

UNIVERSITY PREPARATION PROGRAM

2012 COURSE COMPONENT DETAILS



UNSW

THE UNIVERSITY OF NEW SOUTH WALES

The Learning Centre • The University of New South Wales • Sydney NSW 2052 • Ph: +61 (2) 9385 2060

CORE COMPONENT - SEMESTER 1, 2012 (FOR ALL STREAMS)

REGZ9000 - UNIVERSITY ORIENTATION AND STUDY SKILLS 1

Staff Contact: Dr D Fitzsimmons

Units of credit: 6

Hours per week: 3

Offered by: The Learning Centre

Available: Semester 1 (exclusively to UPP students)

Prior Knowledge: None required but must be proficient in written and spoken English.

Timetable: Each week students will attend ONE of the following 2 hour class sessions:

Monday **6pm to 8pm** **OR**

Tuesday **6pm to 8pm** **OR**

Friday **12pm to 2pm**

plus a 1 hour online component

Please note: Students enrolled in the Science and Engineering streams will NOT be able to attend Monday UOSS sessions.

The UOSS1 course provides a practical engagement with the academic skills needed for success at university: for example, academic reading, critical thinking and academic writing. UOSS1 has a particular focus on the understanding of, and the preparation required, to produce an academic essay. The writing process involves content knowledge, research and critical reading, note making, academic writing, referencing, time management and an introduction to online learning.

Topics covered include

- orientation to the academic system
- time management
- critical/analytical skills
- preparing seminar presentations
- essay writing
- note taking from lectures and written material
- examination techniques

Assessment is continuous and comprises class participation, a seminar presentation, two essays and a final examination. Attendance is compulsory from Week 1 onwards.

CORE COMPONENT - SEMESTER 1, 2012 (FOR SCIENCE AND ENGINEERING STREAMS)

REGZ9070 - UPP MATHEMATICS SKILLS 1

Staff Contact: Ms Kathy Gray

Units of credit: 6

Offered by: The Learning Centre

Available: Semester 1

Prior Knowledge: Year 10 Advanced Level Mathematics is assumed (see below for further details).

Timetable: students will attend BOTH of the following sessions:

Monday **6pm to 9pm** **AND**

Wednesday **6pm to 9pm**

Hours Per Week: 6

UPP Mathematics Skills 1 is for students who have not achieved an appropriate level of mathematics at high school or equivalent and wish to apply to UNSW degree programs with assumed knowledge in mathematics. UPP Mathematics Skills 1 includes the following:

Fundamentals

- Basic Numeracy and Measurement
- Algebra and Surds
- Equations
- Coordinate Geometry
- Functions and Graphs
- Sets and Probability/Sequences and Series
- Trigonometry

Year 10 Advanced Level Mathematics is assumed. You should be confident with algebra (eg. simplification of expressions, solving equations & inequations, factorisation including quadratic equations and using a scientific calculator including the fraction, power and exponential keys).

Calculus Methods and Applications

- The Tangent to a Curve and Differentiation
- Applications of Differentiation
- Integration
- Exponential and Logarithmic Functions
- Further Applications of Calculus

Please Note: While the information in this brochure was correct at the time of publication, information regarding UPP electives may be subject to change. Electives will be confirmed in April 2012.

CORE COMPONENT - SEMESTER 2, 2012 (FOR HUMANITIES AND SCIENCE STREAMS)

REGZ9255 - UNIVERSITY ORIENTATION AND STUDY SKILLS 2

Staff Contact: Dr D Fitzsimmons

Units of credit: 6

Hours Per Week: 3

Offered by: The Learning Centre

Available: Semester 2 (exclusively to UPP students)

Pre-requisites: Successful completion of UOSS1 (REGZ9000)

University Orientation & Study Skills 2 builds on the fundamental academic skills studied in first semester. UOSS2 focuses on developing skills in writing, presenting critical reviews and reports, and completing a small research project.

