526-301 Microbial Cells and Genomes

Credit Points:	12.50
Level:	3 (Undergraduate)
Dates & Locations:	2009, This subject commences in the following study period/s: Semester 2, - Taught on campus.
Time Commitment:	Contact Hours: 36 lectures (three a week) Total Time Commitment: 120 hours
Prerequisites:	Microbiology 526-201; either biochemistry 521-211 and 521-212, or genetics 652-214 and 652-215; one of microbiology 526-221, biochemistry 521-220 or genetics 652-216. BBiomedSc students: microbiology 526-201 or 526-205; 521-213 and 536-250. Bachelor of Biomedical Engineering Students: successful completion of first and second year of the Biocellular stream.
Corequisites:	None
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 active and safe participation in a subject are encouraged to discuss this with the relevant subject coordinator and the Disability Liaison Unit.
Coordinator:	Dr David Edward Tribe
Subject Overview:	By the end of the subject students should: # understand fundamental concepts of cell division, cell growth, and the transfer of substrates, macromolecules and signals across cell membranes; # be able to describe the ways in which microorganisms function and interact with their environment and each other and regulate their genetic and metabolic potential to ensure their continued existence; # be familiar with techniques and strategies such as mutant construction, and molecular cloning that are used to dissect microbial function; # appreciate how microbial behaviour can be modified by changes to genotype or environment to facilitate use of microbes in biotechnological processes; and # have developed the skills necessary to read and comprehend scientific papers and interpret genomic data in electronic databases. Students will enhance their ability to utilise information from textbooks, scientific literature and computer-based sources and logically apply broad principles to address a particular scientific question.
Assessment:	Written assignments in total up to 3000 words due during the semester (40%); a 2-hour written examination in the examination period (60%).
Prescribed Texts:	Microbe (M Schaechter, J L Ingraham and F C Neidhardt), 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

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.
Related Course(s):	Bachelor of Biomedical Science Bachelor of Engineering (Biomedical)Biocellular Graduate Diploma in Biotechnology
Related Majors/Minors/ Specialisations:	Biotechnology Microbiology