



THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato

UniSTARt – University of Waikato 2008

University Papers for Secondary School Students



2008

INTRODUCTION

Your school may be interested in offering University level papers to students to provide them with:

- *An academic challenge*
- *The next step if they have already achieved success in a Level 3 subject*
- *The opportunity to gain credit towards a University of Waikato undergraduate degree*

The University of Waikato offers papers to secondary school students in the following subjects:

- Biology
- Chemistry
- Computer Science
- Economics
- Law
- Mathematics
- Philosophy
- Physics
- Te Reo Māori
- Tourism Management

Information about 2008 offerings is in this booklet.

Papers in other subjects may be available – please ask.

Secondary Tertiary Alignment Resource (STAR) funding for university papers is available to public and integrated Secondary Schools through the Ministry of Education. Students can also enrol as full fee paying students*.

Secondary Schools interested in offering any of these papers will need to contact the University of Waikato by the end of November 2007 (or by April 2008 for LAWS 105-08C which commences 5 May 2008).

** with the permission of your Secondary School Principal*

BIOL102-08A (SEC) BIOLOGY OF ORGANISMS

15 POINTS

This paper is concerned with the distinctive features of the various groups of plants and animals, and how they have overcome various basic problems such as the acquisition of nutrients, gas exchange, regulation and transport of body fluids, reproduction, and development. Aspects of animal behaviour, and the principles of ecology, are also included.

Fee: \$500 per student per paper

Length of paper: 18 weeks from the week beginning 25 February to the week ending 29 June.

In addition to the Discretionary Entrance Requirements that are detailed at the back of this booklet, students must meet the following prerequisites:

- Prior to students enrolling in this paper a staff member from your school must be approved for teaching degree level Biology by the Biology Department of the University of Waikato.
- Entry to this paper is on the recommendation of the approved teacher.

Applications should be received at the University by 11 February 2008

BIOL101-08B (SEC) CELLULAR & MOLECULAR BIOLOGY

15 POINTS

This paper covers: the ultrastructure and function of cells & energy flow in photosynthesis, respiration and metabolism; an introduction to microbiology; DNA as biological information, its replication and transfer, genetic variability including recombinant DNA, & the principles of Mendelian genetics and evolution.

Fee: \$500 per student per paper

Length of paper: 18 weeks from the week beginning 14 July to the week ending 16 November.

In addition to the Discretionary Entrance Requirements that are detailed at the back of this booklet, students must meet the following prerequisites:

- Prior to students enrolling in this paper a staff member from your school must be approved for teaching degree level Biology by the Biology Department of the University of Waikato.
- Entry to this paper is on the recommendation of the approved teacher.

Applications should be received at the University by 30 June 2008



CHEM101-08A (SEC)

CHEMICAL CONCEPTS

15 POINTS

A study of chemical concepts fundamental to the sciences and technology. Topics include atoms, elements, stoichiometry, intermolecular forces, states of matter, gas-phase, solution, acid-base and redox equilibria, atomic structure, quantum theory, orbitals and electronic configurations, bonding and structure and systematic chemistry of main group elements.

Fee: \$500 per student per paper

Length of paper: 18 weeks from the week beginning 25 February to the week ending 29 June.

In addition to the Discretionary Entrance Requirements that are detailed at the back of this booklet, students must normally meet the following prerequisites:

- a minimum of 14 credits (or the equivalent) in Chemistry at NCEA Level 3; and
- Prior to students enrolling in these papers a staff member from your school must be approved for teaching degree level Chemistry by the Chemistry Department of the University of Waikato.
- Entry to this paper is on the recommendation of the approved teacher.

Applications should be received at the University by 11 February 2008

CHEM102-08B (SEC)

CHEMICAL CHANGE AND ORGANIC COMPOUNDS

15 POINTS

An introduction to physical and organic chemistry with some emphasis on environmental, technological and biological relevance, chemical thermodynamics, reaction kinetics and mechanism, and the common organic functional groups and their typical reactions.