UOSS 2 will be taught in lecture and tutorial format (2 hours per week), and one hour online.

Timetable: Students will attend ONE of the following sessions:

Monday	6pm to 8pm	OR
Tuesday	6pm to 8pm	OR
Friday	12pm to 2pm	

CORE COMPONENT - SEMESTER 2, 2012 (FOR SCIENCE AND ENGINEERING STREAMS)

REGZ9072 - UPP MATHEMATICS SKILLS 2

Staff Contact: Ms Kathy Gray

Units of credit: 6

Offered by: The Learning Centre

Available: Semester 2

Pre-requisites: Successful completion of REGZ9070

UPP Mathematics Skills 2 is for students who have not achieved an appropriate level of mathematics at high school or equivalent and wish to apply to UNSW degree programs with assumed knowledge in mathematics. :

NOTE: Science Stream students who attain a Distinction result in REGZ9070 in Semester 1 **MAY** be permitted to take one of the Elective Science Gateway courses in place of REGZ9072. Engineering stream students who attain a Distinction result in REGZ9070 **MAY** be permitted to take MATH1011 Fundamentals of Mathematics B in place of REGZ9072

Timetable: students will attend BOTH of the following sessions:

Monday	6pm to 9pm	AND
Wednesday	6pm to 9pm	

Hours Per Week: 6

CORE COMPONENT - SEMESTER 2, 2012 (FOR ENGINEERING STREAM)

ENG0360 - COMMUNICATING IN ENGINEERING

Staff Contact: Dr I M Skinner

Units of credit: 6

Offered by: The Learning Centre

Pre-requisites: Successful completion of REGZ 9000 and REGZ9070

The expectations and conventions applying to spoken and written communications within engineering and science. Different textual genres. Aspects of rhetoric. Ethical use of material. Formal language structure; grammar and syntax. Students will improve their ability to collect and build ideas into coherent arguments, learn how to construct texts that demonstrate critical thinking, and develop their communication skills (speaking, listening, writing, & reading), in preparation for subsequent study in a professional context.

Timetable: TBA in April 2012

Hours Per Week: 3

Available: Semester 2

ELECTIVE COMPONENTS

Semester 2 Timetable will be available in April 2012. Please note that most Elective courses will be held during the day. The number of evening classes for Elective courses is very limited.

Humanities Stream Gateway Electives - To be completed in Semester 2, 2012 (July - Nov)

ATSI1001

INTRODUCTION TO ABORIGINAL PEOPLE AND SOCIETY

Staff Contact: School Office Units of credit: 6

Hours Per Week: 3 Time: TBA in April 2012

This course introduces students to the academic field of Aboriginal and Torres Strait Islander Studies. Focusing on the ongoing nature of colonization, we consider ideas around country, Indigenous knowledges, languages, cultures, resistance, governance and social justice.

ARTS1150

INTRODUCTION TO AMERICAN STUDIES

Staff Contact: School Office Units of credit: 6

Hours Per Week: 3 Time: TBA in April 2012

Introduction to American Studies' is the gateway course to the Americas Studies minor in FASS. It introduces students to key themes in the human and environmental changes, and their interpretation, which have occurred in the Western Hemisphere since the pre-Colombian era to the present, so as to provide students with the knowledge and the conceptual skills to engage in Americas Studies courses in second and third year.

ARTS1180

ARCHAEOLOGY AND OUR PAST: AN INTRODUCTION

Staff Contact: School Office **Units of credit:** 6

Hours Per Week: 3 **Time:** TBA in April 2012

This course combines instruction in modern archaeological methods and practices (e.g. remote sensing, surface survey, excavation, archaeological sciences, conservation) with the study and assessment of various interpretive theories in archaeology (e.g., culture history, processualism, post-processualism).

