

Course Title:	Statistics for Data Science
Course Code:	COMP616
Descriptor Start Date:	31/01/2025
POINTS:	15.00
LEVEL:	6
PREREQUISITE/S:	MATH503
COREQUISITE/S:	None
RESTRICTION/S:	None

LEARNING HOURS

Hours may include lectures, tutorials, online forums, laboratories. Refer to your timetable and course information in Canvas for detailed information.

Total learning hours: 150

PRESCRIPTOR

Introduces the mathematical and statistical foundations for data science and machine learning through application and the use of statistical packages.

LEARNING OUTCOMES

1. Analyse medium to complex datasets to test hypotheses and check for significant differences
2. Calculate means, variances, covariances and correlations
3. Apply and evaluate a variety of inferential techniques to medium to complex datasets
4. Apply and evaluate a variety of data fitting methods
5. Undertake an individual data analysis exploratory project on a medium to complex dataset

CONTENT

- Core statistical concepts, including descriptive statistics, Gaussian distributions, hypothesis testing, significance and analysis of variance
- Statistical inference, including regression, correlation and linear discriminant analysis
- Bayesian thinking, including conditional probabilities, priors, posteriors and likelihoods
- Linear and non-linear fitting methods, including polynomials, splines and kernel functions

LEARNING & TEACHING STRATEGIES

Disclaimer: Course descriptors may be amended between teaching periods/semesters

Lectures will be used to present the material, with workshops to support individual practical exercises.

ASSESSMENT PLAN

Assessment Event	Weighting %	Learning Outcomes
Assignment 1	30.00	1-3
Assignment 2	30.00	1-5
Final Exam	40.00	1-5

Grade Map	MAP1 A+ A A- Pass with Distinction B+ B B- Pass with Merit C+ C C- Pass D Fail
------------------	---

Overall requirement/s to pass the course:

To pass this course, students must attempt all summative assessments and achieve a minimum overall grade of C-.

LEARNING RESOURCES

-

For further information, contact: Te Ara Auaha - Faculty of Design & Creative Technologies

Principal Programme: AK3697, Bachelor of Computer and Information Sciences

Related Programme/s: AK3698
AK3756
ICE1
INEXCH1
SABRD1

Disclaimer: Course descriptors may be amended between teaching periods/semesters