Fee: \$500 per student per paper

Length of paper: 18 weeks from the week beginning 14 July to the week ending 16 November.

In addition to the Discretionary Entrance Requirements that are detailed at the back of this booklet, students must normally meet the following prerequisites:

- a minimum of 14 credits (or the equivalent) in Chemistry at NCEA Level 3; and
- Prior to students enrolling in these papers a staff member from your school must be approved for teaching degree level Chemistry by the Chemistry Department of the University of Waikato.
- Entry to this paper is on the recommendation of the approved teacher.

Applications should be received at the University by 30 June 2008

COMP103-08C (HAM)

INTRODUCTION TO COMPUTER SCIENCE 1

15 POINTS

This paper introduces computer programming in C# – the exciting challenge of creating software and designing artificial worlds within the computer. It also covers concepts such as the internals of the home computer, the history and future of computers, how computers are changing society, and current research and challenges in computing.

This paper is taught at the University of Waikato Hamilton campus in conjunction with the normal University offering of COMP103-08A (HAM).

Fee: \$250 per student per paper

Length of paper: 18 weeks from the week beginning 25 February to the week ending 29 June.

The Discretionary Entrance Requirements are detailed at the back of this booklet.

Applications should be received at the University by 11 February 2008

COMP104-08C (HAM)

INTRODUCTION TO COMPUTER SCIENCE 2

15 POINTS

This paper continues from COMP103, expanding upon data organisation and algorithms, and introducing computer architecture, Boolean algebra, assembly language, program analysis and object-oriented programming.

This paper is taught at the University of Waikato Hamilton campus in conjunction with the normal University offering of COMP104-08B (HAM).

Fee: \$250 per student per paper

Length of paper: 18 weeks from the week beginning 14 July to the week ending 16 November.

The Discretionary Entrance Requirements are detailed at the back of this booklet.

Applications should be received at the University by 30 June 2008



**COMPUTER SCIENCE TASTER COURSE
INTRODUCTION TO PROGRAMMING FUNDAMENTALS**

Practical sessions include:

- > Gamedmaker (game construction software)
- > Introduction to C#
- > C#: Events and event handling
- > C#: Algorithms
- > Graphics and Games in a 3D virtual world ("Garry's Mod" to Half-life2)

Fee: \$200 per student

Location: Computer Science Labs (R Block)

Length of course: The course will be structured as five labs, held bi-weekly in the Waikato University computing labs in R Block (ground floor).

Start date: TBA

This course is designed to introduce computing at the University and does not count towards a University of Waikato paper



ECON100-08A (SEC)

BUSINESS ECONOMICS AND THE NEW ZEALAND ECONOMY

15 POINTS

This paper introduces students to the essential aspects of the micro- and macroeconomic environment within which individuals and businesses operate. It provides an introduction to the key characteristics of different types of economic environments from both a business and policy perspective, the ways in which market types can be analysed, and the central issues of business strategy that are relevant in markets and in the macroeconomy. This paper helps students to understand and cope with the diverse economic problems that they might encounter as a business manager or policy maker.

Fee: \$500 per student per paper

Length of paper: 18 weeks from the week beginning 25 February to the week ending 29 June.

The Discretionary Entrance Requirements are detailed at the back of this booklet.

Applications should be received at the University by 11 February 2008

ECON110-08B (SEC)

ECONOMICS, MEDIA AND SOCIETY

15 POINTS

An introduction to the analysis of social issues from an economics perspective. This paper will introduce students to key economic models and techniques of social and economic policy analysis, and develop critical thinking skills in economics. A range of social policy topics are considered including intellectual property, information and media, the environment and natural resources, trade and globalisation, education and health. These topics are explored using relevant theory and developed with the aid of numerous case studies.

Fee: \$500 per student per paper

Length of paper: 18 weeks from the week beginning 14 July to the week ending 16 November.

