526-321 Molecular Microbiology Techniques

Credit Points:	12.50
Level:	3 (Undergraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: March, - Taught on campus.
Time Commitment:	Contact Hours: 54 hours of practical work and 6 hours of lectures in the first six weeks of semester only Total Time Commitment: 120 hours
Prerequisites:	Microbiology 526-201 and 526-221.BBiomedSc students: microbiology 526-201 or 526-205; 521-213 and 536-250.
Corequisites:	At least one of microbiology 526-301 or 526-313.
Recommended Background Knowledge:	None
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. Students who feel their disability may impact upon their participation are encouraged to discuss this with the subject coordinator and the Disability Liaison Unit.
Coordinator:	Dr Helen Billman-Jacobe
Subject Overview:	This subject covers various aspects of practical and molecular microbiology including conventional isolation and identification methods, PCR and DNA sequencing, and antigen detection using western blots. Upon completion of the course, students should have: # gained some understanding of the principles and procedures involved in the culture, isolation and identification of bacteria (particularly those of medical and environmental importance) based on principles of microbial physiology; # used molecular microbiological techniques (eg. PCR, DNA sequencing, western blot probing) to identify important characteristics of bacteria (eg. virulence factors); # used common bioinformatics methods to analyse DNA and protein sequence data (eg. BLAST searches, translation of DNA sequences, *emm* virulence types of streptococci); and # gained expertise in retrieving published scientific data related to the project using computer searches and library facilities (eg. Medline).
Assessment:	Attendance at practical classes is compulsory. Students must attend at least 80% of the laboratory-based component to be considered for assessment.Two written reports of laboratory work of up to 4 pages each, including answers to discussion questions given out in class, due during the semester (50%); a 2-hour written examination held mid-semester (50%). Satisfactory completion of the laboratory work and written reports is necessary to pass the subject.
Prescribed Texts:	None
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
Notes:	Students enrolled in the BSc (pre-2008 BSc), BASc or a combined BSc course will receive science credit for the completion of this subject. This subject is likely to be quota-restricted this year.
Related Course(s):	Bachelor of Biomedical Science

	Graduate Diploma in Biotechnology
Related Majors/Minors/ Specialisations:	Biotechnology Microbiology