Frenchay][8yrs] MSci 2021-22

Biomedical Science {Foundation} [Sep][SW][Frenchay][6yrs] MSci 2021-22

Biomedical Science {Foundation} [Sep][FT][Frenchay][5yrs] MSci 2021-22

Biomedical Science [Sep][PT][Frenchay][6yrs] BSc (Hons) 2020-21

Biomedical Science [Sep][PT][Frenchay][8yrs] MSci 2020-21