The Discretionary Entrance Requirements are detailed at the back of this booklet.

Applications should be received at the University by 30 June 2008



LAWS105-08C (SEC)

INTRODUCTION TO NEW ZEALAND LAW AND SOCIETY

15 POINTS

This paper is designed for students learning about law for the first time and introduces ideas about the nature of law and its functions in New Zealand society. You will gain knowledge about New Zealand's main legal institutions and of how laws are made and applied. The paper will be taught entirely via the internet, using on-line discussions and debates, video clips and interviews with key participants in the legal system. You will gain valuable insights into the criminal justice system, and knowledge of consumer law and alternative forms of dispute resolution through the use of case studies. The assessment will include a legal research and writing assignment, and a test. In addition, marks will be allocated for participation in the on-line discussions.

Fee: \$500 per student per paper

Length of paper: from the week beginning 5 May to the week ending 11 August.

The Discretionary Entrance Requirements are detailed at the back of this booklet.

Applications should be received at the University by 18 April 2008.

MAOR101-08A (SEC)

TE REO MĀORI: INTERMEDIATE 1

15 POINTS

This paper focuses on developing competencies in language skills required in the communication of feelings, attitudes, emotions and points of view in different situations. The paper is for students at a reasonably high level, or who are fluent speakers of Māori. Study guides, text books and audio tapes will be provided, and where possible, lectures will be video-conferenced to schools who have these facilities. The assessment will include written and oral tests. Oral tests will normally be conducted on the phone and where possible, both oral and written tests may be conducted at the University. Included will be assignments and either a research project or essay component.

Fee: \$550 per student per paper

Length of paper: 18 weeks from the week beginning 25 February to the week ending 29 June.

In addition to the Discretionary Entrance Requirements detailed at the back of this booklet, students must meet the following prerequisite:

- a minimum of 14 credits in Te Reo Rangatira or Te Reo Māori at NCEA Level 3

Applications should be received at the University by 11 February 2008

MAOR110-08B (SEC)

TE REO MĀORI: INTERMEDIATE 2

15 POINTS

This paper focuses on the development of the language and language skills required to communicate about rights, duties, obligations and responsibilities, building on the skills acquired in MAOR101.

Fee: \$550 per student per paper

Length of paper: 18 weeks from the week beginning 14 July to the week ending 16 November.

In addition to the Discretionary Entrance Requirements that are detailed at the back of this booklet, students must meet the following pre-requisites:

- a minimum of 14 credits in Te Reo Rangatira or Te Reo Māori at NCEA Level 3; and
- passed MAOR101A before they can undertake MAOR110B.

Applications should be received at the University by 30 June 2008

MATH101-08C (HAM) & 08D (HAM)

INTRODUCTION TO CALCULUS

15 POINTS

This paper studies the fundamental techniques of calculus, including differentiation and integration for functions of one real variable, with applications to rate problems, graph sketching, areas and volumes.

This paper is taught at the University of Waikato Hamilton campus in conjunction with the normal University offerings of MATH101-08A (HAM) and MATH101-08B (HAM).

Fee: \$250 per student per paper

Length of paper: 18 weeks from the week beginning 25 February to the week ending 29 June (C version) and 18 weeks from the week beginning 14 July to the week ending 16 November (D version).

In addition to the Discretionary Entrance Requirements that are detailed at the back of this booklet, students must meet the following prerequisite:

- evidence of prior mathematical achievement at a level equivalent to NCEA Level 3 Mathematics with Calculus, and permission of the Department of Mathematics of The University of Waikato.

Applications should be received at the University by 11 February 2008 for MATH101-08C and 30 June 2008 for MATH101-08D



MATH102-08C (HAM) & 08D (HAM)

INTRODUCTION TO ALGEBRA

15 POINTS

This paper studies the fundamental techniques and applications of algebra including Gaussian elimination, vector and matrix algebra, complex numbers, induction and recursion, number theory and cryptography.

