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Disclaimer

Although every reasonable effort is made to ensure accuracy, the information in this document is provided as a general guide only for students and is subject to alteration. All students enrolling at The University of Auckland must consult its official document, the Calendar of The University of Auckland, to ensure that they are aware of and comply with all regulations, requirements and policies.

Welcome

Hi,

I'm Chris Triggs, Head of the Department of Statistics. Whether you are just toying with the possibility of taking a statistics course or two, perhaps just for General Education, or going for broke and majoring in the subject, this booklet was designed with you in mind. You will be in good company. Nearly two out of every three students coming to The University of Auckland put at least one statistics course in their undergraduate degree. If you need assistance with course advice, please drop by our Departmental Office, Room 203 of the Science Centre, Building 303 at 38 Princes St. Our Office staff will direct you to an appropriate advisor.

We hope to see you in 2008!

All the best,

Chris Triggs

Most of our information is online at The Department of Statistics homepage: www.stat.auckland.ac.nz

Important dates

1 December 2007

Deadline for new students to submit Application for Admission if 2008 programme includes Summer School courses.

Application for Admission also closes 1 December for all students applying to Sport and Exercise Science and Optometry.

8 December 2007

Deadline for new students to submit Application for Admission if 2008 programme includes Semester One and Semester Two courses only.

If you are a new student, only one Application for Admission is required. This form is due on either 1 December or 8 December, depending on whether you want to take Summer School courses as well.

Applications received after these dates may be accepted if there are places available.

Summer School - 2008	
Lectures begin	Friday 4 January
Auckland Anniversary Day	Monday 28 January
Waitangi Day	Wednesday 6 February
Lectures end	Thursday 14 February
Study break/exams	Friday 15 February - Wednesday 20 February
Summer School ends	Wednesday 20 February
Semester One - 2008	
Semester One begins	Monday 3 March
Easter Break	Friday 21 March - Tuesday 25 March
Mid-semester break	Monday 14 April - Saturday 19 April
ANZAC Day	Friday 25 April
Graduation	Thursday 1 May - Friday 9 May
Queen's Birthday	Monday 2 June
Lectures end	Saturday 7 June
Study break/exams	Saturday 7 June - Monday 30 June
Semester One ends	Monday 30 June
Inter-semester break	Tuesday 1 July - Saturday 19 July
Semester Two - 2008	
Semester Two begins	Monday 21 July
Mid-semester break	Monday 1 September - Saturday 13 September
Graduation	Tuesday 23 September - Thursday 25 September
Lectures end	Saturday 25 October
Labour Day	Monday 27 October
Study break/exams	Saturday 25 October - Monday 17 November
Semester Two ends	Monday 17 November
Semester One - 2009	
Semester One begins	Monday 2 March 2009

Information from the Department of Statistics

Introduction

Statistics ... the most important science in the whole world: for upon it depends the practical application of every other science and of every art; the one science essential to all political and social administration, all education, all organisation based upon experience, for it only gives the results of our experience.

- Florence Nightingale

Statistical Thinking will one day be as necessary for efficient citizenship as the ability to read and write.

- H.G. Wells

Who needs statistics in the 21st century? Anyone who wants to be able to look critically at numerical information and not be misled. Anyone who has problems to solve, problems they won't be able to solve until they find out a little more about the world and how it operates. Such problems include finding ways to make a business more profitable right through to improving living standards and fighting cancer. Investigative questioning, designing ways to collect data to answer those questions, collecting data, and making sense of what that data says to produce reliable answers, this is the subject matter of statistics.

We live in an Information Age. Computers allow us to collect and store information in quantities that previously would not even have been dreamed of. What is this information? It might be costs, values, sales volumes, measurements, ratings, distances, prices, percentages, counts, times, or market shares. But raw, undigested data stored on computer disks is useless until we can start to make sense of it. Statistics is the human side of the computer revolution, an information science, the art and science of extracting meaning from seemingly incomprehensible data. In your future life and career, you will need to be able to make good use of such information to make sound decisions.

Statistics applies to almost any field. This is what makes the study and practice of statistics so exciting. In one week, a practising statistician may help to design an experiment to evaluate the effects of a new treatment for a disease, analyse a set of data gathered by an ecologist, and help a freight carrier to study work processes to find ways of making the company more profitable.

More students at The University of Auckland study Stage 1 statistics than any other subject. It is taken by two out of every three students who come to this university. Many see statistics as an ideal complement to their other subjects. Others know that it will be fun. And still others have to take it because some very popular university programmes (e.g. psychology, marketing and others listed below) have made it compulsory.

Careers in Statistics

Statisticians find work in all of the following areas: insurance companies, finance companies and banks, market research companies, manufacturing, as private consultants, in crown research institutes, crown health enterprises, government departments (e.g. Treasury, Statistics N.Z., AgResearch, MAFTech, etc.), local bodies, and as academics/researchers in universities and technical institutes. In all of these jobs they are designing studies, analysing data, making projections and helping to make decisions. Successful statisticians often begin in technical roles and end up in management.

There are excellent job opportunities for people who know a lot about statistics and a business specialty. Our handbook entitled "Conjoint Degrees for Quantitative Specialties in Commerce" (online at www.stat.auckland.ac.nz/conjointhb.php) describes shared programmes that prepare students for careers as financial analysts (designing investment strategies and managing risks), actuaries (in the insurance and superannuation industry), market researchers (conducting opinion polls, identifying market opportunities, testing consumer perceptions and the effectiveness of advertising, and predicting market trends), management scientists (finding how to make the most effective use of limited resources, e.g. stock control strategies for supermarkets, scheduling shifts and duties, determining the number of tellers to have operating in a bank, and formulating cost efficient maintenance strategies for fleets of vehicles), quality managers (improving the quality of products and services in business and industry), and econometricians (investigating the economy at all levels from individual businesses through to national economies).

Studying Statistics at The University of Auckland

Statistics courses at The University of Auckland are designed not only for intending statisticians, but for all students to help them become better accountants, market researchers, psychologists, biologists, geographers, engineers and so on. Statistics can be studied for most of the popular university degrees. After Stage 1, there are 4 strands to our programme. Applied courses are about practical methods for collecting and analysing data. Computers do the mechanical work of constructing graphs, estimates and tests, leaving us free to concentrate on understanding what it all means and how to react. Theory courses are concerned with underlying principles and mathematical derivations. They are fun for people who like doing maths. Theoretical understanding is necessary for those who will go on to develop new statistical methods but it is also helpful for understanding advanced techniques. Our Stage 1 courses are predominantly applied. You can start studying theoretical (mathematical) aspects of the subject with STATS 125 or at Stage 2 with STATS 210. Our statistical computing courses, consisting of STATS 220, STATS 301 and STATS 380 include data management and computer programming. More details about these three strands are given in the section entitled the Statistics Programme. The fourth strand is described in the section entitled the Operations Research Programme.

Choosing a Degree

The University of Auckland offers many qualifications. Statistics (including Operations Research) can be studied as either a major or minor part of any of the most popular degrees. Your choice of degree depends upon what else you want to study.

BSc (Bachelor of Science, 3 year programme)

Use to combine Statistics with any of: Computer Science, Mathematics, Psychology, Biological Sciences, Geography, Chemistry, Physics, Geology, or Sports and Exercise Science.

BCom (Bachelor of Commerce, 3 year programme)

Use to combine Statistics with any of: Accounting, Finance, Economics, Management, Marketing, Computer Information Systems.

BA (Bachelor of Arts, 3 year programme)

Use to combine Statistics with any of: Geography, Mathematics, Sociology, Anthropology, Politics, Education, Philosophy or any other Arts subject.

Conjoint BCom/BSc or Conjoint BA/BCom (both give 2 degrees in a minimum of 4 years)

Challenging programmes that permit a broader education and increased employment opportunities. See our publication "Conjoint Degrees for Quantitative Specialities in Commerce (online at www.stat.auckland.ac.nz/conjointhb.php).

BE

Many students choose Statistics as a useful option for first year Engineering.

BBIM (Bachelor of Business and Information Management)

This is a defined programme that includes one course in statistics.

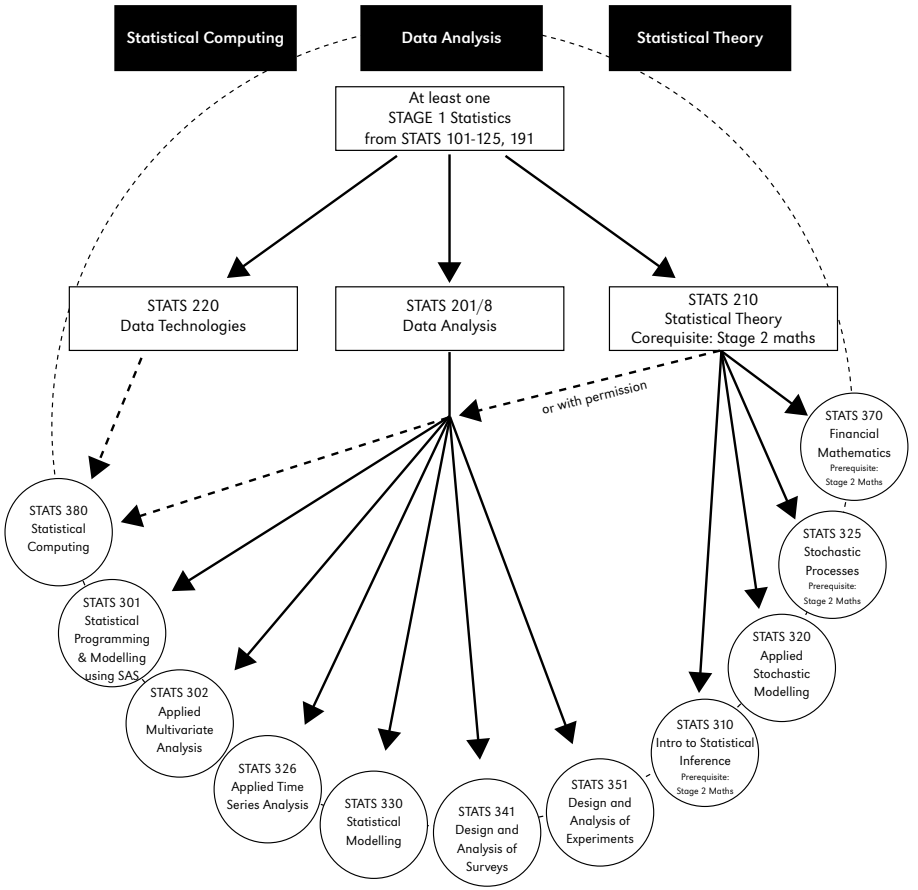
Graduate Diploma in Science:

This qualification is useful for candidates who already hold a Bachelor's degree in some other subject but who either want to increase their skills and obtain a formal qualification in statistics, or who wish to prepare themselves for graduate study in statistics. It is a one year programme (2 years part time) which consists of Stage 2 and Stage 3 (undergraduate) courses in statistics and a project. Students are expected to have already passed a Stage 1 course in Statistics (or have equivalent experience) and know sufficient mathematics to qualify them for entry to Stage 2 courses in Mathematics.

The Statistics Programme

The Statistics Programme is depicted below	
Applied Statistics courses:	Any Stage 1; STATS 201 or 208; STATS 301, STATS 302, STATS 326, STATS 330, STATS 341, STATS 351
Theoretical Statistics courses:	Any Stage 1 but preferably including STATS 125; STATS 210; STATS 310, STATS 325, STATS 370. MATHS 340 very useful if going on to postgraduate study
Statistical Computing courses:	STATS 220; STATS 301; STATS 380

The Statistics Undergraduate Programme 2008



Majoring in Statistics

A **major** subject in a Bachelor's degree programme is a subject that you have specialised in. It is possible to major in two subjects (**a double major**). A minor is a subject that you have done a substantial amount of study in but not enough to qualify as a major. Detailed definitions of these terms differ between Faculties.

