

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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Ecology

196.205	15 credits	S1	I	PN
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Ecology and Conservation

An analytical approach to terrestrial ecology, including bio-geochemical cycling, communities, ecosystems and their development, nutrient and energy movements, competition, population dynamics and human ecology. The principles and practice of conservation in New Zealand. Statistical approaches are used in field and laboratory work.

196.207	15 credits	S2	E	PN
Biological Evolution		S2	I	PN

A general review of modern evolutionary biology and evolutionary theories. The theory component covers both micro- and macro-evolution. The paper centres on genetic processes that operate in natural populations and among species. Other topics include evolutionary changes in DNA, human evolution, the extinction of dinosaurs, the nature of species concepts and how species arise. Laboratory classes include a range of computer skills.

196.213	15 credits	S1	E	PN
Microbial Ecology		S1	I	PN

Introduction to the diversity of prokaryote and eukaryote microorganisms. Population biology and community ecology including microbe-microbe, microbe-plant, and microbe-animal interactions. Adaptations of microbes to extreme environments. The role of microorganisms in biogeochemical cycles, and aspects of applied microbiology, e.g. bioremediation, biological control, composting and biogas.

196.313	15 credits	S1	I	PN
Limnology				

A general introduction to the study of freshwater ecosystems, including the physical and chemical cycles which occur in streams and lakes and their effects on the biota. Composition and population dynamics of the biota. The effects of pollution on freshwater systems and their restoration. The study and management of freshwater fisheries.

196.315	15 credits	S2	I	PN
Applied Ecology and Resource Management				

The principles and practice of management of land and pests and of conservation; the utilisation and sustainable development of natural resources by the application of ecological principles. Considerable emphasis is placed on the practical course which includes modelling using a computer. There are compulsory field days.

Paper No./Title	Credits	Sem	Mode	Loc
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196.316	15 credits	S1	E	PN
New Zealand Plant Ecology		S1	I	PN

Global issues in concept-based plant ecology taught from a New Zealand perspective. Topics include plant growth dynamics, community assembly rules, plant successional concepts and models, herbivory impacts, life history strategies, invasion ecology and plant reproduction. Practical work includes compulsory field days.

196.317	15 credits	S1	I	PN
Community and Ecosystem Ecology				

A theoretical perspective to the study of community and ecosystem ecology examining the role of interactions between two or more species and their environment. Topics covered include techniques of community description, abiotic and biotic controls of community structure, the effects of disturbance, food web theory, ecosystem function and biodiversity. The emphasis will be on understanding the models and theories relating to this area of science, although examples of the application of these principles will also be given. Practical classes will involve a small research project emphasising the statistical and writing skills important in community and ecosystem ecology.

196.318	15 credits	*	*	*
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Molecular Ecology

The diverse array of DNA and protein-based technologies of use in the study of natural populations will be considered. These include isozymes, multilocus minisatellites, Restriction Fragment Length Polymorphisms (RFLPs), mitochondrial DNA sequencing and microsatellite DNA markers. Important ecological problems such as kinship, sex assignment, parentage, diet and aspects of conservation genetics such as consequences of population bottlenecks are addressed.

196.321	15 credits	S3	E	PN
Vegetation Studies in New Zealand				

Practical vegetation science in New Zealand taught via a summer field course, with emphasis on understanding the dynamics of native systems and their responses to disturbance. Topics covered include vegetation types and distribution in New Zealand, vegetation monitoring and analysis, vegetation processes, and recording and reporting techniques. Assessment will be on location.

