MIIM20002 Microbes, Infections and Responses

Credit Points:	12.50
Level:	2 (Undergraduate)
Dates & Locations:	This subject is not offered in 2013.
Time Commitment:	Contact Hours: 36 hours of lectures and 6 X 3 hour practical classes and 6 X 1 hour on-line computer aided learning associated with each practical class = 60 hours total. Total Time Commitment: 120 hours
Prerequisites:	**BSc Students** **Subject** / **Study Period Commencement:** / **Credit Points:** MIIM20001 Principles of Microbiology & Immunology / Not offered 2013 / 12.50 **BBiomedicine Students** Passes in the following two subjects: **Subject** / **Study Period Commencement:** / **Credit Points:** CHEM10006 Chemistry for Biomedicine / Semester 1 / 12.50 BIOM20001 Molecular and Cellular Biomedicine / Not offered 2013 / 25
Corequisites:	None
Recommended Background Knowledge:	The prerequisite subjects should have provided an appropriate background for this subject.
Non Allowed Subjects:	None
Core Participation Requirements:	It is University policy to take all reasonable steps to minimise the impact of disability upon academic study and reasonable steps will be made to enhance a student's participation in the University's programs. This subject requires all students to actively and safely participate in laboratory activities. Students who feel their disability may impact upon their participation are encouraged to discuss this with the subject coordinator and the Disability Liaison Unit: http://www.services.unimelb.edu.au/disability/
Contact:	Academic Coordinators Mrs Helen Cain: **hmcain@unimelb.edu.au (mailto:hmcain@unimelb.edu.au)** Prof Lorena Brown: **lorena@unimelb.edu.au (mailto:lorena@unimelb.edu.au)** Dr Odilia Wijburg **odilia@unimelb.edu.au (mailto:odilia@unimelb.edu.au)** Administrator Coordinator Ms Chantelle Linnett **BiomedSci-AcademicServices@unimelb.edu.a (mailto:BiomedSci-AcademicServices@unimelb.edu.a)**
Subject Overview:	This subject describes how microbes are an essential part of our environmental ecology and participate unique interactions within their environmental niche. This subject also describes how microbes (bacteria, viruses, fungi and parasites) cause infections in humans, and how our immune system responds. The characteristics of some of the pathogens which cause respiratory, gastrointestinal and hospital acquired infections are discussed together with the

	body's immune response to these pathogens, and the design of appropriate interventions, including vaccines and antibodies. The community and public health response is also described so that the interaction between pathogen, host and environment can be seen. This is a fully integrated course, that is, the lecture and the practical course build on, and support, each other. The practical course comprises a series of case studies which illustrate and revise material covered in the lectures.
Objectives:	Upon completion of this subject, students should be able to: # Describe the contributions and interactions of microbes within the environment # Describe the characteristics of some important pathogens # Describe the mechanisms by which microorganisms initiate infection and by which the immune response controls infection # Describe some of the ways in which infectious disease can be controlled in individuals and in communities, including the use of antimicrobial agents and vaccines, and # Perform basic microbiological techniques safely and effectively and recognise the clinical applications of these techniques
Assessment:	Written practical reports throughout semester (20%), A 40-minute multiple choice question test mid semester (20%), A 2-hour written exam in the end of the semester examination period (60%). Attendance is compulsory. Students who miss more than 20% of the practical component of this subject will not be eligible for final assessment
Prescribed Texts:	No prescribed texts.
Recommended Texts:	Prescott, Harley and Klein's Microbiology, Willey J, Sherwood L, Woolverton C. 8th edn, 2010 Schaechter's Mechanisms of Microbial Disease (N C Engleberg, V DiRita and T S Dermody), 4th Edn, 2006
Breadth Options:	This subject is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	On completion of this subject, students should have developed the following generic skills: # An ability to interpret scientific literature. # The capacity to integrate knowledge across disciplines. # An ability to critically analyse scientific data.
Notes:	Where appropriate: # whilst students will not be involved in the manipulation and handling of animals, tissues obtained from appropriately euthanased animals will be used in some experiments. # These experiments will be approved by the University of Melbourne Animal Welfare Committee. # Experiments contained in this unit will also be approved by the Biosafety and Gene Technology Committee. Students wishing to register in this subject after week 2 of a Semester should contact the course coordinators.
Related Course(s):	Bachelor of Biomedicine
Related Majors/Minors/ Specialisations:	Defence and Disease Science credit subjects* for pre-2008 BSc, BASc and combined degree science courses Science-credited subjects - new generation B-SCI and B-ENG. Core selective subjects for B-BMED.
Related Breadth Track(s):	Microbiology and immunology