



Course Outline (Higher Education)

School:	School of Science, Psychology and Sport
Course Title:	CLINICAL MICROBIOLOGY
Course ID:	SCMIC3003
Credit Points:	15.00
Prerequisite(s):	(SCMOL2001 or SCMIC2001)
Co-requisite(s):	Nil
Exclusion(s):	Nil
ASCED:	010911

Description of the Course :

Clinical Microbiology focuses on infectious diseases of the organ systems, summarising the aetiology, pathogenesis and laboratory identification of important viral, bacterial and eukaryotic pathogens. The epidemiology of infectious disease and strategies for disease control are highlighted. The mode of action of antimicrobial drugs, their role in treating infectious disease and the problems of drug resistance are discussed. Techniques for laboratory diagnosis of infectious disease, and safe handling of pathogens, are emphasised.

Grade Scheme: Graded (HD, D, C, etc.)

Work Experience:

No work experience: Student is not undertaking work experience in industry.

Placement Component: No

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the course but gained a final mark of 45 per cent or above and submitted all major assessment tasks.

Program Level:

Level of course in Program	AQF Level of Program					
	5	6	7	8	9	10
Introductory	■	■	■	■	■	■
Intermediate	■	■	■	■	■	■
Advanced	■	■	✓	■	■	■

Learning Outcomes:**Knowledge:**

- K1.** Describe the fundamental mechanisms of infectious diseases, including knowledge of bacterial, viral and eukaryotic parasite pathogenicity.
- K2.** Define the terms, concepts and descriptions used in infectious disease epidemiology.
- K3.** Outline the role of chemotherapy in the treatment of infectious disease; and have an appreciation for the public health significance of antimicrobial drug resistance.
- K4.** Recall the role of microorganisms in selected infectious diseases associated with the different organ systems.
- K5.** Recognise the diversity of techniques used in clinical microbiology diagnostic laboratories.

Skills:

- S1.** Demonstrate competence in laboratory procedures for handling and processing diagnostic specimens and pathogens.
- S2.** Apply a variety of routine microbiological diagnostic techniques for the identification and treatment of clinically significant bacteria and fungi.

Application of knowledge and skills:

- A1.** Choose the appropriate course of action in the diagnosis of infectious diseases from patient samples.
- A2.** Apply a variety of routine microbiological diagnostic techniques for the identification and treatment of clinically significant bacteria and fungi.

Course Content:

Topics may include:

- Deep understanding of organism taxonomy and how it impacts on infectious disease and treatment
- Infectious disease epidemiology
- Culture media and identification tests
- Antibiotic susceptibility testing and antimicrobial mode of action
- Procedures for sample collection, transport and processing of different specimen types: Blood cultures; Urinary samples; Wound, tissue and genital samples; CSF investigations; Respiratory infections; Gastrointestinal specimens
- Infection control
- Laboratory Investigations of viral, prokaryotic and eukaryotic infectious agents

Values:

- V1.** Students will be equipped with the skills, motivation and confidence to engage in continuous learning to meet the personal, professional and vocational challenges of an ever changing world.
- V2.** Students will possess the confidence, capability, assurance, independence and enterprise to enable them to fulfil their personal and career aspirations.
- V3.** Students will add to the productive capacity of the economy and be in demand and will be attuned to, and engage with, contemporary social and cultural issues and aspire to make meaningful and helpful contributions to local, national and global communities.
- V4.** Students will be aware of generally accepted norms of ethical behaviour, particularly in the context of medical ethics. Students will be encouraged to act in a socially responsible manner both in the work place and other settings.

Graduate Attributes

The Federation University FedUni graduate attributes (GA) are entrenched in the Higher Education Graduate Attributes Policy (LT1228). FedUni graduates develop these graduate attributes through their engagement in explicit learning and teaching and assessment tasks that are embedded in all FedUni programs. Graduate attribute attainment typically follows an incremental development process mapped through program progression. **One or more graduate attributes must be evident in the specified learning outcomes and assessment for each FedUni course, and all attributes must be directly assessed in each program**

Graduate attribute and descriptor		Development and acquisition of GAs in the course			
		Learning Outcomes (KSA)	Code A. Direct B. Indirect N/A Not addressed	Assessment task (AT#)	Code A. Certain B. Likely C. Possible N/A Not likely
GA 1 Thinkers	Our graduates are curious, reflective and critical. Able to analyse the world in a way that generates valued insights, they are change makers seeking and creating new solutions.	K1,K3	B, A	AT1, AT1	C, A
GA 2 Innovators	Our graduates have ideas and are able to realise their dreams. They think and act creatively to achieve and inspire positive change.	A1	B	AT3	C
GA 3 Citizens	Our graduates engage in socially and culturally appropriate ways to advance individual, community and global well-being. They are socially and environmentally aware, acting ethically, equitably and compassionately.	Not applicable	N/A	Not applicable	Not applicable
GA 4 Communicators	Our graduates create, exchange, impart and convey information, ideas, and concepts effectively. They are respectful, inclusive and empathetic towards their audience, and express thoughts, feelings and information in ways that help others to understand.	K2, K3, K4	A, A, A	AT1, AT2, AT3, AT4	A, A, A, A
GA 5 Leaders	Our graduates display and promote positive behaviours, and aspire to make a difference. They act with integrity, are receptive to alternatives and foster sustainable and resilient practices.	S2	B	AT3	B

Learning Task and Assessment:

Learning Outcomes Assessed	Learning Tasks	Assessment Type	Weighting
K1, K4; A2	Demonstration of knowledge and understanding of disease pathology, diagnostic microbiology or topical aspect of clinical microbiology.	Individual and/or group assignments.	20 - 30%
K4, K5; A1	Interpretation of case based clinical microbiology laboratory data	Individual assignment	5-20%
K5; S1, S2; A1	Performance of basic laboratory procedures and techniques and interpretation of data.	Participation and assessment of written laboratory report.	20 - 30%

Learning Outcomes Assessed	Learning Tasks	Assessment Type	Weighting
K1 - K5; A1, A2	Test	Final online test	30 - 50%

Adopted Reference Style:

Australian Harvard