UNIVERSITY PREPARATION PROGRAM
2012 COURSE COMPONENT DETAILS

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

<table>
<thead>
<tr>
<th>Staff Contact:</th>
<th>Dr D Fitzsimmons</th>
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<tbody>
<tr>
<td>Units of credit:</td>
<td>6</td>
</tr>
<tr>
<td>Hours per week:</td>
<td>3</td>
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<tr>
<td>Offered by:</td>
<td>The Learning Centre</td>
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<tr>
<td>Available:</td>
<td>Semester 1 (exclusively to UPP students)</td>
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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

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

REGZ9070 - UPP MATHEMATICS SKILLS 1

<table>
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<th>Staff Contact:</th>
<th>Ms Kathy Gray</th>
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<td>Semester 1</td>
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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.*

**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

**ENG0360 - COMMUNICATING IN ENGINEERING**

- **Staff Contact:** Dr I M Skinner
- **Units of credit:** 6
- **Offered by:** The Learning Centre

*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.*

**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)**

**ATS1001**

**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.
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.

STATISTICS FOR LIFE AND SOCIAL SCIENCES

Staff Contact: School Office

Units of credit: 6

Hours Per Week: 3

Time: TBA in April 2012


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.
**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.

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**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.

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**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.

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**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.

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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.

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To be completed in S1, 2013 (March - June)

**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)