A major theme of the course will be the interaction of archaeology with other disciplines (e.g. history, anthropology, social and natural sciences). The course will progress through an overview of the discipline, beginning with the history of archaeology, then examining approaches to archaeology, research design, fieldwork, insights offered by other disciplines, and theoretical approaches to reconstructing and understanding the past, and ultimately concluding with a consideration of threats to archaeological heritage and strategies for conservation and preservation.

Case studies will be used to explore how archaeologists work. Lectures and readings will introduce concepts, which will then be critiqued in tutorial. Student writing will analyse and assess recent archaeological publications.

ARTS1190

AUSTRALIAN LEGENDS: INTRODUCING AUSTRALIAN STUDIES

Staff Contact: School Office **Units of credit:** 6

Hours Per Week: 3 **Time:** TBA in April 2012

As the Gateway course for Australian Studies, 'Australian Legends' introduces students to important components of Australian self-understanding in their evolving cultural contexts. It investigates the origins and shifting meanings of images such as the Fatal

Shore, the Bush Legend, the Quiet Continent, White Australia, the Anzac Legend, the Land of the Fair Go, Secular Sporting Paradise, Man's World.

The course also examines how a wide variety of writers, artists, feminists, historians, radical nationalists and Indigenous activists have contributed to the making of these images as well as challenged them. The course addresses fundamental questions implicit in the field of Australian Studies itself: what is Australian Studies? What do scholars in this field do? What led to its development?

ARTS1900

GENDERED WORLDS: INTRO TO WOMEN'S & GENDER STUDIES

Staff Contact: School Office **Units of credit:** 6

Hours Per Week: 3 **Time:** TBA in April 2012

'Gendered Worlds' is the introductory ('Gateway') course for UNSW's minor in Women's and Gender Studies. This is an area of study first introduced by feminist scholars from the late 1960s, which today informs all academic disciplines in the Arts and Social Sciences.

The course introduces students to the study of women, gender and sexualities through the lens of world history. As such, it provides a good introduction both to feminist history and to feminist interdisciplinary scholarship: that is, to 'gender' and other forms of feminist analysis. It ranges from ancient times to the present, focusing particularly on social constructions of gender (which are, at base, social expectations of 'proper' feminine and masculine roles, behaviour and identities) while also investigating how these expectations have affected women's status, male-female power relations and normative and transgressive sexual practices. The emphasis is on how these have varied over time, and in different cultures, social classes and modes of subsistence.

Science Stream Electives - To be completed in Semester 2, 2012 (July - Nov)

NOTE: Science Stream students who attain a Distinction result in REGZ9070 in Semester 1 **MAY** be permitted to take one of the Elective Science Gateway courses in place of REGZ9072.

MATH1011

FUNDAMENTALS OF MATHEMATICS B

Staff Contact: School Office **Units of credit:** 6

Hours Per Week: 3 **Time:** TBA in April 2012

Functions (and their inverses), limits, asymptotes, continuity; differentiation and applications; integration, the definite integral and applications; inverse trigonometric functions; the logarithmic and exponential functions and applications; sequences and series; mathematical induction; the binomial theorem and applications; introduction to probability theory; introduction to 3-dimensional geometry; introduction to linear algebra.

Assumed knowledge: A level of knowledge equivalent to achieving a mark of at least 60 in HSC Mathematics. Students who have taken General Mathematics will not have achieved the level of knowledge which is assumed in this course.

MATH1041

STATISTICS FOR LIFE AND SOCIAL SCIENCES

Staff Contact: School Office **Units of credit:** 6

Hours Per Week: 3 **Time:** TBA in April 2012

Probability, random variables, independence. Discrete distributions, Poisson and binomial distributions. Data analysis, Descriptive statistics. Sampling, Continuous distributions, the normal distribution. Estimation of mean and variance. Tests of hypotheses. Linear regression and correlation. Tests for goodness of fit. Bayesian statistics.

Assumed knowledge: A level of knowledge equivalent to achieving a mark of at least 60 in HSC Mathematics. Students who have taken General Mathematics will not have achieved the level of knowledge which is assumed in this course.