BSc:

Major: 15 points from STATS 125, 210; at least 60 points from STATS 301-390, ENGSCI 391, MATHS 340

Note for transitional students: Transitional students are required to take 45 points from Stats 301-391, EngSci 391, Maths 340

Second Major: 45 points from STATS 301-390

BA:

Single Major: 135 points from the following list with at least 60 points above Stage 2

STATS 101-150,STATS 201-255, STATS 301-390, MATHS 162, MATHS 340, ENGSCI 391

Double Major: 120 points from the preceding list with at least 45 points above Stage 2

Minor: 90 points from the preceding list with at least 60 points above Stage 1

BCom: It is not yet possible to formally major in statistics within a BCom although it is quite easy to do sufficient statistics within the BCom (along with a Commerce subject major) to gain eligibility for entry to a postgraduate programme in statistics. At present, the best vehicles for students with substantial interests in both statistics and commerce are the conjoint BA/BCom and BCom/BSc degrees. If this possibility interests you, please contact us for further information.

Preparing for Graduate Study in Statistics

To gain entry to the BSc(Hons), BA(Hons) or Master's degree programmes (MSc, MA, etc.), you will need to pass STATS 210 (Statistical Theory) and one of the mathematics courses MATHS 253, MATHS 208, MATHS 230.
In addition, ...

BSc(Hons):	Major in Statistics which includes STATS 210 and at least 90 points at Stage 3 or higher. An average of at least B in 90 points above Stage 2 which includes 45 points in Statistics
BA(Hons):	Major in Statistics which includes STATS 210. An average of at least B in 45 points in Statistics above Stage 2
PGDipSci:	Major in Statistics
PGDipArts:	Major in Statistics
Masters:	Follows on after Hons or PGDip

If you don't meet the above criteria but have very good university records and a demonstrated interest in Statistics, please feel free to contact us for advice. For further information about graduate study, see the Department's Postgraduate Handbook.

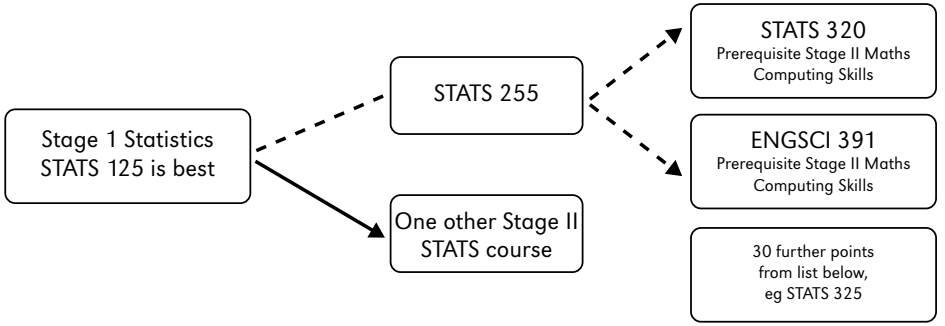
The Operations Research Programme

Operations Research (OR) is the application of mathematical and scientific methods to solve certain classes of problem in the design and management of large or complex systems found in business, industry and government. Typical problems involve deciding how to make the most effective use of limited resources such as people, machines, money and time. Frequently mathematical and computer representations of problems are used to solve them. OR courses teach the basic techniques used in solving resource management problems and discuss the most common areas of application.

The basic techniques of OR can be grouped broadly into two classes, namely optimisation methods such as linear programming (which may be used to minimise costs, for example), and modelling techniques like computer simulation and forecasting. Most of this modelling is probabilistic or statistical. Application areas include: inventory control (what should a supermarket stock, in what quantities, when should goods be re-ordered and in what quantities), transportation problems (how to manage a fleet of trucks), scheduling problems (constructing duty rosters for airline crews), games and competition (bidding for contracts, political campaigns), production planning (e.g. how often to produce batches of ice-cream, whether a single long production line is better than two parallel lines), queuing problems (what sort of customer queuing system should be set up in a bank, number of tellers operating in various situations), reliability (how long does equipment function, when should it be serviced or replaced), location problems (e.g. where to place warehouses) and quality control (ensuring that good quality goods are produced).

Students wanting to study OR should take Mathematics at Stage 1 and Stage 2 (including a Stage 2 course with calculus) and Stage 1 statistics (preferably including STATS 125). They also require some computing skills.

The Coordinator of the OR Programme is Dr Ilze Ziedins (ext 85051), to whom enquiries should be directed. Enquiries can also be made to Associate Professor David Scott (ext 86830) and Dr Geoffrey Pritchard (ext 85267).



Specialising in Operations Research (BSc Students only)

First or Single Specialisation:

- 45 points: STATS 255, STATS 320, ENGSCI 391
- At least 15 points from STATS 301, STATS 310, STATS 325, STATS 326, STATS 370, STATS 380, COMPSCI 320
- At least 15 points from STATS301-390, MATHS 326, MATHS 328, MATHS 361, OPSMGT 371, OPSMGT 382

Note for transitional students:
Transitional students are required to take

- At least 45points from EngSci 391, Stats 255,320.
- At least 15 points from CompSci 320, Stats 301-390, Maths 326, 328,361, OpsMgt 371,382

Second Specialisation:

- 45 points: STATS 255, STATS 320, ENGSCI 391
- At least 15 points from STATS 301, STATS 310, STATS 325, STATS 326, STATS 370, STATS 380, COMPSCI 320

Statistics Courses

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Stage I Courses

The University Calendar lists 7 Stage 1 statistics courses. Students can take up to 3 courses in Statistics at Stage 1.

Students wishing to learn how to analyse data or to fulfil Psychology or BCom or BBIM requirements should take one of the equivalent courses in the "STATS 10x" sequence (STATS 101-108, 191). These lead on to all further statistics courses.

There are two additional Stage 1 courses that can be taken either alone or together with a STATS 10x course:

STATS 150
Lies, Damned Lies, and Statistics
(also available for General Education as STATS 150G), is a course about the uses, limitations, and abuses of statistical investigation and statistical information. It is concerned with the critical examination of the data-based arguments that pervade the media and public policy debate rather than hands-on data analysis. This course alone does not serve as a prerequisite for our more advanced courses in Statistics, or as the Statistical prerequisite for BCom, BBIM or Psychology.

STATS 125
Probability and its Applications
is intended for students with good Year 13 mathematics marks (or university equivalent). Probabilistic models are used in disciplines as varied as commerce and biology. They are critical in the assessment of risk. STATS 125 fulfils the statistical prerequisites for Stage 3 courses in Operations Research and Applied Probability. Students majoring in statistics must take either STATS 125 or STATS 210.

STATS 101, STATS 102, STATS 108, (STATS 191) - The 10x Courses
The 10x Courses are intended for anyone who will ever have to collect or make sense of data, either in their career or private life. Someone telling you about having done Stage 1 Statistics will almost certainly have done one of these courses. These are our basic Statistics courses and cover material similar to Bursary statistics but at a more advanced level.

In 2002, the first year of The University of Auckland's Teaching Excellence Awards scheme, the Stage 1 Introductory Statistics Teaching Team won 2 of the 5 awards made and in 2003 they won a New Zealand National Tertiary Teaching Excellence Award.

The 10x courses try to make Statistics come alive by:

- showing videos that show statistics at work in the real world;
- using class experiments to illustrate concepts;
- using small groups to brainstorm ideas or get the answers to exercises;
- using computer demonstrations to clarify ideas, and
- choosing enthusiastic lecturers who want to assist students to do well.

In fact if your idea of fun is copying formulae off whiteboards you probably won't like our 10x courses!

If you think Statistics 10x sounds good but you have always been a bit worried about maths, we offer a variety of help services. See the section entitled "Help Systems".

We try to make our courses easier by:

- helping to organise student study groups - make friends and help each other at the same time;
- running voluntary tutorials for people whose skills are a bit rusty;
- staffing a "Help Clinic" that is open over 35 hours per week to assist you with any problems.

The 10x courses are very similar and their exams are almost identical. You may choose only one of them.

Points:	15 point course	
STATS 101:	Introduction to Statistics	Both Semesters City and Tamaki
STATS 102:	Statistics for Social Science	Both Semesters City
STATS 108:	Statistics for Commerce	Both Semesters City and Tamaki and Summer School
STATS 101G:	[General Education course code]	[Can be in same time and room as any STATS 10x stream]
Restrictions:	You can choose only one course from STATS 101 - STATS 108 or STATS 191.	
Credit for Coursework:	Final Exam = 60%; Test = 20%; Assignments = 20% or Final Exam = 70%; Assignment = 20%. Test =10%. Must obtain at least 50% overall and at least 45% in final exam to pass.	
Textbooks:	Wild & Seber Chance Encounters: A First Course in Data Analysis and Inference. Other materials produced by the Department will be available from the City and Tamaki Student Resource Centres. A calculator which can automatically compute means and standard deviations (for further discussion, see the Section on "Calculators and Computers".).	
Advice about the 10x Courses:	**City:** Christine Miller (ext 84275), David Smith (ext 85390), Matt Regan (ext 85242) **Tamaki:** Ross Parsonage (ext 86608).	

Choosing Your 10x Course

The course you should apply for depends upon your degree and the Campus in which you are enrolling. Pick the course to enrol in by using the following table (timetable constraints may necessitate other choices).

	Degree		
Campus	BCom, BProp, BPlan, BArch	BA	BSc and all other degrees
City	STATS 108	STATS 102	STATS 101
Tamaki	STATS 108	STATS 101	STATS 101

Topics Covered in the 10x Courses

The 10x Courses are intended for anyone who will ever have to collect or make sense of data, either in their career or private life. The steps involved in conducting a statistical investigation are studied with the main emphasis being on data analysis and the background concepts necessary for successfully analysing data, extrapolating from patterns in data to more generally applicable conclusions (statistical inference), and communicating results to others. Technical topics discussed include: types of investigations; data collection; tools for exploring and summarising data; probability and distributions; tools for extrapolating from data (includes confidence intervals to convey uncertainty, statistical significance, t-tests, and p-values); nonparametric methods; analysing relationships (includes comparing groups and one-way analysis of variance, simple linear regression, correlation, tables of counts and the chi-square test).

Differences Between the 10x Courses

STATS 101 is our basic statistics course. **STATS 102**, primarily for Arts students (City campus) is similar to STATS 101 but with more emphasis on examples from the Social Sciences (e.g., Psychology, Sociology, Political studies etc). **STATS 108** for Business and Economics students has more business examples. Although we put on slightly different versions of STATS 10x to cater for the interests of different groups of students, the contents of all of these courses are very similar and their examinations are almost identical. Consequently, if you cannot timetable the 10x course that would normally suit your degree "best", you should transfer into one of the others.

Provision for **STATS 101G** (General Education) students has been made within each STATS 10x stream giving students who want to study Statistics for General Education the greatest possible timetabling flexibility.

All students with very high levels of performance in NCEA level 3 or 4 Statistics and Modelling or Calculus or A level Cambridge Mathematics are encouraged to discuss their study plans and the possibility of direct entry to Stage 2 Statistics with David Scott (ext 86830) or Ilze Ziedins (ext 85051).

Preparation Required for the 10x Courses

If you are worried about having the mathematical skills to take a 10x course, the first thing to know is that the 10x courses are not primarily mathematics courses. The main mathematical skills needed are to be able to work with decimals and fractions and to use a standard calculator.

The Student Learning Centre runs preparatory workshops that will help build up your mathematical confidence. There is a small cost for the workshops. The Student Learning Centre staff can also direct you to appropriate self-study modules. Contact the Student Learning Centre for more details phone 373 7599, ext 88850 or 88967. The url of their website is www2.auckland.ac.nz/slc.

Help available for all Stage 1 statistics students:

We run a variety of help services for all our Stage 1 students. See the section entitled "Help Systems".

