



# Science

## STATS 100 : Concepts in Statistics (15 POINTS)

### Course Prescription

A first exposure to statistics that builds data handling skills and develops conceptual thinking through active participation in problems using real data, computer simulations and group work. STATS 100 makes full use of appropriate technology and prepares students for further study in Statistics. *Restriction: STATS 100 may not be taken with, or after passing, any other Statistics course. STATS 100 is not available to students who have 14 credits or more in Mathematics and Statistics at NCEA Level 3 or those who have passed Cambridge Mathematics A with an E or better, or Cambridge Mathematics AS with a D or better, or those who have passed International Baccalaureate Mathematics, or equivalent*

### Course Overview

The overall goal of STATS 100 is to increase your confidence and your personal interest in Statistics. So if you've done a little bit of Statistics study in the past or avoided it completely, and/or think Statistics is boring or difficult, then this course should convince you how awesome working with data really is! STATS 100 will develop your conceptual understanding of Statistics through active participation in problems using real data, hands-on activities, group work and projects. The course makes full use of appropriate technology and prepares students for further study in Statistics, in particular STATS 101/STATS 108. The lectures, tutorials and labs are designed to be interactive and to build on each other over the course. If you are intending to study any subject that requires working with data, this course will help you build strong foundations in the key concepts of Statistics.

### Course Requirements

No pre-requisites or restrictions

### Capabilities Developed in this Course

- Capability 1: Disciplinary Knowledge and Practice
- Capability 2: Critical Thinking
- Capability 3: Solution Seeking
- Capability 4: Communication and Engagement
- Capability 5: Independence and Integrity
- Capability 6: Social and Environmental Responsibilities

## Learning Outcomes

By the end of this course, students will be able to:

1. Manipulate data and work with a range of data sources (Capability 1)
2. Select and apply appropriate technology and software to analyse data (Capability 1)
3. Reason critically with data and models when forming arguments or making decisions (Capability 2)
4. Use mathematical representations in the process of developing models (Capability 3)
5. Produce written reports that utilise statistical thinking and clearly communicate uncertainty (Capability 4)
6. Design, conduct, and evaluate statistical investigations (Capability 4)
7. Describe responsible and ethical practices for using data (Capability 5)
8. Consider social consequences of data-based decisions (Capability 6)

## Assessments

Assessment Type	Percentage	Classification
Final Exam	50%	Individual Examination
Tests	20%	Individual Coursework
Tutorials	10%	Individual Coursework
Quizzes	5%	Individual Coursework
Labs	15%	Individual Coursework
5 types	100%	

Assessment Type	Learning Outcome Addressed							
	1	2	3	4	5	6	7	8
Final Exam			✓	✓		✓	✓	✓
Tests			✓	✓		✓	✓	✓
Tutorials	✓	✓	✓	✓	✓	✓	✓	✓
Quizzes			✓			✓	✓	✓
Labs	✓	✓	✓	✓	✓	✓		

The online tests may be held at a time other than the standard lecture time, including in the evening. Students must obtain at least 45% in the final exam to pass.

Tuākana tutors/mentors work alongside the lecturer to support students with tutorials, online labs and revision for the tests and exam. For more information and to find contact details for the Statistics Tuākana coordinator, please see <https://www.auckland.ac.nz/en/science/study-with-us/maori-and-pacific-at-the-faculty/tuakana-programme.html>

### Key Topics

- Topic 1: Making predictions
- Topic 2: Conducting tests
- Topic 3: Building models
- Topic 4: Informing decisions

### Special Requirements

There are no special requirements for this course.

### Workload Expectations

This course is a standard 15 point course and students are expected to spend 150 hours per semester involved in each 15 point course that they are enrolled in.

For this course, you can expect to spend 24 hours attending/watching lectures, 12 hours completing tutorial tasks, 12 hours completing lab tasks, 24 hours reading and writing learning reflections, and 78 hours working on completing interactive examples, quizzes and revision for the tests/exam.

### Delivery Mode

#### Campus Experience

Lectures will be available as recordings.