Note: This course is not intended for students who propose to study a substantial amount of Mathematics beyond first year level.

PHYS1111**FUNDAMENTALS OF PHYSICS****Staff Contact: School Office Units of credit: 6****Hours Per Week: 3 Time: TBA in April 2012**

This is an introductory level course in physics for students from all disciplines. The course will cover the methods of Physics, including the following topics: the description of motion; forces and momentum; the dynamics of particles; kinetic and potential energy; the conservation of energy; temperature and thermal equilibrium; specific and latent heat; thermal energy; fluids and fluid flow; oscillations and simple harmonic motion; waves, wave reflection, refraction and interference; the wave nature of light; electric fields and charge; electric potential and energy; electric currents; magnetism; electromagnetic induction and Faraday's law; early quantum theory and models of the atom; nuclear physics and radioactivity; nuclear energy.

BIOS1101**EVOLUTIONARY AND FUNCTIONAL BIOLOGY****Staff Contact: School Office Units of credit: 6****Hours Per Week: 3 Time: TBA in April 2012**

The course examines the evolutionary history of life on earth from origins to humans and the relationship between environment, adaptation and function. Animal (particularly human) and plant physiology are covered with an emphasis placed on adaptation in the Australian context.

PHYS1160**INTRODUCTION TO ASTRONOMY****Staff Contact: Ms R Balalla Units of credit: 6****Hours Per Week: 3 Time: TBA in April 2012**

This course provides a broad overview of Astronomy and our place in the Cosmos. It covers the solar system and its exploration, stars, galaxies and cosmology, the Earth as a habitable planet, and the search for life elsewhere in the universe. The course is delivered wholly on the internet through Blackboard. The course is suitable as an introductory course for science students or as a general education course for non-scientists.

Engineering Stream Electives - To be completed in S2, 2012 (July - Nov)

NOTE: Engineering Stream students who attain a Distinction result in REGZ9070 in Semester 1 **MAY** be permitted to take MATH1011 Fundamentals of Mathematics B in place of REGZ9072.

MATH1011**FUNDAMENTALS OF MATHEMATICS B****Staff Contact: School Office Units of credit: 6****Hours Per Week: 3 Time: TBA in April 2012**

Functions (and their inverses), limits, asymptotes, continuity; differentiation and applications; integration, the definite integral and applications; inverse trigonometric functions; the logarithmic and exponential functions and applications; sequences and series; mathematical induction; the binomial theorem and applications; introduction to probability theory; introduction to 3-dimensional geometry; introduction to linear algebra.

Assumed knowledge: A level of knowledge equivalent to achieving a mark of at least 60 in HSC Mathematics. Students who have taken General Mathematics will not have achieved the level of knowledge which is assumed in this course.

To be completed in S1, 2013 (March - June)**PHYS1111****FUNDAMENTALS OF PHYSICS****Staff Contact: School Office Units of credit: 6****Hours Per Week: 3 Time: TBA in 2013**

This is an introductory level course in physics for students from all disciplines. The course will cover the methods of Physics, including the following topics: the description of motion; forces and momentum; the dynamics of particles; kinetic and potential energy; the conservation of energy; temperature and thermal equilibrium; specific and latent heat; thermal energy; fluids and fluid flow; oscillations and simple harmonic motion; waves, wave reflection, refraction and interference; the wave nature of light; electric fields and charge; electric potential and energy; electric currents; magnetism; electromagnetic induction and Faraday's law; early quantum theory and models of the atom; nuclear physics and radioactivity; nuclear energy.

Making changes to your UPP stream

To change your UPP stream, contact:

The Admissions Office (UPP), The University of New South Wales, UNSW Sydney NSW 2052

Tel: + 61 2 9385 3228 Email: ugadmis@unsw.edu.au

Any changes to your UPP stream can only be made before or on the final Friday before classes commence.

Final date for changes: Friday 24 February 2012 (before 4.00pm)