STATS 125 (15points)
Probability and its Applications

Taught: First Semester City

Recommended Preparation: Good marks in Year 13 mathematics or university equivalent

Corequisites: MATHS 108 or MATHS 150 (or equivalent –see Department)

Assessment: Final Exam = 60%; Test = 15%; Assignments = 20%; Tutorial tasks = 5% or Final Exam = 75%; Assignments = 20%; Tutorial tasks = 5%

For Advice: Ilze Ziedins (ext 85051)

This course is primarily aimed at Stage 1 students who have enjoyed mathematics and probability problems and would like to learn more about probability and its use in solving real-world problems. It fulfils the statistical prerequisites of the Stage 3 applied probability and operations research courses STATS 320 and STATS 325, and is strongly recommended for students interested in these areas. Students majoring in Statistics must take either STATS 125 or STATS 210. This course concentrates on probability models and their applications in a variety of fields. Probabilistic models are used in disciplines as varied as commerce and biology (e.g. calculating the probability that a share price will exceed a certain level or the probability that a population will become extinct). Probability underpins both statistics and (stochastic) operations research.

Topics studied include:
Probability, conditional probability, Bayes theorem, random walks, branching processes, Markov chains, probability models. Illustrations will be drawn from a wide variety of applications including finance and economics; genetics, bioinformatics and other areas of biology; telecommunications, networks; games, gambling and risk.

STATS 150 (15 points)
Lies, Damned Lies and Statistics

Taught: Second Semester City

Assessment: Final Exam = 50%, Test = 15%, Assignment = 30%, Tutorial tasks=5%

For Advice: Maxine Pfannkuch (ext 88794), Rachel Cunliffe (ext 85237)

This course (also available for General Education as STATS 150G) is to prepare anyone, regardless of whether or not they have any background in statistics, to become a critical consumer of statistical information. It will be useful, for example, for aspiring journalists, politicians, political scientists, sociologists, lawyers, public communicators, health personnel, conservationists, environmental scientists, business people, marketers, engineers, and scientists. It examines the uses, limitations, and abuses of statistical information in a variety of activities such as polling, public health, sport, law, marketing, and the environment. The statistical concepts and thinking underlying data-based arguments will be explored. The interpretation and critical evaluation of statistically-based reports as well as the construction of statistically-sound arguments and reports will be emphasised. Some course material will be drawn from topics currently in the news.

This course teaches you how to critique statistical reporting. It does not, however, teach you how to analyse data. Thus, it alone does not serve as a prerequisite for any of our more advanced courses in statistics, or as the statistical prerequisite for BCom or Psychology.

Stage II Courses

We teach **four different aspects** of Statistics at Stage 2, namely **Data Analysis** (STATS 201 or STATS 208), **Statistical Theory** (STATS 210), **Statistical Computing** (STATS 220) and **Operations Research** (STATS 255). If you wish to advance in Statistics you are advised to take at least the first two of these courses (i.e. take one of STATS 201/8 **and also** STATS 210). They are prerequisites for some of the Stage III courses and STATS 210 is a prerequisite for all postgraduate courses.

STATS 201 Data Analysis
STATS 208 Data Analysis for Commerce
(15 points)

Taught: Both Semesters City, Semester 1 Tamaki, Summer School City (208 only)

Prerequisites: 15 Points from STATS 101, 102, 108, 191

Restrictions: You may take only one of STATS 201 and STATS 208.

Assessment: Final Exam = 60%; Test = 20%; Assignment = 20% or Final Exam = 70%; Test = 10%; Assignment = 20%, Students must obtain at least 50% overall and at least 45% in the final exam to pass.

Textbooks: Wild & Seber "Chance Encounters: A First Course in Data Analysis and Inference". Also consult the Mathematics and Statistics Student Resource Centre or Tamaki SRC.

For Advice: David Smith (ext 85390), Mike Forster (ext 88759), Andrew Balemi (ext 85713), Christine Miller (ext 84275).

These two courses teach computer based data analysis. They are particularly useful for business and economics, and the biological, medical and social sciences. They are useful for anyone who will do research, or even just read research papers in any discipline where research makes use of statistical analyses.

Topics studied include: Review of Statistical Inference, Exploratory Data Analysis, One Sample, Paired Sample and Two Sample Analysis, Introduction to Analysis of Variance and Experimental Design, Tables of Counts, Multiple Regression Techniques and Time Series.

STATS 210
Statistical Theory (15 points)

Taught: Both Semesters City

Corequisites: 15 points at Stage 2 in Mathematics (MATHS 208 or MATHS 250 is recommended)

Assessment: Exam=75%, Test=7%, Tutorials=8%, Assignments=10%, or : Exam=100%.

Textbooks: Notes distributed in class

For Advice: Rachel Fewster (ext 83946), Stephanie Budgett (ext 85756)

STATS 210 introduces the theory that underlies the statistical methods used in practical statistics courses. It is aimed at students who enjoy maths and are interested in probability and statistics. It is useful for students with interests in Econometrics, Operations Research, Finance, and theoretical aspects of Marketing Research, as well as those who have Maths or Statistics as their main interest. STATS 210 is a prerequisite for STATS 310 and admission to a Masters degree in statistics. Student majoring in Statistics must take either STATS 125 or STATS 210.

Topics studied include: Probability, random variables, discrete and continuous probability distributions, likelihood and hypothesis tests.

STATS 220
Data Technologies (15 points)

Taught: First Semester City

Prerequisites: One stage I course in Computer Science or Statistics.

Assessment: Final Exam = 60%; Test = 20%; Assignment = 15%, Labs 5%

Textbooks: None

For Advice: Paul Murrell (ext 85392), Ross Ihaka (ext 85054)

This course introduces a variety of computer technologies relevant to gathering, managing, and processing data. The course has two aims: to teach software tools specific to the handling of data, and to teach and build confidence with general concepts of computer languages. It is useful for students with interests in applying statistics in business or research environments. Lectures will be reinforced with weekly (optional) lab work.

Topics studied include: Data acquisition and Data Entry (Electronic Forms); Data Description and Semantic Markup (XML); Data Storage (Spreadsheets, Databases); Data Management and Summary (Database Queries); Data Processing (Scripting, Pattern Matching).

STATS 255
Introduction to Operations Research
(15 points)

Taught: Both Semesters City

Prerequisites: 15 points in Stage 1 Statistics or Mathematics

Restrictions: ENGSCI 255

Assessment: Final Exam = 60%; Test = 20%; Assignment = 20% or Final Exam = 80%; Assignment = 20%, must obtain at least 50% overall and at least 45% in final exam to pass.

Textbooks: Course book purchased from Student Resource Centre

For Advice: Ilze Ziedins (ext 85051), Matthias Ehrgott (Eng. Science ext 82421), David Ryan (Eng. Science - ext 88398), Andy Philpott (Eng. Science ext 88394).

This course considers a range of practical operations research problems, including effective use of limited or valuable resources such as machines and personnel, understanding queues and simulation. The course is valuable for students interested in Commerce, Statistics, Mathematics, and Computer Science. The course will emphasise the relationship between business and industrial applications and their associated Operations Research models. Computer packages will be used to solve practical problems.

Topics studied include: Linear programming, transportation and assignment models, network algorithms, queues, inventory models, and simulation.

Stage III Courses

All Stage 3 courses are different and you may take as many of them as you wish. We will discuss Stage 3 courses under four broad headings, namely, Applied courses, Theory courses, Statistical Computing courses and Operations Research courses. Before reading further, please look back at the diagrams in the Statistics Programme and Operations Research Programme sections. Courses STATS 201 and STATS 208 are identical for prerequisite purposes and are hereafter referred to as STATS 201/8.

Themes

Applied Statistics

[STATS 301, STATS 302, STATS 326, STATS 330, STATS 341, STATS 351] In content, the Stage 3 applied courses follow on from STATS 201/8, which is a prerequisite. N.B. All Stage 3 applied courses have restricted entry made necessary by limited laboratory space. You can confidently expect to be admitted to any of these courses if you have a grade point average of 2.5 or more.

Theoretical Statistics

[STATS 310, STATS 325, STATS 370] STATS 310 deals with theoretical statistics (statistical models and statistical inference). STATS 325 deals with applied probability and stochastic processes. Both require STATS 210 or STATS 125 (or alternatives) and Stage 2 pure mathematics (e.g. MATHS 208 or MATHS 252). STATS 370 deals with mathematical and statistical aspects of Finance.

Statistical Computing

[STATS 301, STATS 380] STATS 301 follows on most naturally from STATS 201/8 whereas STATS 380 can be taken after either STATS 220 or STATS 201/8. Restrictions on entry apply, see "Applied courses" above.

Operations Research

[STATS 320, STATS 325, ENGSCI 391] STATS 320 deals with stochastic (probabilistic) Operations Research. Eng Sci 391 deals with deterministic Operations Research. Both require Stage 2 pure mathematics (e.g. MATHS 208 or MATHS 250).

STATS 301
Statistical Programming and Modelling Using SAS
(15 points)

Taught: Summer School and 2nd Semester City

Prerequisites: 15 pts from STATS 201, 208, BIOSCI 209

Assessment: Final Exam = 60%; Coursework = 40%; 1 test worth 20% and assignments worth 20%; must obtain at least 50% in the assignments and 50% in the final exam to pass.

Textbooks: Recommended: The Little SAS Book: a primer (SAS 2003, 3rd edition). This book can be purchased from the SRC when in stock.

For Advice: Russell Millar (Tamaki - ext 85289), Thomas Yee (Tamaki - ext 86857), Yong Wang (City - ext 84700)

Introduction to the SAS statistical software with emphasis on using SAS as a programming language for purposes of database manipulation, simulation, statistical modelling, and other computer-intensive methods. The SAS skills gained from this course are sought after by most employers of statisticians, from jobs in the Biological Sciences through to Commerce. Students who are unfamiliar with density functions may need to do some background reading.

Topics studied include: The SAS package and language, data processing, statistical programming, simulation and bootstrapping, permutation tests and statistical modelling of nonlinear and non-normal data with applications to ecology and commerce

STATS 302
Applied Multivariate Analysis (15 points)

Taught: 1st Semester City

Prerequisites: STATS 201 or 208

Assessment: Final Exam = 60%; Coursework = 40%; 1 test worth 15% and assignments worth 25%; must obtain at least 50% in final exam to pass.

For Advice: Brian McArdle (ext 85845), Marti Anderson (ext 85052)

This course covers the exploratory analysis of multivariate data, with emphasis on the use of statistical software and reporting of results.

Topics studied include: Techniques for data display, dimension reduction and ordination, cluster analysis, multivariate analysis of variance and associated methods. The approach will be largely non-mathematical and practical, with an emphasis on the understanding of the techniques.

STATS 310
Introduction to Statistical Inference (15 points)

Taught: 1st Semester City

Prerequisites: STATS 210 and MATHS 208 or 250

Assessment: Final exam = 100 or 75%; coursework 0 or 25%; 1 test worth 15% and assignments worth 10%.

Textbooks: J.A. Rice, Mathematical Statistics and Data Analysis, 3rd edn (2005), Duxberry Press, available from the University Bookshop.

For Advice: Chris Triggs (ext 88856)

This course follows on from course STATS 210 and provides the theory underlying the statistical methods used in Stages 2 and 3. Many BSc(Hons) Statistics courses use this course as a prerequisite. It is a good course for students with interests in Mathematics, Econometrics or Finance, as well as those who consider their main interest to be Statistics.

Topics studied include: Point and interval estimation, likelihood and other approaches to inference, hypothesis testing, and the linear model.

STATS 320
Applied Stochastic Modelling (15 points)

Taught: 1st Semester City

Prerequisites: 15 points from STATS 125 or STATS 210; 15 points from STATS 201, 208, 220. 15 points from MATHS 208, 250

Assessment: Final exam = 65 or 90%; coursework 35 or 10%; 10% compulsory computer assignments; 25% optional coursework consisting of 1 test and assignments; 50% in final exam to pass.

Textbooks: Recommended Reading: Kleijnen, J. & van Groenendaal, W., Simulation: A Statistical Perspective (Wiley 1992)

For Advice: Ilze Ziedins (ext 85051), Geoffrey Pritchard (ext 87400), David Scott (Tamaki ext 86830), Wiremu Solomon (ext 88771).

