



ACADEMIC SERVICES

MODULE SPECIFICATION

| Part 1: Basic Data | | | | | |
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| Module Title | Pathophysiology of Disease (FdSc HSC) | | | | |
| Module Code | USSJT7-30-1 | Level | 1 | Version | 1.2 |
| Owning Faculty | Health and Applied Sciences | Field | Biological, Biomedical and Analytical Sciences | | |
| Contributes towards | FdSc Healthcare Science | | | | |
| UWE Credit Rating | 30 | ECTS Credit Rating | 15 | Module Type | Standard, |
| Pre-requisites | None | | Co- requisites | None | |
| Excluded Combinations | None | | Module Entry requirements | None | |
| Valid From | September 2013 | | Valid to | September 2019 | |

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| CAP Approval Date | 20 th November 2014 |
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| Part 2: Learning and Teaching | |
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| Learning Outcomes | <p>On successful completion of this module students will be able to:</p> <ul style="list-style-type: none"> Understand the major pathogenic mechanisms which underlie human disease, including inflammation, necrosis and carcinogenesis (Coursework, Examination and formative) Within this outcome students will be able to practically relate the investigation and diagnosis of conditions from all major Biomedical disciplines (Coursework, semester 1) Understand the science underpinning the range of disciplines within the Biomedical Health Care Sciences (coursework, WBL) Explain the importance of pathogenic bacteria, viruses, fungi and parasites, with particular emphasis on disease. (Examination and formative) Understand the discipline of Medical Microbiology, how it has evolved and discuss how the re-emergence of pathogens is related to illness Demonstrate a broad basic and clinical sciences knowledge and apply that knowledge with respect to Cardiology, and Respiratory diseases (Examination and formative) Explain the basic principles underpinning typical investigations and procedures carried out in the diagnosis and treatment of cardiovascular and respiratory disease (Examination and formative) |
| Syllabus Outline | <ul style="list-style-type: none"> Haematology. Overview of haemopoiesis, normal blood parameters and haemostasis. Outline of the aetiology and pathogenesis of anaemia, haemorrhagic and thrombotic disorders. Blood groups and blood |

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| | <p>grouping. An introduction to transfusion to transfusion medicine Introduction to anaemia, white blood cells, and their role in disease.</p> <ul style="list-style-type: none"> • Clinical Biochemistry: Diseases of the liver and Diabetes. Causes of liver disease. Diabetes: types, prevalence and clinical presentation. Diagnosis of these diseases. Overview of biochemical markers of these diseases. • Cellular Pathology: Carcinogenesis and Neoplasia: Agenesis, aplasia, hypoplasia, atrophy, hypertrophy and hyperplasia. Metaplasia and dysplasia. Neoplasia – benign and malignant neoplasms. Neoplasm-host interaction. Carcinogenesis. • Immunology: The immune system, acute and chronic inflammation: Antigens, antibodies, antigenicity, specificity, memory, tolerance and autoimmunity. Overview of cellular and humoral immunity. Fluid, cellular and systemic aspects of inflammation. Patterns of inflammation. Toxicity and infection. • Cellular injury and death. The cell as the basis of life and disease. The aims of the cellular pathology based lectures will be to provide an introduction to the study of disease in mammalian tissues by looking at necrosis and mechanisms and manifestations of sub-lethal cellular injury e.g. ischaemia. Cell death – necrosis and apoptosis. • Medical microbiology: Development of the discipline. Role of medical microbiologist today, including developments which aid in the understanding of pathogens and diagnostics. • Medical microbiology (diseases): Overview of the range of medically important bacteria, viruses, fungi and parasites: an overview of the range of diseases that microbes cause, from the trivial to the life-threatening. • Current issues in Medical microbiology: Emerging and re-emerging pathogens: an evaluation of the re-emergence of illnesses (e.g. tuberculosis) to attempt to identify reasons for their return; consideration of the emergence of new diseases (e.g. SARS, haemorrhagic viruses) • Pathology of Cardiovascular and respiratory disorders: Understanding the pathophysiology of cardiovascular and respiratory disorders • Clinical investigations underpinning Cardiovascular and respiratory disorders: Investigations and procedures carried out in the diagnosis and treatment of respiratory disorders. |
| Contact Hours | <ul style="list-style-type: none"> • Work based training: pro rata allocation of the 16 hours per week for the programme • There will be 4 weeks of contact time at UWE proposed to be presented in 3 x 1 week blocks with an induction week included. Included in this week are practical classes, lectures and tutorials. • In addition to the allocated hours on campus learning, students will engage in synchronous and asynchronous online learning each week. This will comprise 1.5hrs per week of online engagement through a combination of lectures, synchronous tutorials, synchronous and asynchronous discussions. |
| Teaching and Learning Methods | <p>Scheduled learning: During block periods at UWE, lectures, seminars, tutorials, and practical classes will be delivered. In addition scheduled learning also includes synchronous online, collaborative group work which may be timetabled on a weekly basis and participation in asynchronous online activities</p> <p>Independent learning: Using defined TEL strategies includes hours engaged with</p> |

