

# APPENDIX A

## SCIENCE SCHEDULE OF SUBJECTS

(Check Online Course Handbook for full details: [www.uow.edu.au/handbook](http://www.uow.edu.au/handbook))

<b>Science Schedule</b>	<b>cps</b>	<b>Session</b>
<b>BIOLOGICAL SCIENCES</b>		
BIOL103 Molecules, Cells and Organisms	6	2
BIOL104 Evolution, Biodiversity and Environment	6	1
BIOL212 Introductory Microbiology and Immunology	6	*
BIOL213 Principles of Biochemistry	6	1
BIOL214 The Biochemistry of Energy and Metabolism	6	2
BIOL215 Introductory Genetics	6	2
BIOL240 Functional Biology of Plants and Animals	6	1
BIOL241 Biodiversity: Classification and Sampling	6	2
BIOL251 Principles of Ecology and Evolution	6	1
BIOL292 Special Biology Studies	6	1,2
BIOL303 Biotechnology: Applied Cell and Molecular Biology	8	1
BIOL320 Molecular Cell Biology	8	1
BIOL321 Infection and Immunity	8	2
BIOL332 Ecological and Evolutionary Physiology	8	1
BIOL333 Frontiers in Field Physiology	8	*
BIOL351 Conservation Biology: Marine and Terrestrial Populations	8	1
BIOL355 Marine and Terrestrial Ecology	8	2
BIOL356 Marine and Terrestrial Ecology (Environmental Science)	8	2
BIOL357 Field Methods in Ecology	8	*
BIOL391 Advanced Biology	16	1,2,A
BIOL392 Advanced Biology	8	1,2,3
BIOL394 Critical Issues in Research	8	1,2
* Not offered in 2009		
<b>CHEMISTRY</b>		
CHEM10 Chemistry 1A: Introductory Physical and General Chemistry 1	6	1
CHEM10 Chemistry 1B: Structure and Reactivity of Molecules for Life 2	6	2
NANO10 Current Perspectives in Nanotechnology 1	6	2

CHEM21 1	Inorganic Chemistry II	6	1
CHEM21 2	Organic Chemistry II	6	1
CHEM21 3	Molecular Structure, Reactivity and Change	6	2
CHEM21 4	Analytical and Environmental Chemistry	6	2
CHEM21 5	Food Chemistry	6	1
CHEM21 8	Special Chemistry Studies	6	1,2,3
NANO20 1	Research Topics in Nanotechnology	6	2
CHEM30 1	Advanced Materials and Nanotechnology	8	2
CHEM31 4	Instrumental Analysis	8	1
CHEM32 0	Bioinformatics: From Genome to Structure	8	2
CHEM32 1	Organic Synthesis and Reactivity	8	2
CHEM32 7	Environmental Chemistry	8	1
CHEM33 0	Medicinal Chemistry	8	2
CHEM34 0	Chemistry Laboratory Project	8	1,2,3
CHEM35 0	Principles of Pharmacology	8	1
CHEM36 4	Molecular Structure and Spectroscopy	8	1
NANO30 1	Research Topics in Nanomaterials	8	1,2,3
<b>EARTH AND ENVIRONMENTAL SCIENCES</b>			
EESC101	Planet Earth	6	1
EESC102	Earth Environments and Resources	6	2
EESC103	Landscape Change and Climatology	6	1
EESC104	The Human Environment: Problems and Change	6	2
EESC201	Earth's Inferno	6	1
EESC202	Soils, Landscapes and Hydrology	6	2
EESC203	Biogeography and Environmental Change	6	1

EESC204	Introductory Spatial Science	6	1,2
EESC205	Population Studies	6	1
EESC206	Discovering Downunder: A Geography of Australia	6	2
EESC208	Environmental Impact of Societies	6	2
EESC210	Social Spaces: Rural and Urban	6	2
EESC211	Rural and Urban Social Geography	8	2
EESC212	Geographical Population Studies	8	1
EESC213	Introduction to Spatial Science	8	1,2
EESC214	Discovering Downunder: A Geography of Australia	8	2
EESC215	Environmental Impact of Societies	8	2
EESC216	Sediments and Fuels	6	2
EESC250	Field Geology	6	3
EESC252	Geology for Engineers I	6	2
EESC260	Earth and Environmental Sciences Research Project	6	1,2
EESC300	Directed Studies in Earth and Environmental Sciences A	8	1
EESC301	Plate Tectonics, Macrotopography and Earth History	8	1
EESC302	Coastal Environments: Process and Management	8	2
EESC303	Fluvial Geomorphology and Sedimentology	8	1
EESC304	Geographic Information Science	8	2
EESC305	Remote Sensing of the Environment	8	1
EESC306	Resources and Environments	8	2
EESC307	Spaces, Places and Identities: Qualitative research design	8	1
EESC308	Environmental and Heritage Management	8	2
EESC309	Dung, Death and Decay: modern scientific methods in archaeology	8	1
EESC310	Water Resources and Management	8	2
EESC311	Human Geography Fieldwork Project	8	2,3
EESC312	Resource Geology for Engineers	6	2
EESC350	Directed Studies in Earth and Environmental Sciences B	8	2
ENVI391	Environmental Science	8	2
<b>GENERAL SCIENCE</b>			
SCIE101	Modern Perspectives in Science (Restricted to B. Science Education)	6	2
SCIE102	International Perspectives in Science (Restricted to B. Science International)	6	1
SCIE103	Climate Change	6	2
SCIE202	Bioethical Challenges: A Global Perspective (Restricted to B. Science International)	2	1
SCIE292	Science Research Internship	6	1,2,3
SCIE392	Science Research Internship B	8	1,2,3