This course concentrates on stochastic methods used in operations research, biology etc. It covers the construction, analysis and simulation of stochastic models, as well as some optimization questions connected with these models. It is valuable for students interested in Business, Economics, Statistics, Mathematics, Computer Science and the Biological Sciences.

Topics studied include: The Poisson process, birth and death processes, queuing theory, simulation, random number generation, variance reduction, and optimization.

STATS 325
Stochastic Processes (15 points)

Taught: 2nd Semester City

Prerequisites: 15 points from MATHS 208, 230, 250, 253; and B- or above in STATS 210, or B+ or above in STATS 125, or B+ or above in STATS 320

Assessment: Exam=75%, Test=10%, Assignments=15%, or : Exam=100%

Textbooks: Grimmett, G.R. and Stirzaker, D.R., Probability and Random Processes, (OUP 1992)

For Advice: Rachel Fewster (ext 83946), Ilze Ziedins (ext 85051), Geoffrey Pritchard (ext 87400).

This course looks at the theory of stochastic processes, showing how complex systems can be built up from sequences of elementary random choices. The course is useful for students with interests in Mathematics, Statistics, Operations Research, Finance and Theoretical Biology.

Topics studied include: Generating functions, branching processes, Markov chains, random walks.

STATS 326
Applied Time Series Analysis (15 points)

Taught: 1st Semester City

Prerequisites: STATS 201 or 208.

Assessment: Final Exam 60%; Coursework = 40%; 1 test worth 20% and assignments worth 20%; 50% in final exam to pass.

For Advice: Mike Forster (ext 88759)

This course covers Time Series data, with an emphasis on computer based analysis and reporting the results of analyses.

Topics studied include: Time series data, non-stationary time series models, stationary time series models, differencing of non-stationary time series and an introduction to some advanced topics in time series analysis. The approach will be largely non-mathematical and practical, with an emphasis on applications using R and an appreciation of the problems associated with modelling time series data.

STATS 330 Statistical Modelling (15 points)

Taught: 2nd Semester City

Prerequisites: STATS 201 or 208

Assessment: Final exam = 60%; coursework 40%; 1 test worth 20% and assignments worth 20%; must obtain at least 50% in final exam to pass.

For Advice: Alan Lee (ext 88749), Arden Miller (ext 85054)

The main emphasis of this course is on analysing data using extensions of the regression methods seen in STATS 201/8. These extensions permit, for example, the building of models for response variables which are not continuous. The main statistical computer package used is R. Students from STATS 210 who have not taken STATS 201/8

will need to do some preparatory reading. It is very useful for almost all subjects in Business and Economics, for Operations Research, for any experimental or social science. It is also a useful complement to Computer Science.

Topics studied include: Application of the generalised linear model to fit data arising from a wide range of sources, including multiple linear regression models, log-linear models and logistic regression models. The graphical exploration of data.

STATS 341
Design and Analysis of Surveys (15 points)

Taught: 1st Semester City

Prerequisites: STATS 201or 208 or STATS 210

Restrictions: STATS 340

Assessment: Final exam = 60%; coursework = 40% (made up of assignments and at least one test), must obtain at least 50% in final exam to pass.

Textbooks: Lecture notes will be distributed in class.

For Advice: Joss Cumming (ext 85756)

This course looks at the design and analysis of the sample survey. It is useful for students with interests in Statistics, Mathematics or any area that uses sample surveys (e.g. Market Research, the Social Sciences, Biological Sciences)

Topics studied include: Survey design (including non-sampling errors, sampling frame, question design and ethics), data management and information systems, and the analysis of data (from simple random, stratified, multistage, and cluster sampling).

STATS 351
Design and Analysis of Experiments (15 points)

Taught: 2nd Semester City

Prerequisites: STATS 201 or 208

Restrictions: STATS 340

Assessment: 60% Final exam, 20% Term Test, 20% Assignments.

Textbooks: Lecture notes will be distributed in class.

For Advice: Arden Miller (ext 85053)

This course introduces the design and analysis of experiments. It presents the foundations of the statistical approach to designing experiments.

Topics studied include: Commonly used designs such as completely randomised designs, randomised complete block designs, balanced incomplete block designs, split plot designs, Latin square designs, two-level factorial designs and fractional factorial designs.

STATS 370
Financial Mathematics (15 points)

Taught: 2nd Semester City

Prerequisites: 15 points in Stage 2 statistics and 15 points in Stage 2 Mathematics

Assessment: Final exam = 75%; coursework 25% or Final exam = 100%; coursework 0%; 1 test worth 15% and assignments worth 10%; must obtain at least 50% in final exam to pass.

Textbooks: None. Handouts will be given out.

For Advice: Dr Wiremu Solomon (Statistics, ext. 88771) or Dr Geoffrey Prichard (Statistics, ext 87400)

This course is suitable for Finance majors who want to learn more about the more mathematical aspects of the subject and for Statistics or Mathematics majors wanting to learn about Finance.

Topics studied include: Mean-variance portfolio theory; options, arbitrage and put-call relationships; introduction of binomial and Black-Scholes option pricing models; compound interest, annuities, capital redemption policies, valuation of securities, sinking funds; varying rates of interest, taxation; duration and immunisation; introduction to life annuities and life insurance mathematics.

STATS 380
Statistical Computing (15 points)

Taught: 1st Semester, City

Prerequisites: 15 points from STATS 201, 208, 220

Assessment: 60% Final exam, 40% Coursework

For Advice: Ross Ihaka (ext 85054), Paul Murrell (ext 85392), Yong Wang (ext 84700)

This course is designed to provide an introduction to programming with the R programming language. The course will provide a general introduction to programming and discuss the specific techniques which make it possible to use R productively. After successfully completing the course, students should be able to develop new software components for their own use or for use by others.

Topics studied include: Programming (basic data structures, control-flow and vectorisation, creating new functions object-oriented programming, debugging techniques); Numerical Techniques (solving linear and non-linear equations, root finding, optimisation, Monte-Carlo techniques); and Graphics (creating statistical plots in R including Trellis plots, plot customisation, writing functions to draw plots including completely new plot types).

ENGSCI 391
Optimization in Operations Research (15 points)

Taught: 1st Semester City, 2nd Semester Tamaki

Prerequisites: 15pts from ENGGEN 150, ENGSCI 111, MATHS 208, 230, 250, 253 and one of COMPSCI 101, ENGGEN 131, ENGSCI 131, MATHS 162, STATS 220.

Restrictions: STATS 391

Assessment: Final exam = 70%; coursework 30% or Final exam = 85%; coursework 15%. 15% compulsory computer assignments; 15% optional coursework consisting of assignments and short tests.

For Advice: Andy Philpott (Eng Science ext 88394), David Ryan (Eng Science ext 88398)

This course was previously numbered STATS 391. It has always been taught by staff of the Engineering Science Department. It provides an understanding of some of the mathematical ideas underlying the computer packages used in STATS 255, together with some practical experience in the use of the methods. ENGSCI 391 concentrates on deterministic methods based on linear optimisation models such as linear programming and network optimisation. This course is valuable for students interested in Commerce, Statistics, Mathematics and Computer Science.

Topics studied include: Linear programming; Simplex and revised Simplex methods; duality and the dual simplex method; post optimal analysis; network optimisation; transportation and flow problems.

Help systems

Help available for Stage 1 statistics - City Campus

The assistance available at Stage 1 is described in detail in the Study Guide for Stage 1 Statistics. Some elements include:

Assistance Room

During the year the Statistics Department operates an Assistance Room for its first year courses which is staffed 35 hours or more per week to help students with problems arising with assignments or understanding some aspect of work covered in lectures. This room (B09) is situated in the basement of the Science Centre, Building 303. Tutors are available in the Computer Laboratory at certain times who can assist with the computer-based parts of your assignments.

Optional Tutorials

Tutorials are available for those who think that they need regular additional explanation of ideas in a small classroom environment.

Help in the Computer Laboratories Laboratory Statistics demonstrators are on duty in the computer laboratory from 9:00am to 5:00pm daily to assist students with their computer work.

Student Learning Centre

The Student Learning Centre (SLC) is located in Kate Edger Information Commons, and it is staffed by tutors with special skills for helping students to develop better learning strategies. Twice each semester a brochure is published by the SLC, advertising the workshops that will be held for that half of the semester. The Centre has statistics and mathematics skills workshops for those students who do not have the background knowledge normally assumed in these areas for Statistics 10x courses. SLC activities are also well advertised in Statistics 10x lectures. You may register for workshops, or make individual appointments with tutors at the SLC office (phone 373 7599, ext 88850 or 88967).

Maori and Pasifika Room

The Statistics and Mathematics departments have jointly established a common room for Maori and Pasifika students. Room 120 is available to all Maori and Pasifika students taking courses at any level, in either department. It is located on the first floor of the Maths/Physics (Science Centre) Building. Please feel free to use the room for private study, to relax, and to meet other Maori & Pasifika students. One-to-one assistance and small group assistance is available for some statistics papers. For more information contact Susan Wingfield (Room 291, ext 84934) or Garry Nathan (Room 315, ext 83063).

Help available for Stage 1 statistics - Tamaki Campus

Students on the Tamaki Campus are welcome to make use of the assistance services offered on the City Campus. i.e. Tutorials, the Statistics Assistance Room, and the Student Learning Centre. In addition Lecturers are available at posted hours.

Tutorials on Tamaki Campus

Optional tutorials are available for those who think that they need regular additional explanation of ideas in a small classroom environment.

Help in the Computer Laboratories Laboratory Statistics demonstrators are on duty in the computer laboratories at posted hours to assist students with their computer work.

Student Learning Centre

The Student Learning Centre (SLC) also operates at the Tamaki Campus. Brochures are published each semester advertising the workshops and activities that will be held for that semester. We advertise the SLC workshops and activities in 10x lectures.

Help for Stage 2 & 3 Courses

There are two main sources of help for students in STATS 201/8. For most hours in the day there is at least one demonstrator in the Undergraduate Computing Lab on the City Campus (where students carry out the computing for their assignments) who is fluent in both the course material and the computer package we use. They can provide a valuable source of assistance to students, especially if approached outside "rush hour" times in the laboratory. Stage 2 students can also use the Assistance Room, which is staffed 35 hours per week. Optional tutorials are available for those who think that they need regular additional explanation of ideas in a small classroom environment. And of course, you can always approach any of the lecturers for help. The main sources of help for Tamaki students is their Lecturer and Lab demonstrators at posted hours. Detailed descriptions of the services available will be given in the Study Guides for STATS 201/8.

Help For All Other Courses

For assistance with courses other than Stage 1 and STATS 201/8, see your lecturer. Lecturers will post "Office Hours" for student-help on their doors. Most are happy to help you at any time when you find them in their office and they are free. Office hours are simply times when they promise to be there. There will be some assigned assistance hours for STATS 210, STATS 255 and some Stage three courses, these will be announced in lectures.

Most students come to The University of Auckland straight after completing a reasonably successful Year 13 at a New Zealand high school and have English as their first language. This section tells you about some services available for people who do not fit that pattern. Here, we discuss two programmes for preparing students not straight from school for university study in general and programmes/courses for people for whom English is a second language.

Preparing for University Study

Tertiary Foundation Certificate Programme (TFC)

The TFC Programme is recommended for students who left school without enough background to enrol in University courses. It is a full-year Programme covering a range of subjects. The Mathematics section prepares students to enrol in MATHS 101 or MATHS 102 the following year. Further information and application forms are available from the Co-ordinator, Reina Whaitiri in the English Department, Arts 1 Building, Room A 507, Ext 87335. For information on the Mathematics component contact Moira Statham or Sheena Parnell, Rm 324, Building 303, Science Centre, ext 85750.

New Start - a course of programmes for adults

There are two part-time programmes which prepare adults for university level study - New Start for Arts and New Start for Commerce. (Statistics can be studied in either Faculty). And in February there is a Summer Study Skills programme which includes 'Statistics without fear' consisting of six 2-hour sessions for adults new to the study of Statistics. You can choose day or evening for New Start Arts; New Start Commerce and 'Statistics without fear' are offered only in the evening. For information contact Cath Henderson 373-7599 ext 87823 or Jan Edmonds ext 82981. Cath and Jan have offices on the second floor of the Clock Tower Building, 22 Princes Street - Room 220.

