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| Module Title Medical Microbiology | Reference AS3016 SCQF Level SCQF 9 SCQF Points 15 ECTS Points 7.5 Created May 2002 Approved September 2004 Amended May 2011 Version No. 4 |
| Keywords Infectious diseases, pathogenesis, antimicrobial agents. | |

This Version is No Longer Current

The latest version of this module is available [here](#)

Prerequisites for Module

AS1010 Applied Microbiology or equivalent

Corequisite Modules

None.

Precluded Modules

None.

Aims of Module

To enable students to evaluate the role of micro-organisms in infectious disease states, their mechanisms of host pathogenesis and the action of antimicrobial agents in treatment.

Learning Outcomes for Module

On completion of this module,

Diagnostic microbiology, isolation of pathogens from clinical samples: blood, urine, faeces, genital system, CSF and wounds, microbiological and molecular identification strategies: selective/differential media; ELISA; agglutination; DNA probes. Public health microbiology, epidemiology, mortality and morbidity, disease reservoirs including carrier status, nosocomial infections. Clinical syndromes and bacteriology; mycology; virology and parasitology. Infectious disease states linked to respiratory, food/waterborne, sexual and animal transmission.

Indicative Student Workload

| <i>Contact Hours</i> | Full Time |
|----------------------|-----------|
| Keynote lectures | 10 |
| Laboratory Practical | 12 |
| Lectures | 12 |

students are expected to be able to:

1. Discuss the normal human microflora and problems arising from opportunistic infections.
2. Relate the mode of pathogenesis to factors such as type of toxin and mechanism of action within the host.
3. Determine the appropriate procedures for isolation, identification and treatment regime for pathogenic organisms.
4. Appraise the importance of epidemiological investigation as a procedure to control and prevent spread of infectious diseases.
5. Integrate details of the clinical symptoms and determine biological consequences for specific infectious diseases.

Indicative Module Content

Normal flora of human tissues: respiratory; GI tract; GU tract; and skin, routes of infection colonisation and growth, secretory and cell associated virulence factors.

Immunisation programmes as preventative measures, antimicrobial agents such as penicillins, cephalosporins, tetracyclines, macrolides.

Tutorials/Case Studies 6

Directed Study
Directed Study 50

Private Study
Private Study 60

Mode of Delivery

A lecture based approach supplemented with tutorial sessions, laboratory sessions, case studies and group learning activities will be used.

Assessment Plan

| | Learning Outcomes Assessed |
|-------------|----------------------------|
| Component 1 | 1,2,4,5 |
| Component 2 | 3 |

Component 2 is a formal practical report.

Component 1 is a closed book examination.

Indicative Bibliography

1. No core text book will be used. Instead recently published scientific papers will form the basis of background material.

aminoglycosides,
sulphonamides, monitoring
levels during administration,
molecular mode of antimicrobial
action, development of antibiotic
resistance, novel approaches for
treatment.

2.MADIGAN, M.T., et al. *Brock
Biology of Microorganisms*.
Current Edition. Pearson.