

Prescriptions and Schedule of Papers for 2007

Mode of Delivery

*	= Not available in 2007
B1, B2, B3	= Available as a block course
E, E1, E2	= Available extramurally
F1	= Face to face teaching
I, I1, I2, I3, I4, I5, I6, I7, I8, I9, I10, I11, I12, I13, I14, I15, I16, I17, I18, I19, I20, I21, I22, I23, I24, I25, I26, I27, I28, I29, I30, I31, I32, I33, I34, I35, I36, I37, I38, I39, I40, I41, I42, I43, I44, I45, I46, I47	= Available internally

Semesters

S1	Semester One
S2	Semester Two
S3	Summer School
S12	Double Semester

Locations

AG	Auckland Geographic Area
AL	Massey Albany
CG	Christchurch Geographic Area
CH	Christchurch
EM	Employers and Manufacturers Assc
HK	Hokowhitu Campus
HW	Hawkes Bay
MA	Military Stds Inst. Auckland
NT	Email/Internet
PG	Papua New Guinea Geographic Area
PN	Massey Palmerston North
RU	Ruawharo Campus
SP	Singapore Aviation Academy
TH	Thailand Aviation Academy
TN	Tonga Geographic Area
WG	Wellington Geographic Area
WL	Massey Wellington

Paper No./Title	Credits	Sem	Mode	Loc
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Microbiology

162.001	24 credits	S2	I	PN
Foundation Studies in Biology	S3	I	PN	

This paper provides a preliminary course in biology designed for students with little experience of learning biology in English. Topics include: the diversity of life: cells as the basic unit of life; form and function of cells, microbes, animals and plants; DNA and molecular genetics; classical genetics; evolution and ecology. Emphasis is placed on reading, writing and discussing biology in English.

162.101	15 credits	S1	I	AL
Biology of Cells		S1	I	PN

An introduction to eukaryotic and prokaryotic cell structure and function and the flow of information within cells. The transmission of genetic information to progeny in cell division. A description of cellular mechanisms for creating genetic diversity, leading to a discussion of biological evolution. An introduction to molecular biotechnologies for modifying the genetic information of cells.

162.103	15 credits	S3	E	PN
Introductory Biology				

An introductory course in biology suitable for students with little previous experience in the subject. Topics include: the diversity of life; cells as the basic unit of life; form and function of cells, microbes, animals and plants; DNA and molecular genetics; classical genetics; evolution and ecology.

162.211	15 credits	S1	I	PN
Biology and Genetics of Microorganisms		S2	I	AL

Structure and metabolism of bacteria and their relation to the environment. Bacterial genetics. Eukaryote microbes – structure, physiology and genetics. Life cycle of viruses. The immune response. Practical training in the manipulation of micro-organisms.

162.212	15 credits	S2	I	PN
The Microbial World				

Microbiology as an integrated study of the diversity of micro-organisms and microbial environments. The range of microbial cell structures and metabolism is described in relation to environmental niches, and the molecular mechanisms for responding to environmental change. Actions and interactions of micro-organisms in soil and water.

162.283	15 credits	S2	I	PN
Medical Microbiology				

An introduction to the general principles of host-pathogen interaction for some major groups of bacteria and fungi pathogenic for humans.

Paper No./Title	Credits	Sem	Mode	Loc
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Detection of pathogens in clinical specimens. Sterilisation, disinfection and control of microbial growth. Antimicrobial agents, resistance to antimicrobial agents and antimicrobial susceptibility testing.

162.301	15 credits	S1	I	PN
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Advanced Medical Microbiology

Some major bacterial pathogens of humans in terms of the organisms, their habitats, modes of transmission, disease patterns and laboratory diagnosis. The structure, classification, propagation, assay and transmission of some of the major viruses of humans. Immunity to viruses and the laboratory diagnosis of viral infections.

162.303	15 credits	S1	I	PN
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Immunology

The principles of immunology including innate immunity, cell and antibody mediated immunity, the major histocompatibility complex, the hypersensitivities, immunodeficiency and autoimmunity. An introduction to vaccines, clinical immunology and immunological laboratory tests.

162.304	15 credits	S2	I	PN
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Environmental Microbiology

Actions and interactions of micro-organisms in soil, water and air, and the consequences of colonisation processes.

162.305	15 credits	S1	I	AL
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Food Microbiology

The growth of microbes in foods, their detection and control to produce safe, wholesome foods.

162.307	15 credits	S2	I	PN
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Microbial Biotechnology

Selected topics in applied microbiology with a strong emphasis on established biotechnological production processes, such as e.g. various biopolymers.

162.312	15 credits	S2	I	PN
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Molecular Microbiology

Major themes in modern microbiology. Molecular analysis of structure, function and export of bacterial surface proteins. Response to environmental change. Molecular typing and population dynamics in pathogens. Developmental signals and differentiation in micro-organisms. Students will have the opportunity to design, implement and evaluate molecular approaches to a problem in microbiology.