English Language Acquisition Programme

Institute of Language Teaching and Learning All students need to be proficient in English, the language of instruction and assessment at this University. The English Language Acquisition Programme offers a range of courses to assist students whose first language is not English to improve their competence in English both before they enrol and while they are studying at the University.

For enrolled students there is a range of credit and non-credit courses which can be included in a degree programme. These are available in Summer School and the first and second semesters. For intending students there is the Full-time English Academic Proficiency course taught in 5 week modules during the academic year and during the summer. The Institute of Language Teaching and Learning also offers the IELTS test and IELTS preparation classes.

For further information please contact the Secretary at the ILTL, 24-26 Wynyard St, (ext 87125).

Enquiries About Statistics

If you have any general queries at any time relating to the Department of Statistics, the staff in the Department Office will be only too happy to help you and steer you in the right direction. The Statistics programme was discussed earlier. The listings for Statistics courses give names and telephone extensions of people who can give you more detailed information about any particular course. If you want to visit in person, office numbers are given in the Staff Directory or on the notice board by the Statistics Department Office. See also our discussions about "Choosing a Degree".

Getting set up for 2008

Student Resource Centre

The City Campus Student Resource Centre is located in B01, Basement of the Science Centre, Building 303, 38 Princes Street ext 85510. The Tamaki Campus Student Resource Centre is located in Building 710.106 ext 85230. The Resource Centres have been set up specifically to deal with student-related activities. These include:

- dealing with assignment distribution and collection
- handouts
- selling books, disks, additional pages for printing in the Computer Laboratory, etc.
- updating student records and marks

If you encounter a problem and you do not know what to do, enquire at the Resource Centre.

Buying textbooks

Many of our courses use material (Textbooks, Study Guides, Computer Manuals etc.) produced by the Department. These materials will be sold at the Student Resource Centre in the basement of the Science Centre, Building 303 and at the Tamaki Student Resource Centre. At the time of writing, the complete list of materials required by most courses has not been finalised. However, by the summer, the Student Resource Centres will have the lists of materials that you will require. (Occasionally you will find Departmental materials at other outlets - often at a higher price.) Other textbooks will be available at the University Bookshop, Campus Branch at 34 Princes Street and Tamaki branch. The prescribed texts for statistics courses, in cases where they have already been decided upon, are listed as part of the course descriptions earlier in this Handbook, and in the 2006 University Calendar. Students should not buy any other Statistics books for their course without consulting the department. A second-hand bookshop is operated by the Students' Association through the University Bookshop. There is another second hand-book shop, Volume 1, in Symonds Street. Sometimes second-hand prices are more expensive than new prices so it pays to check before you buy. Check also that the second-hand copies are not older editions which are out of date.

Changing your course after enrolment

Staff at the Faculty office and the Tamaki Student Resource Centre have the necessary (SA-70) forms to fill in for a change of course. Please note that there is a charge for changing courses (including dropping and adding courses) after week 2 of each semester. You will need to go to the main Statistics Office Reception (in the City) and you will be referred to the correct person. The Graduate Officer must be consulted for changes to Masters or Postgraduate courses. It is advisable to retain your receipt for any change of course. The Calendar lists deadline dates for course changes. If you do make a late enrolment it is recommended that you see your lecturer to obtain handouts/assignments etc.

Scholarships and Prizes

There are a large number of university and privately funded scholarships and prizes available for students at The University of Auckland. Scholarships help you fund your education. You may be eligible to apply for some of them. The University's "Scholarships & Financial Support" homepage can be found at www.auckland.ac.nz/scholarships. There are many links for students in many categories including one to "Maori and Polynesian Scholarships".

Prizes are honours which only provide a small amount of money but look very impressive on your C.V. (curriculum vitae, resume). Prizes and honours where the winners are chosen by the Department of Statistics include:

Annual Prize in Statistics:

Awarded to the student who has done the best year's work in statistics at any level. Usually awarded at MSc or BSc(Hons) level.

Senior Scholarship in Statistics:

Awarded to the undergraduate student who has done the best year's work in statistics at the Stage 3 level.

NZ Aluminium Smelters Prize:

Established in 1999 by NZ Aluminium Smelters Ltd, this prize is conferred on the student who has done the best work in Stage 3 courses in Applied Statistics.

Statistics New Zealand Prize:

Established in 1994 by Statistics New Zealand, this prize is conferred on the student who has done the best work in Stage 3 courses offered by the department.

Senior Prizes in Statistics:

Senior Prizes are awarded to approximately 5% of undergraduate students who achieve the highest grades in at least three Stage 3 courses in two consecutive semesters The list of prize winners is linked from the Statistics Department homepage.

Information for International Students

Statistics courses at all levels are available to International Students with the appropriate background. International Students apply for places in a degree programme, say Bachelor of Arts (BA) or Bachelor of Science (BSc). If they are successful, they will be able to claim a place in any of the courses offered for that programme, provided they have the prescribed academic background. Information about minimum entry requirements for the various degree programmes, application procedures, tuition fees and scholarsips is available online from www.auckland.ac.nz/international/, and then clicking on "Prospective International Students".

Departmental & General Information

Communication and Student Representation

Staff/Student Consultative Committee

At the beginning of each semester each class elects a representative to attend meetings to discuss matters concerning students and the department. Any students who are elected as class representatives in the first semester are asked to continue to be the representative for any statistics course they may be taking in the second semester. At least two meetings are scheduled each semester. Those meetings are attended by the elected student representatives and departmental staff. We use the meetings as a means of getting advice from students about how to improve the way the Department is run so that it can serve students better. We often have more than one representative from a course - we are keen to involve any student who wants to help. Class representatives also raise problems affecting students that have been brought to their attention. Students are able to approach their class representatives if they want a matter raised. You may contact your class representatives through the Statistics Office if you are unsure who they are. A graduate and an undergraduate representative are asked to volunteer or are elected to attend Faculty of Science Liaison meetings and Departmental meetings for the entire year. In addition, the Stage 1 team invites student representatives to attend one of their meetings each semester.

Complaints

If you have any complaints about the way you have been treated by the Department, our Head of Department invites you to discuss them with him directly. If you find the prospect of approaching the HoD daunts you, other avenues for making complaints are through your class representative, or Joss Cumming (ext 85756, Room 209), chair of the Staff/Student Consultative Committee, or any lecturer that you do find approachable. (Small complaints like inaccurate marking of tests or assignments are usually best dealt with by the Stage 1 Course Administrator or your Lecturer).

Calculators and Computers Calculators

For Statistics 10x any calculator which can automatically compute means and standard deviations (e.g. a Casio fx82L or Sharp EL531LH) will be sufficient. There are some conditions placed on the type of calculator that is permitted in our examinations: It must be hand-held, self-powered. If you are in any doubt as to the eligibility of your calculator, check with your lecturer before the examination.

Computer Laboratories versus using a home computer

Our laboratory facilities have sufficient capacity for you to be able to do all your assigned computer work in the Labs (see below for further discussion of the Computer Laboratories). However, many students do have access to computers at home and where it is possible to work at home it is usually more convenient to do so.

The "10x" courses will be using the widely-used statistical software package "SPSS" available for home use at an extremely discounted price from the Student Resource Centre, and the widely available Microsoft Excel.

The Statistics Department uses a locally produced statistical computing package called R in many of our courses, so that it can be made available to students for home use at minimal cost. This package is available from the City and Tamaki Student Resource Centres.

Using the Computer Laboratory

The Department shares a large 120-seat computer laboratory with the Department of Mathematics. This is located in the basement of the new Building 303 extension. This is the computer laboratory for all undergraduate courses in statistics. The booking terminals in the laboratory can be used to reserve time on the computers. Because the laboratories are used by a large number of students, they can be very busy around assignment due dates. We urge students to work on their assignments early to ensure access to computers!

Access

All Statistics students in a course that sets laboratory assignments are entitled to use the laboratory and book time on the machines. Students are given a print quota which should be ample. Should students exhaust their quota, more pages can be purchased from the Student Resource Centres.

Coursework, Sickness, Bereavement etc

How much work am I expected to put into each course?

You cannot learn statistics without doing statistics. Statistics courses involve a considerable amount of assignment work. In applied courses, much of this involves the use of computers. Coursework consists of assignments and tests. Credit is given for coursework as well as for final exams; the proportion varies from course to course - this information is listed in the course descriptions.

In addition to time spent on assignments, you should plan a minimum of an hour reading and working on problems for every hour of lectures.

Late Assignments

For Statistics 10x and STATS 201/8, follow the procedures laid down in your course's Study Guide. For other courses, if for some reason you were unable to hand your assignment in on time, approach staff in the Student Resource Centre and ask for their advice. Depending on the time which has elapsed after the due date, arrangements may be made. If you missed the date owing to sickness or other medical reasons notify the staff at the Student Resource Centre. The lecturer in charge will be notified and your marks will be adjusted accordingly. Please note that you will be required to produce a medical certificate. Please note: Pressure of coursework is not an acceptable excuse for handing in an assignment late.

What to do if you cannot sit a mid-Semester Test

For Statistics 10x and STATS 201/8, see the Course Administrator as laid out in your course's Study Guide. For other courses, as soon as you find out that you will be unable to sit your test, approach your lecturer. Your lecturer may be able to arrange another time for you to sit your test, or make other arrangements for you. If owing to exceptional circumstances (e.g. medical reasons) you miss a test, you will have to apply for special consideration. Application forms for special consideration are available from the Enquiries Counter of the Registry, and they are to be submitted within seven days of the test.

Please note: Pressure due to workload is not an acceptable excuse for missing tests.

What to do if you are sick, etc., prior to, or at the time of a final exam

Forms are available from the Examinations Office, ClockTower, 22 Princes Street and from the Tamaki Student Resource Centre. Applications, including medical details, must be completed on the forms provided.

Applications for Aegrotat and Compassionate Consideration

An application may be made for aegrotat or compassionate consideration, by candidates who may have been prevented from being present at an examination, or who consider that their preparation for or performance in an examination has been seriously impaired by temporary illness or injury or exceptional circumstances beyond their control. This also applies to tests, but not assignments.

Application forms are available online, or from the relevant campus Student Health and Counselling Services and Examinations Office.

The application form must be submitted to the University Health and Counselling Service within one week of the date that the examination affected took place, or if more than one examination has been affected, then within one week of the last of those examinations.

In the case of illness or injury, a registered medical practitioner must:

(i) State when the practitioner saw the candidate. This should be on the day of the examination, or if this is not possible, on the day before or the day after. For impaired preparation, the medical certificate should cover a period within the fortnight immediately preceding the examination, unless special circumstances apply.

(ii) Give sufficient detail of the illness or injury to show clearly that the candidate was not responsible for the illness or injury.

(iii) State whether, in the practitioner's opinion, the illness or injury of the candidate at the time either prevented the candidate from taking the examination, or was likely to have seriously impaired the candidate's preparation for it or performance in it.

Following the decision of Senate on an application for Aegrotat or Compassionate Consideration, a student may apply for reconsideration of that decision no later than four weeks after the student is notified of Senate's decision.

Please refer to *The University of Auckland Calendar* for the official regulations.

Policy on cheating

Cheating is viewed as a serious offence by The University of Auckland. Penalties are administered by the Discipline Committee of the Senate, and may include suspension or expulsion from the University.

The University of Auckland will not tolerate cheating, or assisting others to cheat, and views cheating in coursework as a serious academic offence. The work that a student submits for grading must be the student's own work, reflecting his or her learning. Where work from other sources is used, it must be properly acknowledged and referenced. This requirement also applies to sources on the world-wide web. A student's assessed work may be reviewed against electronic source material using computerised detection mechanisms. Upon reasonable request, students may be required to provide an electronic version of their work for computerised review.

What is cheating?

Cheating, in the context of university coursework and examinations, is the act of attempting to gain an unfair advantage by violating the principle that lies behind all university work – that of intellectual and scholarly integrity.