This paper is taught at the University of Waikato Hamilton campus in conjunction with the normal University offerings of MATH102-08A (HAM) and MATH102-08B (HAM).

Fee: \$250 per student per paper

Length of paper: 18 weeks from the week beginning 25 February to the week ending 29 June (C version) and 18 weeks from the week beginning 14 July to the week ending 16 November (D version).

In addition to the Discretionary Entrance Requirements that are detailed at the back of this booklet, students must meet the following prerequisite:

- Evidence of prior mathematical achievement at a level equivalent to NCEA Level 3 Mathematics with Calculus, and permission of the Department of Mathematics of The University of Waikato.

Applications should be received at the University by 11 February 2008 for MATH102-08C and 30 June 2008 for MATH102-08D

PHIL106-08C (SEC)

SOCIAL AND MORAL PHILOSOPHY

15 POINTS

This paper helps students to develop the skill of moral argumentation by studying some sophisticated examples of its use in the writings of contemporary philosophers, and by practising it under conditions that are more structured than in everyday moral discussions. Topics include abortion, euthanasia and genetic modification.

We provide students with copies of readings, and we set up an internet discussion list where they discuss issues relevant to the paper. We also post material on the Philosophy Department's ethics site that directs them to interesting websites. The paper is internally assessed (no final exam). Students write two 1200 word essays, two short 800 word assignments and a short answer test (totalling 80% of the assessment). The remaining 20% is based on participation in class discussions.

Fee: \$500 per student per paper

Length of paper: 16 weeks from the week beginning 17 March to the week ending 6 July.

In addition to the Discretionary Entrance Requirements detailed at the back of this booklet, students must meet the following prerequisite:

- a total of 64 credits in four approved subjects in NCEA Level 2.

Applications should be received at the University by 11 February 2008.

PHYS103-08B (SEC)

PHYSICS FOR SCIENTISTS AND ENGINEERS 1

15 POINTS

This paper extends the basic physics covered in NCEA Level 3. Applications of physics to the real world will be emphasised. Topics include mechanics, dynamics, oscillations, waves, sound, light, and electric and magnetic forces. This paper includes a compulsory laboratory component.

Fee: \$500 per student per paper

Length of paper: 18 weeks from the week beginning 14 July to the week ending 16 November.

In addition to the Discretionary Entrance Requirements that are detailed at the back of this booklet, students must meet the following prerequisite:

➤ a minimum of 14 credits in Physics at NCEA Level 3.

Prior to students enrolling in this paper a staff member from your school must be approved for teaching degree level Physics by the Department of Engineering at the University of Waikato.

Applications should be received at the University by 30 June 2008.

TOMG101-08A (SEC)

INTRODUCTION TO TOURISM AND HOSPITALITY MANAGEMENT

15 POINTS

The tourism and hospitality industries are an important and essential part of people's life and the New Zealand economy. Tourism is the world's largest industry and as such influences many aspects of our lives and the work we may do in the future. To help students understand the importance and influence that tourism and hospitality has, this paper looks at the planning, implementation, and control functions in the tourism and hospitality industries. An understanding of the structure and relationship between the tourism and hospitality industries is part of this understanding. It gives students looking toward their future careers an understanding of the impact that tourism and hospitality has on all our lives.

Fee: \$500 per student per paper

Length of paper: 18 weeks from the week beginning 25 February to the week ending 29 June.

The discretionary entrance requirements are detailed at the back of this booklet.

Applications should be received at the University by 11 February 2008.