essential reading, case study preparation, assignment preparation and completion etc. These sessions constitute an average time per level as indicated in the table below. Scheduled sessions may vary slightly depending on the module choices you make.

Work based learning: Students will learn subject specific content during work based learning

Key Information Sets Information

Key Information Sets (KIS) are produced at programme level for all programmes that this module contributes to, which is a requirement set by HESA/HEFCE. KIS are comparable sets of standardised information about undergraduate courses allowing prospective students to compare and contrast between programmes they are interested in applying for.

| Key Information Set - Module data | | | | |
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| Number of credits for this module | | | | 30 |
| Hours to be allocated | Scheduled learning and teaching study hours | Independent study hours | Workbased study hours | Allocated Hours |
| 300 | 50 | 100 | 150 | 300 |

The table below indicates as a percentage the total assessment of the module which constitutes a -

Written Exam: Unseen written exam, open book written exam, In-class test

Coursework: Written assignment or essay, report, dissertation, portfolio, project

Practical Exam: Oral Assessment and/or presentation, practical skills assessment, practical exam

Please note that this is the total of various types of assessment and will not necessarily reflect the component and module weightings in the Assessment section of this module description:

| Total assessment of the module: | |
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| Written exam assessment percentage | 40% |
| Coursework assessment percentage | 60% |
| Practical exam assessment percentage | 0% |
| | 100% |

Reading Strategy

All students will be encouraged to make full use of the print and electronic resources available to them through membership of the University. These include a range of electronic journals and a wide variety of resources available through web sites and information gateways. The University Library's web pages provide access to subject relevant resources and services, and to the library catalogue. Many resources can be accessed remotely. Students will be presented with opportunities within the curriculum to develop their information retrieval and evaluation skills in order to identify such resources effectively.

An indicative reading list will be included in the module handbook highlighting textbooks appropriate to each subject area. An expectation with all distance learning is 'further' reading.

Any **essential reading** will be indicated clearly, along with the method for accessing it,