To cheat is to be intellectually dishonest by passing off as your own, work that has been done by someone else. It is also unjust in that it devalues the grades and qualifications gained legitimately by other students.

All staff and students have a responsibility to prevent, discourage and report cheating.

Examples of forms of cheating

- Copying from another student during a test or examination, whether or not there is collusion between the students involved;
- Using the work of other scholars or students when preparing coursework or writing an examination and pretending it is your own by not acknowledging where it came from. This is called plagiarism. Course coordinators, lecturers or tutors are the appropriate people with whom you should discuss how to appropriately use and acknowledge the work of others.
- Making up or fabricating data in research assignments, or the writing up of laboratory reports;
- Impersonating someone else in a test or examination, or arranging such impersonation. _ Submitting the same, or a substantially similar, assignment that you have done, for assessment in more than one course
- Misrepresenting disability, temporary illness/ injury, or exceptional circumstances beyond one's control, then claiming special conditions
- Using material obtained from commercial essay or assignment services, including web based sources.

Group work

On the whole, the University requires assessment of the work of individual students. On those rare occasions where the work of a group of students is assessed, group members need to make sure that the workload is shared equally. Course coordinators will determine their own procedures for dealing with cases where the final piece of work reflects unequal participation and effort.

Student support: 'getting help' vs cheating

Typically students cheat because they are having difficulty managing workloads, feel that the course content is too difficult or are experiences difficulties with the language of the course. None of these reasons are justification for cheating. The University provides many services to help students receive assistance, do better or to make thoughtful decisions about whether to continue. Options of people to approach for assistance include:

- The course convenor/coordinator, lecturer, tutorial leader, lab demonstrator
- Head of Department
- Faculty-level official
- Health and Counselling services _ Student Learning Centre
- AUSA or other students' associations
- Chaplaincy services

The guidelines on Conduct of Coursework and cheating are set out in full on the Teaching and Learning website at www.auckland.ac.nz/uoa/about/teaching/plagiarism/plagiarism.cfm

Admission and enrolment

New Students

For ALL students, if you are not enrolled at The University of Auckland in 2007, apply online at www.auckland.ac.nz/apply_now. If you are unable to access our website, please call 0800 61 62 63 or visit the Student Information Centre at 22 Princes Street, Auckland. This is open Monday to Friday from 8am – 6pm and Saturday 9am – 12noon during peak times.

Student Information Centre
Room 112
Level 1 (Ground Floor)
The ClockTower Building
22 Princes Street
Auckland City Campus

Phone: + 64 9 373 7599 x 88199
Facsimile: + 64 9 367 7104
Email: studentinfo@auckland.ac.nz

The closing date for most undergraduate Science applications is 8 December 2007.

If you want to take courses at Summer School, or wish to apply to Sport and Exercise Science or the Bachelor of Optometry, applications close 1 December 2007.

Only one application is required.

After submitting your application:

Your application will be acknowledged by post, and you will receive your Net ID, password and a list of items required to evaluate your eligibility to be admitted to the University and to your chosen programme/s (if you are submitting a hard copy application form, you are required to include relevant documentation at the time of submission). When all documentation requirements have been met, your application will be assessed by the Admissions Office and relevant faculties. If your application is approved, you will receive an offer of place.

Your Net ID and password allow you to access the University's nDeva site, enabling you to monitor the progress of your application and check if further documentation is required.

Once you have accepted an offer of place, you will gain access to the Enrolment module on nDeva and you can then proceed to enrol in courses online. Postgraduate students may need to contact their department for enrolment to be completed.

Returning Students

If you are currently enrolled at The University of Auckland in 2007, and would like to change your existing programme (for example MSc after completion of BSc(Hons)), you should apply on nDeva (www.auckland.ac.nz/nDeva) by logging on and clicking on Add/Change programme.

You will be able to enrol via nDeva, but if you would like help, please call 0800 61 62 63 or visit the Student Information Centre or the Faculty of Science Student Centre (Ground Floor, Building 301, 23 Symonds Street). Postgraduate students may need to contact their department for enrolment to be completed.

The University of Auckland will be open for enrolment from November 2007 to the end of February 2008. You are welcome to attend at any time during normal office hours to seek academic or enrolment advice or assistance in completing your enrolment.

A quick guide to applying and enrolling for Undergraduate Programmes

Make the most of the opportunities we provide to help you find out as much as possible about the programmes you are interested in.

Are you ready to apply?

Do you have web access or can you come on to campus to our computer labs?

NO

For further information

Phone 0800 61 62 63

For overseas calls

Phone 64 9 308 2386

YES

- Log on to website www.auckland.ac.nz
- Click on 'Apply Now'.
- Complete the online application for admission.
- You will receive a letter of acknowledgement with your Net ID and password for accessing the online application and enrolment system. This acknowledgement will ask you to send through specific certified documents.
- Your programme(s) will be assessed by the relevant faculty and an offer letter will be mailed to you. You can check the status of your application online using your Net ID and password.
- Accept or decline your offer(s) online.
- To help you select your courses you can use The University of Auckland Calendar or handbooks. (The Calendar is for sale in bookshops, or can be accessed from the website; to obtain handbooks call 0800 61 62 63.) If you would like personalised advice, visit the faculty student centres or contact The University of Auckland.
- Enrol in your courses.
- Pay your tuition fees.
- You are now a University of Auckland student.

Academic Programme Structure

Points Structure

From 2006, all courses were changed to a different points value. Students enrolled in a normal full time course of study now complete 120 points per year. The courses in most undergraduate degrees carry a value of 15 points and a normal full time enrolment is eight courses per year.

Transition Points Structure

Transition regulations apply to all students who have continued enrolment during the transition period having commenced study in their programme at this university prior to the 2006 academic year. They also apply to students who commence study in an undergraduate degree in the 2006 academic year having commenced but not completed study in a different undergraduate programme at this university between 2001 and 2005.

The Transition regulations were written to ensure that students are able to complete their qualification without disadvantage in terms of duration of study or the proportion of their qualification to be completed.

Transition regulations are available in the Transition Regulations Handbook. This handbook is available from the Science Faculty Student Centre, the Short Loans Library and online at www.auckland.ac.nz/currentstudents/academiclife.

General Education

Courses in General Education are a distinctive feature of University of Auckland bachelors degrees. General Education is aimed at producing graduates with flexibility, critical thinking skills, and an appreciation and understanding of fields outside of their usual area of study. The General Education programme consists of high quality, intellectually challenging courses taught by some of the University's best teachers and researchers.

BSc students must take two General Education courses (30 points) in their degree. These can be taken at any time during the degree, but it may be preferable to take these in Year 2 and 3.

Students will choose General Education courses from schedules which list courses available to their particular degree. The schedules have been developed so that students will take General Education courses that allow them to explore areas of interest outside of their degree subjects. The General Education schedules are:

A) Music, Art and Contemporary Society

B) Humanities and Social Sciences

C) Business and Society

D) Life Sciences

E) Physical Sciences

F) Mathematical and Information Sciences

G) Communication

H) Languages

The courses available to BSc students will depend on the subjects in which they are enrolled. For example, students enrolled in a Biological Sciences course will not be able to take General Education courses from Schedule D Life Sciences.

In some cases, courses are available both as part of the General Education programme and as part of the portfolio of regular degree courses. If students are taking a dual purpose course as part of the General Education programme, they will enrol in the G version of the course (e.g. HISTORY 103G). The classes and programme of study will be the same for all students.

A General Education website, www.auckland.ac.nz/generaleducation can be accessed from the University webpage and enables students to view the courses available to them and provides the information needed for course selection.

The requirement for General Education applies to students who enrol at The University of Auckland from 2006 to begin their first undergraduate degree. Students enrolled prior to 2006 are not required to include General Education as part of their degree. Special arrangements will apply to students transferring from another tertiary institution with credit.

Students are encouraged to seek advice on General Education in their degree from the Science Students' Centre.

Postgraduate Programmes

From 2006, most Masters programmes became one year degrees preceded by either a one year Bachelors Honours degree or a Postgraduate Diploma.

Doctoral Students

Doctoral degrees remain essentially the same in structure and duration. The structure of the PhD is now recorded on the academic transcript in new points in accordance with the 120 points system.

For named doctorates which include courses with points, the courses have been re-weighted as part of the 120 point structure.

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Students Association

Auckland University Students' Association (AUSA) offers many services to support students and to provide discounted goods. AUSA runs training workshops for Class Representatives throughout the year and publishes a monthly newsletter available through the Department. Students may also contact a Student Advocate, the AUSA Education Coordinator or the Education Vice President regarding academic concerns. If interested in creating a club and receiving funding, contact the AUSA Clubs Liaison Officer. Phone 309 0789 or visit the AUSA House, 4 Alfred Street, across from the General Library on City Campus.

Students With Disabilities

People with disabilities are encouraged to attend and accomplish at The University of Auckland. Lynne Crabb is the Coordinator for students and staff with disabilities and would like students with disabilities (both permanent and temporary) to contact her. She can offer current information on facilities available and ways in which they can be of assistance to you. They are located in Room 036, ClockTower, 22 Princes Street, and can be contacted on extension 88808, fax on 308- 2354 or by email disabilities@auckland.ac.nz

Harassment

In the large and complex society of the University it is possible that students may encounter problems with the behaviour of staff or fellow students. If this behaviour is unwanted, unacceptable or offensive it may be harassment. University policy is that harassment on any grounds - including, but not restricted to sexual, racial, religious, and academic - is totally unacceptable. For informal and confidential assistance in dealing with harassment problems, students may approach any member of the Resolve Network (a list of their names can be found on posters displayed around campus) or the Mediator. For information and contact details, visit www.auckland.ac.nz/mdr .

Careers advice

A science degree from The University of Auckland will give you a foundation of knowledge and skills that can lead to a wide range of career opportunities. Our graduates begin their careers in research organisations, local government, central government, universities, commerce and industry, international and community organisations. You may begin your career in a science position, or in a position that is not directly science related but where your science knowledge and skills are of benefit.

The University Careers Centre can assist you with your career planning and job search throughout the course of your studies. The Careers Centre provides assistance to science students through careers information and advice, job search and career research workshops in the Careers Centre, plus seminars and a drop-in service at a variety of times and locations in the Science faculty. For more details please see our website www.auckland.ac.nz/careers.

Careers.Sci

Make sure you visit Careers.Sci, an online career planning programme customised for Science students that will allow you to manage and plan your career. Log on to Cecil (cecil.auckland.ac.nz) and check it out!
www.auckland.ac.nz/careers

For job vacancies and information on current graduate career opportunities, visit http://careerhub.auckland.ac.nz, which also advertises employer presentations on campus. Also go to the Science@Work careers fair in August/September each year. The Careers Centre is located in Room 001 of The ClockTower, 22 Princes Street, and at Tamaki Campus. Please check the careers website for information about opening hours.

W.A.V.E

Welfare. Advocacy. Voice. Education.

Located within and run by AUSA, WAVE is the centre of representation for all students at Auckland University. Whether its monetary problems, legal problems or problems with any part of the University WAVE are here to help you. Here's what we do:

WELFARE: WAVE cares about your welfare. If you're stressed, hungry or have exhausted your overdraft - we know how to help via the Welfare Referral Service.

ADVOCACY: Sometimes completing your degree can seem like an obstacle course. You're not just dealing with coursework and exams - there are lectures, classmates, flatmates, landlords, employers, family, student loans, university red tape and all kinds of hassles which can crop up at the most inconvenient times! WAVE provides a confidential, free service for all students via the Student Advocacy Network. Student Advocates advise on student rights and university procedures, assist in resolving disputes between students and staff or among students. The SAN is also the first point of contact for students with legal problems or questions.

VOICE: WAVE co-ordinates student representation at Auckland University. From class and year reps within the departments through to the student representatives sitting on University committees, WAVE gives students a voice in the running of the University.

EDUCATION: Students are here to get an education and WAVE is making sure it's the best one possible by providing lobbying and research on the big educational issues.