Other learning activities including tutorials and labs will be available as online tasks.

Attendance on campus is not required for the tests.

Attendance on campus is required for the exam.

### Learning Resources

The online textbook for this course is available via Canvas. Students are able to print a free PDF version of the textbook if desired.

### Student Feedback

During the course Class Representatives in each class can take feedback to the staff responsible for the course and staff-student consultative committees.

At the end of the course students will be invited to give feedback on the course and teaching through a tool called SET or Qualtrics. The lecturers and course co-ordinators will consider all feedback.

Your feedback helps to improve the course and its delivery for all students.

### Digital Resources

Course materials are made available in a learning and collaboration tool called Canvas which also includes reading lists and lecture recordings (where available).

Please remember that the recording of any class on a personal device requires the permission of the instructor.

### Academic Integrity

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 their learning. Where work from other sources is used, it must be properly acknowledged and referenced. This requirement also applies to sources on the internet. A student's assessed work may be reviewed against online source material using computerised detection mechanisms.

### Copyright

The content and delivery of content in this course are protected by copyright. Material belonging to others may have been used in this course and copied by and solely for the educational purposes of the University under license.

You may copy the course content for the purposes of private study or research, but you may not upload onto any third party site, make a further copy or sell, alter or further reproduce or distribute any part of the course content to another person.

### Inclusive Learning

All students are asked to discuss any impairment related requirements privately, face to face and/or in written form with the course coordinator, lecturer or tutor.

Student Disability Services also provides support for students with a wide range of impairments, both visible and invisible, to succeed and excel at the University. For more information and contact details, please visit the [Student Disability Services' website](http://disability.auckland.ac.nz) <http://disability.auckland.ac.nz>

### Special Circumstances

If your ability to complete assessed coursework is affected by illness or other personal circumstances outside of your control, contact a member of teaching staff as soon as possible before the assessment is due.

If your personal circumstances significantly affect your performance, or preparation, for an exam or eligible written test, refer to the University's [aegrotat or compassionate consideration page](https://www.auckland.ac.nz/en/students/academic-information/exams-and-final-results/during-exams/aegrotat-and-compassionate-consideration.html) <https://www.auckland.ac.nz/en/students/academic-information/exams-and-final-results/during-exams/aegrotat-and-compassionate-consideration.html>.

This should be done as soon as possible and no later than seven days after the affected test or exam date.

### Learning Continuity

In the event of an unexpected disruption we undertake to maintain the continuity and standard of teaching and learning in all your courses throughout the year. If there are unexpected disruptions the University has contingency plans to ensure that access to your course continues and your assessment is fair, and not compromised. Some adjustments may need to be made in emergencies. You will be kept fully informed by your course co-ordinator, and if disruption occurs you should refer to the University Website for information about how to proceed.

Level 1: Delivered normally as specified in delivery mode

Level 2: You will not be required to attend in person. All teaching and assessment will have a remote option.

Level 3 / 4: All teaching activities and assessments are delivered remotely .

### Student Charter and Responsibilities

The Student Charter assumes and acknowledges that students are active participants in the learning process and that they have responsibilities to the institution and the international community of scholars. The University expects that students will act at all times in a way that demonstrates respect for the rights of other students and staff so that the learning environment is both safe and productive. For further information visit [Student Charter](https://www.auckland.ac.nz/en/students/forms-policies-and-guidelines/student-policies-and-guidelines/student-charter.html) <https://www.auckland.ac.nz/en/students/forms-policies-and-guidelines/student-policies-and-guidelines/student-charter.html>.

### Disclaimer

Elements of this outline may be subject to change. The latest information about the course will be available for enrolled students in Canvas.

In this course you may be asked to submit your coursework assessments digitally. The University reserves the right to conduct scheduled tests and examinations for this course online or through the use of computers or other electronic devices. Where tests or examinations are conducted online remote invigilation arrangements may be used. The final decision on the completion mode for a test or examination, and remote invigilation arrangements where applicable, will be advised to students at least 10 days prior to the scheduled date of the assessment, or in the case of an examination when the examination timetable is published.