IMPORTANT UNISTART DATES

<p>30 November 2007</p> <p><i>(18 April 2008 for Law Enrolments)</i></p>	<p>Secondary schools interested in offering any of these papers should contact the University of Waikato to notify proposed enrolments.</p> <p>Enrolment packs for 2008 are sent out after student numbers have been advised.</p>	<p>28 March 2008</p>	<p>Deadline for signed STAR contracts for Law Enrolments to be returned from secondary schools to the University's STAR Coordinator.</p>
<p>7 February 2008</p> <p><i>(18 April 2008 for Law Enrolments)</i></p>	<p>Deadline for secondary schools to advise the University of the number of students enrolling in the relevant paper(s).</p>	<p>18 April 2008</p>	<p>Deadline for all completed Law Applications to Enrol to be returned from secondary schools to the University's Enrolment Office.</p>
<p>11 February 2008</p> <p><i>(18 April 2008 for Law Enrolments)</i></p>	<p>Deadline for all completed Applications to Enrol for A semester to be returned from secondary schools to the University's Enrolment Office.</p>	<p>30 June 2008</p>	<p>Deadline for all completed Applications to Enrol for B semester to be returned from secondary schools to the University's Enrolment Office.</p>
<p>11 February 2008</p> <p><i>(28 March 2008 for Law Enrolments)</i></p>	<p>Deadline for signed STAR contracts to be returned from secondary schools to the University's STAR Coordinator.</p>	<p>25 July 2008</p>	<p>Deadline for secondary schools to withdraw students from B Semester papers in order to receive a refund of fees.</p>
<p>7 March 2008</p> <p><i>(5 May 2007 for Law Enrolments)</i></p>	<p>Deadline for secondary schools to withdraw students from A Semester papers in order to receive a refund of fees.</p>	<p>30 July 2008</p>	<p>Secondary schools are invoiced for A and B Semester STAR papers</p>
<p>University of Waikato semester dates:</p> <p>Semester A: 25th February - 29th June 2008</p> <p>Semester B: 14th July - 14th November 2008</p>			

CHECK LIST FOR SECONDARY SCHOOL STAFF

- Sign STAR contracts x 2.
- Advise contact person(s) in the relevant University School or Faculty of student numbers enrolling.
- Ensure Application to Enrol forms are completed and signed by student(s) with the following information attached:
 - Verification of date of birth
 - Verification of citizenship
 - Contact details
 - NCEA Record of Learning
 - Signed STAR Student Agreement

Resources for the relevant paper(s) will not be sent to secondary schools until Applications to Enrol have been submitted with the correct documentation.

ENTRY REQUIREMENTS:

Discretionary Entrance criteria apply for 2008 enrolments.

Discretionary Entrance applies to those students who have undertaken NCEA Level 2. Students are also required to satisfy the entry requirements specified for individual STAR papers.

DISCRETIONARY ENTRANCE REQUIREMENTS:

Students are eligible to be considered for Discretionary Entrance if they do not have University Entrance and meet the following criteria:

- Are a NZ Citizen or Permanent Resident, and
- Will be at least 16 years of age and under 20 years of age at the start of the paper, and
- Have received secondary schooling to at least Year 12 level, and
- Have gained at least 14 credits in one approved subject at NCEA Level 2 and have met the Literacy and Numeracy requirements of University Entrance under NCEA:
 - Numeracy: 14 credits in Mathematics or Pangarau at Level 1 or higher.
 - Literacy: 4 credits in Reading and 4 credits in Writing at NCEA Level 2 from the approved standards list in either English or Te Reo Māori/Te Reo Rangatira



LITERACY REQUIREMENTS

ENGLISH STANDARDS

STANDARDS	CREDITS	READING	WRITING
ACHIEVEMENT STANDARDS			
90720 (3.1)	4		✓
90721 (3.2)	3	✓	✓
90722 (3.3)	3	✓	✓
90723 (3.4)	3	✓	✓
90724 (3.5)	3	✓	
90726 (3.7)	4	✓	✓
90375 (2.1)	3		✓
90376 (2.2)	3		✓
90377 (2.3)	3	✓	✓
90378 (2.4)	3	✓	✓
90379 (2.5)	3	✓	✓
90380 (2.6)	3	✓	
90381 (2.8)	3	✓	✓
UNIT STANDARDS			
8834	6	✓	
8823	4	✓	
8841	6		✓
8842	6		✓
8835	6		✓
8825	5		✓
12419	4	✓	
12420	4	✓	
12421	3	✓	
12422	3	✓	
12427	4	✓	
12428	4	✓	
12429	3	✓	
12430	3	✓	
12905	4	✓	