WAVE are located in the AUSA and can be contacted by phone on 309 0789 ext 238 via email on wave@auckland.ac.nz. Also checkout our www page on www.ausa.auckland.ac.nz/WAVE/wave.htm

DELNA

Diagnostic English Language Needs Assessment

DELNA is an assessment that enables us to identify your level of academic English. If you need to improve your skills, you will be guided to sources of effective English language enrichment within the University. DELNA is only for students who have accepted a place and enrolled at The University of Auckland. It cannot be used to exclude you from a particular programme, there is no cost, and the results do not appear on your academic record.

There are two parts to the assessment:

1. The Screening (required for all first-year students at The University of Auckland):

- is a 30-minute assessment.
- includes a vocabulary task and a text-editing task.
- enables us to quickly identify students who may need assistance with the demands of academic English.

2. The Diagnosis (required for students whose screening results suggest that they need assistance with academic English language skills):

- is a 2-hour assessment.
- includes a listening, reading and writing task.
- enables us to recommend appropriate English language enrichment options.

Upon completion of the diagnosis students who need to improve their English language skills will be invited to discuss their specific needs with the DELNA Language Adviser.

All first year students should go to the DELNA booking site: www.delna.auckland.ac.nz/booking/ to book their 30-minute screening assessment during Orientation Week or the first week of semester.

For further information and contact details go to the DELNA website: www.delna.auckland.ac.nz

ELSAC

English Language Self Access Centre

If you have difficulty with your English, with writing essays, understanding lectures, doing presentations, or any other aspect of English, then ELSAC is the place for you!

ELSAC is open 7 days per week during semesters and is free to enrolled students. Find out more on: www.elsac.auckland.ac.nz

Level 1
Kate Edger Information Commons
(opposite UBS bookstore)

Phone: 373 7599 ext 82134
Email: elsac@auckland.ac.nz

The University of Auckland Library

Te Tumu Herenga

The University Library is an essential resource for the successful Statistics student. It has multiple libraries spread over the five campus sites.

Over 1.9 million volumes of books and serials are available in the University Library system. The Library also has extensive electronic resources, maps, videotapes, DVDs, microforms, manuscripts, and newspapers. Your University ID card is your Library card, your photocopy card and your print card. You need to present your ID card when you want to borrow books and other library materials.

Science Resources

The General Library

Ask at the Enquiry Desk on Level G for assistance. The Science Information Services Team is located on Level M. The printed periodical collections in biology, marine science, chemistry, computer science, food science, forensic science, geology, physics, mathematics, and statistics are located on Level M. Geography and psychology serials are shelved with the book collection.

Tamaki Library

Tamaki Library has resources in computer science, environmental sciences, marine science, mathematics, physics, psychology, sports and exercise sciences and statistics.

The Leigh Marine Research Laboratory Library

The Library at Leigh specialises in marine science resources.

Other relevant scientific material

There are also relevant scientific resources in the Architecture, Engineering, Law, and Medical Libraries.

Voyager, the Library catalogue

Voyager provides access to all books, periodicals, and other resources. You can also use Voyager to check your patron details, to renew and recall books and to see which books you have on loan or have recalled.
http://voyager.auckland.ac.nz/

LEARN, the Library Electronic Academic Resources Network

The Library's electronic network is your gateway to a wide range of information resources, including the full text of many periodicals. These resources may be accessed from computers in the University of Auckland Library System, from the Information Commons, computer labs and offices on the Campus and from home.
www.library.auckland.ac.nz/

Subject Librarian Service

The Science Information Services comprise a team of subject-focused librarians who provide information and research services to all departments in the Faculty of Science. The subject areas covered are biological and marine sciences, chemistry, computer sciences, environmental sciences, food science, forensic science, geography, geology, physics, psychology, mathematics, and statistics.

The Subject Librarian for Statistics is located in Room M13 on Level M (the mezzanine) of the General Library and may be contacted by email at m.parkinson@auckland.ac.nz or phone ext 85858. Consultation sessions are available

during visits made by the Subject Librarian to the Department of Statistics.

Information pertinent to the Science Information Services and each Science Subject Librarian can be found on LEARN at www.library.auckland.ac.nz/about/sis/sis_index.htm

Information Research Skills

Training sessions are offered at the start of each semester and during the semesters.

These include:

- Subject and course-related seminars
- Workshops on databases and the Internet
- Orientation tours
- Voyager tutorials
- An overview of electronic resources is available on LEARN
- Using Endnote to compile bibliographies (of particular interest to graduate students)

Courses may be booked online from the LEARN homepage.

Other Library Services:

1. Inter-Campus Library Delivery Service

This service will assist you in getting books and articles held at another campus or in Off-Campus Storage.

2. Interlibrary Loan and Document Delivery

Should you need an item which is not held in any of the University of Auckland libraries, it can usually be obtained for you from other libraries in New Zealand and overseas, or from commercial document suppliers.

3. Photocopying

Self-service photocopiers are available in all the libraries. The service is based on a PIN- protected account that is accessed using your student ID card.

4. Electronic Help Desk

A NetID and password is required in order to access the library's electronic resources. The IC Helpdesk, within the Information Commons, will guide you in accessing your Netlogin.

5. Ask a Librarian Service

This service available via LEARN, allows you to email requests for information to the library.

For Further Information contact the Statistics Subject Librarian:

Michael Parkinson
Mathematics and Statistics
The University of Auckland
Private Bag 92019
Auckland
New Zealand

Phone: 64 9 3737599 ext. 85858
Email: m.parkinson@auckland.ac.nz

Important Locations

Student Resource Centre, City Campus

Students' main contact with the Statistics Department will be through the Student Resource Centre which is located in B01, Basement of the Science Centre, Building 303, 38 Princes Street.

Department of Statistics Office

At the Student Resource Centre you may be directed to the Statistics Departmental Office. This is located on the second floor of the Science Centre, Building 303, Room 203 (ext 86893 or 87510) straight opposite the lifts.

Offices of Statistics Department Lecturers

These are located along the main corridor of the second floor of the Science Centre, Building 303.

Mathematics and Statistics Computer Laboratories

The main Comrie laboratory is located in the basement of the Building 303.

Assistance Room

This is located in the basement of the Science Centre, Building 303 in room B09 beyond the Student Resource Centre.

Tamaki Campus

The Tamaki Campus is located at the corner of Merton and Morrin Roads in Glen Innes. (There are free buses for students with courses at the Tamaki campus which leave from the City Campus and Tamaki Campus approximately every hour, operating on a reduced schedule during the holiday period. The buses depart from Alfred Street, outside the General Library on the City Campus at five minutes past the hour and depart from in front of building 723 at the Tamaki Campus at thirty-five minutes past the hour). The Tamaki Library is in Building 710.2 near the south entrance to the Campus.

Main Library

The main library is found at 5 Alfred Street.

Lecture Theatre Locations	
Within the Science Centre	
B08	Small Tutorial room in the basement of the Science Centre Building 303
MLT 1	Large Mathematics Lecture Theatre, Science Centre Building 303 (ground floor)
MLT 2	Second Mathematics Lecture Theatre, Science Centre Building 303 (first floor)
MLT 3	Third Mathematics Lecture Theatre, Science Centre Building 303 (first floor)
PLT1	Large Physics Lecture Theatre, Science Centre Building 303 (ground floor)
PLT2	Second Physics Lecture Theatre, Science Centre Building 303 (ground floor)
PLT3	Small Physics Lecture Theatre 3, Science Centre Building 303 (basement)
PLT4	Small Physics Lecture Theatre 4, Science Centre Building 303 (basement)
SLT1	Science Lecture Theatre, Science Centre Building 303 (ground floor)
Others	
ALR	Architecture Lecture Room, Architecture Building, 22 Symonds Street
Arts	Arts1 Building, 14A Symonds Street
BLT100	Biology Building Room 100, 5 Symonds Street
BLT204	Biology Building Room 204, 5 Symonds Street
CA	Commerce A, 3A Symonds Street
CB	Commerce B, 5 Symonds Street
CC	Commerce C, 18 Symonds Street
Chem	Chemistry Building, (corner Symonds and Wellesley Streets) 23 Symonds Street) contains the Large and Medium Lecture Theatres (LgeChem, MedChem)
Conf Cen	Conference Centre, 22 Symonds Street Eng Engineering School, 20 Symonds Street HSB
Lib B10/B10	Library Building Basement Theatre 10, 5 Alfred Street
Lib B15/B15	Library Building Basement Theatre 15, 5 Alfred Street
Lib B28/B28	Library Building Basement Theatre 28, 5 Alfred Street
Law	Law Buildings, 5-17 Eden Crescent contains Stone, Algie, Northey and Small Lecture Theatres
LLT	Lower Lecture Theatre, behind Old Arts building
LargeChem	Large Lecture Theatre, Ground Floor Chemistry Building
MedChem	Medium Lecture Theatre, Ground Floor Chemistry Building
OCH	Old Choral Hall, corner Symonds and Alfred Streets, 7 Symonds Street
OldGovLT	Old Government House Lecture Theatre, 3A Symonds Street
ULT	Upper Lecture Theatre, behind Old Arts Building
OGGB 3/4/5	Owen G Glenn Building, 12 Grafton Road
F&PAA	Fisher and Paykel Appliances Auditorium, 12 Grafton Road
HSB 1/2	Human Sciences Building, 10 Symonds Street

Glossary

The following are terms often used to describe aspects of the university system.

Points System

Each bachelor's degree BSc, BA, and BCom is composed of 360 points. Precisely how the 360 points are to be made up differs slightly between faculties. All statistics courses are 15 point courses.

Conjoint degree

A special programme of study in which students study for two bachelor's degrees concurrently

Corequisite

A course which should be taken in the same semester as another, unless it has previously been satisfactorily completed.

Coursework marks /credit for coursework

During the semester, you will have to do assignments and sit tests. Marks for these activities that can count towards the final grade are called coursework marks. "Credit for coursework" is the number of marks out of the 100% making up the final grade which are taken from coursework.

Limited Entry Course

A course for which the number of students that can be accepted is limited because of constraints on resources (such as the availability of staff and/or teaching and laboratory space).

Major

A specified compilation of courses required in a subject or programme taken to the highest stage for a particular certificate, diploma or degree.

Plussage

A system by which students are credited with a final result for the year, which is either the final examination grade, or a combination of final grade plus coursework, whichever is to the advantage of the student. Some form of plussage is operated in many Statistics courses.

Prerequisite

A course at Stage 2 or above will normally require you to have passed other lower courses before you can enrol. These required courses are called prerequisites. (See also corequisite above.)

Restricted Course

A course in which the learning objectives, content and/or assessment are so similar to a second course that a student should not be credited with both towards a certificate, diploma or degree. In some cases a restricted course may be taken and credited as COP.

Streaming

If you are enrolling in undergraduate courses in the Arts, Commerce, Law or Science Faculties a computer programme will assign you to specific lecture, laboratory and tutorial times (streams). The programme takes into account all the courses in which you have enrolled, provided you enrolled at the appropriate time.