SCIE401	International Bachelor of Science Honours Project	24	Annual
SCIE402	Research Frontiers in Science (Restricted to B. Science International)	12	Annual

### **MARINE SCIENCE**

MARE20 0	Introduction to Oceanography	6	1
MARE30 0	Fisheries and Aquaculture	8	2
MARE35 7	Advances in Molluscan Biology	8	3
MARE39 3	Advanced Marine Science Project	8	1,2,3

### ***Subjects from outside of the Faculty but included in the Science Schedule:***

BMS101	Systemic Anatomy	6	1
BMS112	Human Physiology I: Principles and Systems	6	2
BMS202	Human Physiology II: Control Mechanisms	6	1
BMS311	Nutrients and Metabolism	8	<i>Consult Online Subject Database for Sessions of offer</i>
BMS312	Research in Human Nutrition	8	
CIVL272	Surveying	6	
CIVL322	Hydraulics and Hydrology	6	
CIVL361	Geomechanics 1	6	
CIVL462	Geomechanics 2	6	
CIVL463	Geomechanics 3	6	
CSCI103	Algorithms and Problem Solving	6	
CSCI114	Procedural Programming	6	
ENGG25 2	Engineering Fluid Mechanics	6	
ENVE220	Water Quality Engineering	6	
ENVE221	Air and Noise Pollution	6	
ENVE385	Environment Engineering	6	
ENVE420	Water Engineering	6	
INFO411	Data Mining and Knowledge Discovery	6	
MATE20 1	Structure and Properties of Material	6	
MATE30 4	Transport Phenomena in Materials Processes	6	
MATH11 1	Applied Mathematical Modelling	6	
MATH12 1	Discrete Mathematics	6	
MATH14	Mathematics 1C Part 1	6	

1		
MATH14	Mathematics 1C Part 2	6
2		
MATH15	General Mathematics IA	6
1		
MATH16	Mathematics 1E Part 1	6
1		
MATH16	Mathematics 1E Part 2	6
2		
MATH18	Mathematics 1A Part 1	6
7		
MATH18	Mathematics 1A Part 2	6
8		
MATH20	Multivariate and Vector Calculus	6
1		
MATH20	Differential Equations 2	6
2		
MATH28	Mathematics IIE for Engineers Part 1	6
3		
PHYS141	Fundamentals of Physics A	6
PHYS142	Fundamentals of Physics B	6
PHYS155	Introduction to Biomedical Physics	6
PHYS205	Advanced Modern Physics	6
PHYS206	Project in Physics	6
PHYS215	Vibrations, Waves and Optics	6
PHYS225	Electromagnetism and Optoelectronics	6
PHYS233	Introduction to Environmental Physics	6
PHYS235	Mechanics and Thermodynamics	6
PHYS255	Radiation Physics	6
PHYS295	Astronomy: Concepts of the Universe	6
PHYS305	Quantum Mechanics	8
PHYS306	Project in Physics	8
PHYS325	Electromagnetism	8
PHYS335	Classical Mechanics	8
PHYS365	Detection of Radiation: Neutrons, Electrons and X -Rays	8
PHYS375	Nuclear Physics	8
PHYS385	Statistical Mechanics	8
PHYS390	Astrophysics	8
PHYS396	Electronic Materials	8
POP204	Epidemiology	6

STAT151	Introduction of the Concepts and Practice of Statistics	6
STAT252	Statistics for the Natural Sciences	6
STAT335	Sample Surveys and Experimental Design	6

**Note on Physics Offerings**

A substantial mathematical content is necessary for professional Physics training and as a result Mathematics is a co-requisite at 100-level and 200-level for many Physics units. However, PHYS141, PHYS142, PHYS215, PHYS233 and PHYS255 are available for students who do not attempt Mathematics, and are not majoring in Physics. Consult the Engineering Physics Program in the Faculty of Engineering.