TE REO MĀORI AND TE REO RANGATIRA STANDARDS

STANDARDS	CREDITS	READING	WRITING
ACHIEVEMENT STANDARDS			
90441	6	✓	
90752	3	✓	
90753	3	✓	
7266	5	✓	
90781	3	✓	
90784	3	✓	
90786	3	✓	
90789	3	✓	
7267	7	✓	
7268	9	✓	
90754	4		✓
90755	3		✓
90770	4		✓
90757	4		✓
7258	5		✓
90782	4		✓
90783	4		✓
90787	3		✓
90790	3		✓
90539	3		✓
7259	7		✓
7260	9		✓

90444, 90445, 90448, 90544, 90538, 90545, 90539, *now expired, will continue to be recognised as meeting the literacy requirements for learners who have them in their Record of Learning*

FREQUENTLY ASKED QUESTIONS

HOW ARE THE PAPERS TAUGHT?

Some papers are taught entirely online, others are taught by secondary school staff in their school. Some papers may require students to attend classes on the University campus, while others may be taught through either distance education or video-conferencing.

HOW ARE THE PAPERS ASSESSED?

For most papers assessment is a combination of coursework and/or mini tests and a final examination. Not all papers have final examinations, but for those that do, these are held either at the main campus in Hamilton, or at the University of Waikato Tauranga campus. Depending on the physical location of the secondary school, if neither of the above campuses is suitable, examinations will usually be held at a local tertiary education provider or at the secondary school itself.

WHAT SUPPORT IS PROVIDED?

Students are provided with tutorial support either from their secondary school teacher(s) and University lecturers and tutors. Additional mentoring and support will be provided by the University where it is required. Secondary schools may be required to have suitable staff, facilities and resources, to assist with the teaching of students.

Students will be issued an ID card which will give them access to the University Library, computer and internet facilities. Some papers allow access to laboratories.

WHO CAN ENROLLED STUDENTS CONTACT AT THE UNIVERSITY OF WAIKATO?

The University lecturers'/tutors' contact details are provided in the paper outline at the beginning of the paper. The University's STAR Coordinator and School/Faculty staff are also available to respond to queries.

HOW MANY PAPERS CAN A SECONDARY SCHOOL STUDENT TAKE?

This is dependent upon a student's workload for the year and what their secondary school deems appropriate. Usually, three papers would be the maximum a student could manage in addition to their secondary school study in any one year.

FOR FURTHER INFORMATION REGARDING UNISTART AT THE UNIVERSITY OF WAIKATO

Phone: 0800 WAIKATO (924 5286)

STAR Coordinator: (07) 838 4466 ext 6570

Email: UniStArT@waikato.ac.nz

or visit: <http://www.waikato.ac.nz/sasd/enrolment/star.shtml>

**PLEASE ALSO VISIT THE MINISTRY OF EDUCATION WEBSITE FOR
MORE INFORMATION ABOUT THE SECONDARY TERTIARY ALIGNMENT
RESOURCE (STAR):** [HTTP://WWW.MINEDU.GOVT.NZ](http://www.minedu.govt.nz)





THE UNIVERSITY OF
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Te Whare Wānanga o Waikato

UNIVERSITY PAPERS FOR SECONDARY SCHOOL STUDENTS

The University of Waikato
Private Bag 3105
Hamilton 3240
New Zealand

Academic Pathways & Quality Office
Student & Academic Services Division
Toll Free: 0800 WAIKATO
Website: www.waikato.ac.nz