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| | <p>e.g. students may be expected to purchase a set text, be given or sold a print study pack or be referred to texts that are available electronically, etc. This guidance will be available either in the module handbook, via the module information on Blackboard or through any other vehicle deemed appropriate by the module/programme leaders.</p> <p>If further reading is expected, this will be indicated clearly. If specific texts are listed, a clear indication will be given regarding how to access them and, if appropriate, students will be given guidance on how to identify relevant sources for themselves, e.g. through use of bibliographical databases.</p> |
| Indicative Reading List | <p style="text-align: center;">Indicative Bibliography</p> <ul style="list-style-type: none"> • <i>A Beginner's Guide to Blood Cells</i>. Bain. (2008) ISBN: 1405146176, Publisher: Wiley-Blackwell • <i>Lecture Notes on Haematology</i>. Hugh-Jones, Wickramasinghe and Hatton. (2009) ISBN 1-4051-8050-4, Publisher: Wiley-Blackwell • <i>Haematology: Clinical Cases Uncovered</i>. McCann, Foa, Smith, Conneally and Voldman. (2009) ISBN 1405183222, Publisher: Wiley-Blackwell • <i>Clinical Chemistry 6th edition</i>, (2008) Marshall, Bangert, ISBN 9780723434559 Publisher: C.V. Mosby • <i>Clinical Biochemistry, An illustrated colour text</i>, (2005) Gaw, Murphy, Cowan, O'Reilly. ISBN 0702048925, Publisher: Churchill Livingstone • <i>Emery's Elements of Medical Genetics</i>, (2012) Turnpenny, and Ellard, ISBN 9780702040436, Publisher: Elsevier Health Sciences UK, • <i>Essential Medical Genetics (Essentials S.)</i>. (2011) Tobias, Connor and Ferguson-Smith, 1405169745, Publisher: Wiley-Blackwell • <i>How the Immune system works</i>. (2012) Sompayrac, ISBN 0470657294, Publisher: Wiley-Blackwell • <i>Kuby Immunology</i>. (2007) Goldsby, Kindt, Osborne, and Kuby, ISBN 0716767643, Publisher: WH Freeman and Co. • <i>Core Pathology</i>. Stevens and Lowe. (2008) ISBN 9780723434443 Publisher: C.V. Mosby • <i>Basic Pathology: An introduction to the Mechanisms of Disease</i>_Lakhani, Dilly, Finlayson. (2009) ISBN: 034095003X, Publisher: Oxford University Press • <i>The Biology of Disease</i>, Phillips, Murray and Kirk. (2001) ISBN 0632054042, Publisher: Blackwell Publishers • <i>An introduction to human disease, pathology and pathophysiology correlations</i> Leonard V. Crowley (2009) ISBN: 0763765910, Publisher: Jones and Bartlett • Prescott, Harley and Klein's microbiology 7th edition. (2007) ISBN 0071102310 Publisher: McGraw Hill • Brock, Biology of microorganisms 12th edition. (2011) ISBN 032173551X Publisher: Prentice Hall • Jawetz, Melnick and Adelberg's Medical Microbiology (2012) ISBN 0071790314 Publisher: McGraw Hill <p>Useful websites http://histology.leeds.ac.uk phagocytosis demo, http://www.sp.uconn.edu/~terry/Common/phago053.html blood cell identification, http://www.depts.ttu.edu/liru_afs/staff/jdailey/jwdblood.htm blood transfusion game, - http://nobelprize.org/medicine/educational/landsteiner/ pipetting: http://www.umd.umich.edu/cas/natsci/slc/slconline/MICRPIP/</p> |

| Part 3: Assessment | |
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| Assessment Strategy | <ul style="list-style-type: none"> • The assessment strategy will include a case study element which will be delivered via the block week 1 and capture both the taught and practical element of semester one. This will be further supported through online learning tools such as discussion boards (Summative). • Throughout the term there will be 10 short answer questions online |

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| | <p>there will form the basis of formative assessment, which will follow each unit. This will allow the student to develop experience in answering short answer questions for the exam.</p> <ul style="list-style-type: none"> • The overall examination in Exam period 3 will consist of short answer questions. • Together this examination strategy will address all learners and give a balanced assessment of the module as whole |
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| Identify final assessment component and element | Comp A | |
| % weighting between components A and B (Standard modules only) | A: | B: |
| | 40 | 60 |

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| First Sit | |
| Component A (controlled conditions) Description of each element | Element weighting <i>(as % of component)</i> |
| 1. 1.5 hour examination | 50% |
| 2. 1.5 hour examination | 50% |
| Component B Description of each element | Element weighting <i>(as % of component)</i> |
| 1. CW1 Case study (poster) assess the practical element | 50% |
| 2. CW2 Laboratory book write up | 50% |

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| Resit (further attendance at taught classes is not required) | |
| Component A (controlled conditions) Description of each element | Element weighting <i>(as % of component)</i> |
| 1. 3 hour examination | 100 |
| Component B Description of each element | Element weighting <i>(as % of component)</i> |
| 1. CW1 case study and laboratory book write up | 100 |
| <p>If a student is permitted an EXCEPTIONAL RETAKE of the module the assessment will be that indicated by the Module Description at the time that retake commences.</p> | |