Staff Directory

	Ext	Room	Email
Head of Department			
Chris Triggs	88856	201	triggs@stat.auckland.ac.nz
Departmental Manager			
Walker, Sharon	86836	202	sharon@stat.auckland.ac.nz
Departmental Secretary			
Herle, Suryashobha	86893	203	shobha@stat.auckland.ac.nz
Temporary Office Staff			
Wong, Nancy	87510	203	nancy@stat.auckland.ac.nz
City Staff			
Balemi, Andrew	85713	263	balemi@stat.auckland.ac.nz
Browning, Sharon	88745	220	browning@stat.auckland.ac.nz
Budgett, Stephanie	85756	225	budgett@auckland.ac.nz
Cumming, Joss	85756	225	cumming@stat.auckland.ac.nz
Cunliffe, Rachel	85237	303.205	rachel@stat.auckland.ac.nz
Curran, James	88755	267	curran@stat.auckland.ac.nz
Fewster, Rachel	83946	206	fewster@stat.auckland.ac.nz
Forster, Mike	88759	292	forster@stat.auckland.ac.nz
Guindon, Stephane	82755	211	guindon@stat.auckland.ac.nz
Holmes, Mark	88679	218	mholmes@stat.auckland.ac.nz
Ihaka, Ross	85054	275	ihaka@stat.auckland.ac.nz
Kojadinovic, Ivan	83785	221	ivan@stat.auckland.ac.nz
Loader, Catherine	88811	207	c.loader@auckland.ac.nz
McArdle, Brian	85845	213	bmcardle@stat.auckland.ac.nz
Meyer, Renate	85755	210	meyer@stat.auckland.ac.nz
Miller, Arden	85053	208	miller@stat.auckland.ac.nz
Miller, Christine	84275	204	cmiller@auckland.ac.nz
Murrell, Paul	85392	273	paul@stat.auckland.ac.nz
Nathan, Garry	83063	118	nathan@math.auckland.ac.nz
Pfannkuch, Maxine	88794	310	m.pfannkuch@stat.auckland.ac.nz
Pritchard, Geoffrey	87400	212	g.pritchard@stat.auckland.ac.nz
Regan, Matt	85242	205	regan@stat.auckland.ac.nz
Scott, Alastair	88751	228	scott@stat.auckland.ac.nz
Smith, David	85390	226	dsmith@stat.auckland.ac.nz

	Ext	Room	Email
Solomon, Wiremu	88771	209	solomon@stat.auckland.ac.nz
Sporle, Andrew	82010	721.312	a.sporle@auckland.ac.nz
Stewart, Wayne	83763	294	w.stewart@auckland.ac.nz
Triggs, Chris	85500	265	triggs@stat.auckland.ac.nz
Wang, Yong	84700	271	yongwang@stat.auckland.ac.nz
Wild, Chris	88797	214	wild@stat.auckland.ac.nz
Wingfield, Susan	84934	291	susanw@stat.auckland.ac.nz
Ziedins, Ilze	85051	277	ilze@stat.auckland.ac.nz
Tamaki Staff Office, City Campus	85055	215	
Computing / Technical Staff			
Cope, Stephen	89621	205	s.cope@stat.auckland.ac.nz
Schmidt, Werner	87973	269	schmidt@stat.auckland.ac.nz
Tamaki Staff			
Anderson, Marti	85052	721.330 /292	mja@stat.auckland.ac.nz
Holcombe, Bronwyn	86832	721.340	b.holcombe@auckland.ac.nz
Lee, Alan	88749	721.332	lee@stat.auckland.ac.nz
Metcalf, Patricia	87715	721.303	metcalf@stat.auckland.ac.nz
Millar, Russell	85289	721.333	millar@stat.auckland.ac.nz
Parsonage, Ross	86608 / 89622	721.305 /205	r.parsonage@auckland.ac.nz
Scott, David	86830 / 85055	721.304 /215	d.scott@stat.auckland.ac.nz
Yee, Thomas	86857 / 85055	721.334 /215	yee@stat.auckland.ac.nz
Student Resource Centre			
Venugopalon, Jaya	85510	B01	jaya@math.auckland.ac.nz
Student Resource Centre, Tamaki	85230	T710.105	robyn.marshall@auckland.ac.nz
Unisafe, 24 Hour Service	85000		

THE UNIVERSITY OF AUCKLAND
CITY

Faculty of Science

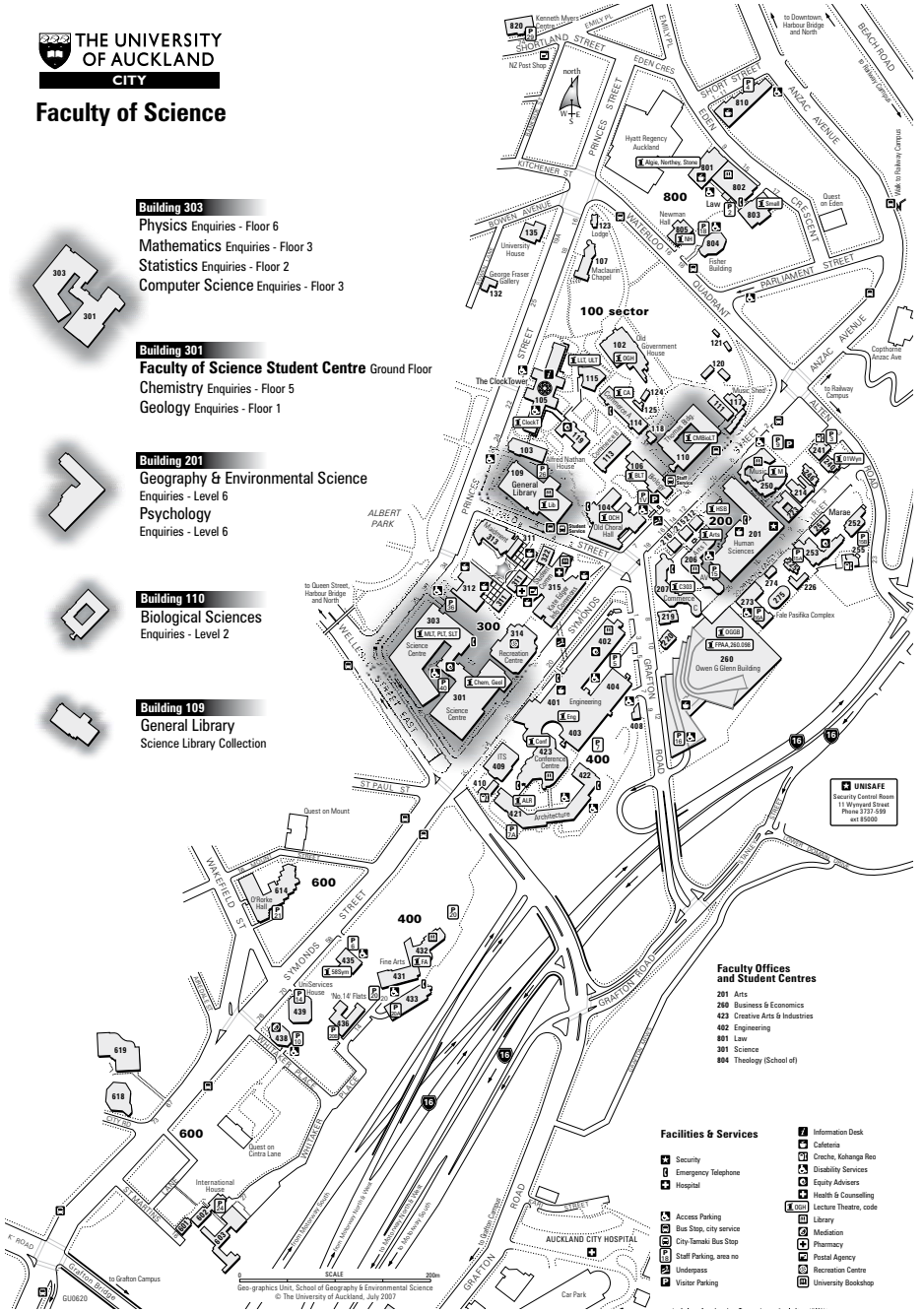
Building 303
Physics Enquiries - Floor 6
Mathematics Enquiries - Floor 3
Statistics Enquiries - Floor 2
Computer Science Enquiries - Floor 3

Building 301
Faculty of Science Student Centre Ground Floor
Chemistry Enquiries - Floor 5
Geology Enquiries - Floor 1

Building 201
Geography & Environmental Science
Enquiries - Level 6
Psychology
Enquiries - Level 6

Building 110
Biological Sciences
Enquiries - Level 2

Building 109
General Library
Science Library Collection



THE UNIVERSITY OF AUCKLAND
TAMAKI

Faculty of Science

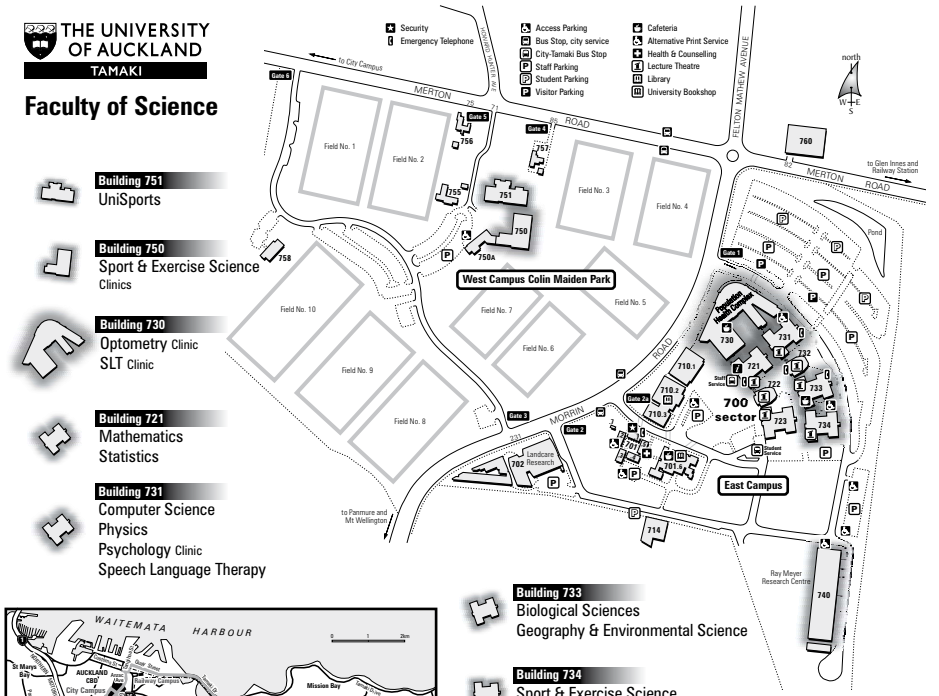
Building 751
UniSports

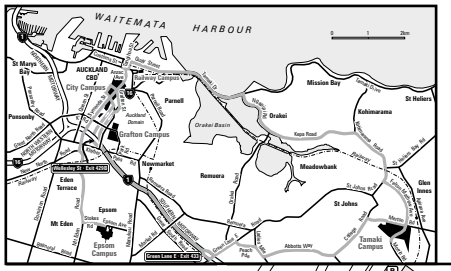
Building 750
Sport & Exercise Science
Clinics

Building 730
Optometry Clinic
SLT Clinic

Building 721
Mathematics
Statistics

Building 731
Computer Science
Physics
Psychology Clinic
Speech Language Therapy



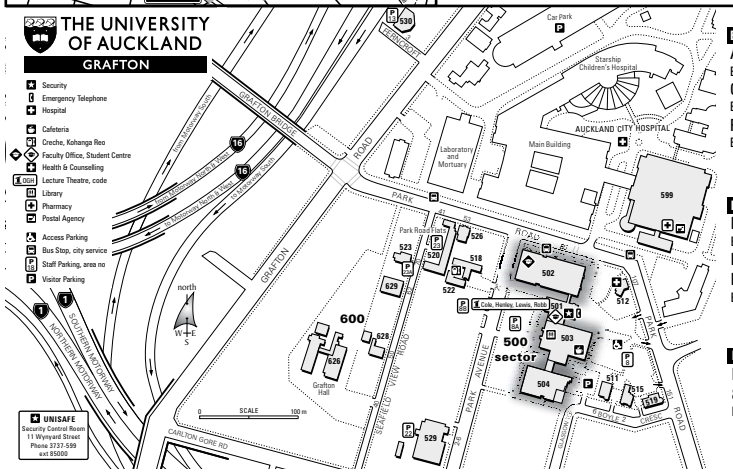


Building 733
Biological Sciences
Geography & Environmental Science

Building 734
Sport & Exercise Science
Psychology

Building 740
Wine Science

THE UNIVERSITY OF AUCKLAND
GRAFTON



Building 502
Anatomy
Enquiries - Level G
Optometry & Vision Science
Enquiries - Level 4
Physiology
Enquiries - Level 3

Building 503
Medical Sciences
Enquiries - Level 4
Pharmacology & Clinical Pharmacology
Enquiries - Level 2

Building 504
Molecular Medicine & Pathology
Enquiries - Level 3