196.712	30 credits	S12	I	PN
Aquatic Ecology				

This paper presents an historical and theoretical perspective to the study of freshwaters, building on the general introduction in 196.313. Topics covered include stream ecosystem structure and function, aquatic macrophytes, plankton, freshwater fish, disturbance and land

Paper No./Title	Credits	Sem	Mode	Loc
use impacts, and the implications of the Resource Management Act to aquatic ecology.				
196.713	30 credits	S12	I	PN
Ecology				
This paper explores contemporary issues in ecology, emphasising a functional outlook on the role of species in communities. It will focus on biodiversity and the interactions of organisms as stimuli for biodiversity. Topics include diversity and ecosystem function, patterns of species diversity, keystone species, herbivory, community structure, assembly roles and food web studies.				
196.726	30 credits	S12	I	PN
Plant Ecology				
Theoretical topics in plant ecology and ecophysiology, such as forest dynamics, population structures, reproductive strategies, spatial pattern, pollination biology, and ontogenetic effects, investigated through a coordinated course of practical work and literature investigations.				
196.790	15 credits	S12	I	AL
Special Topic		S12	I	PN
196.791	30 credits	S12	I	AL
Special Topic		S12	I	PN
196.792	30 credits	S12	I	AL
Special Topic		S12	I	PN
196.798	30 credits	S12	I	AL
Research Report		S12	I	PN
196.799	30 credits	S12	I	PN
Research Report				
196.800	120 credits	S12	I	PN
MPhil – Ecology				
196.897	60 credits	S1	I	AL
Thesis Year 1		S1	I	PN
		S12	I	AL
		S12	I	PN
196.898	60 credits	S1	I	AL
Thesis Year 2		S1	I	PN
		S12	I	AL
		S12	I	PN
196.899	120 credits	S12	I	AL
Thesis		S12	I	PN
196.900	120 credits	S12	I	AL
PhD – Ecology		S12	I	PN

Ecology

232.701	30 credits	S12	I	AL
Conservation Biology		S12	I	PN
Conservation biology involves applying theory from several branches of biology to the problem of conserving biological diversity. This paper covers a range of general issues in conservation biology, including ethical and cultural issues, population and demographics and genetics, population viability analysis, and community-level conservation. It also covers several specific topics in depth, with an emphasis on New Zealand case studies.				
232.702	30 credits	S12	I	PN
Freshwater Ecosystem Management				
Experience in and theoretical framework for the development, implementation and reporting for a 'State of the Environment' study of the biotic component in New Zealand streams and rivers.				

Paper No./Title	Credits	Sem	Mode	Loc
232.703	30 credits	S12	I	AL
Wildlife Management		S12	I	PN
Experience managing and monitoring wildlife in the field, analysing data collected in the field, and writing reports. Field work is conducted on both island and mainland systems, and includes visual surveys, capture methods, tracking tunnels, radio telemetry and predator control. Analytical techniques involve estimation of abundance, survival analysis, home range analysis, and population viability analysis. There is a strong emphasis on understanding the theory underlying methods used.				
232.704	30 credits	S12	I	PN
Wildlife Disease				
Techniques and issues fundamental to planning and interpreting wildlife health investigations and incorporating results into species management programmes. A primary focus on issues relevant to New Zealand's fauna together with specific examples from overseas.				
232.705	30 credits	S12	I	PN
Captive Breeding and Management				
Nutritional, management and disease control programmes relevant to the captive breeding of New Zealand's endangered indigenous species. Problems associated with some selected species illustrating how to obtain healthy individuals for release. Para-veterinary techniques applicable to the safe handling and welfare of a variety of captive species.				
232.791	15 credits	S12	I	AL
Special Topic		S12	I	PN
232.792	30 credits	S12	I	AL
Special Topic		S12	I	PN
232.793	30 credits	S12	I	AL
Special Topic		S12	I	PN
232.799	30 credits	S12	I	AL
Research Report		S12	I	PN
232.897	60 credits	S1	I	AL
Thesis (Year 1)		S1	I	PN
		S12	I	AL
		S12	I	PN
232.898	60 credits	S1	I	AL
Thesis (Year 2)		S1	I	PN
		S12	I	AL
		S12	I	PN
232.899	120 credits	S12	I	AL
Thesis		S12	I	PN
232.900	120 credits	S12	I	AL
PhD Conservation Biology		S12	I	PN