

Course Title:	<b>Forecasting</b>
Course Code:	<b>STAT603</b>
Descriptor Start Date:	<b>01/01/2026</b>
POINTS:	<b>15.00</b>
LEVEL:	<b>6</b>
PREREQUISITE/S:	<b>STAT500 or STAT502 or MATH503</b>
COREQUISITE/S:	<b>None</b>
RESTRICTION/S:	<b>None</b>

## 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

An introduction to forecasting in science and social science (e.g. business and economics) using statistical models. Making predictions from data that arise sequentially in time (e.g. electricity production, unemployment rates, share prices, sales, and temperature). Topics include forecasting strategies, detecting trends, and autoregressive models.

## LEARNING OUTCOMES

1. Detect trends and seasonal variation in time series
2. Calculate and interpret auto-correlation and cross-correlation for different data
3. Fit statistical models to data
4. Make forecasts using fitted models
5. Use statistical software, e.g., R, to simulate possible scenarios

## CONTENT

- Introduction to Forecasting and Time Series Analysis
- Time Series Regression
- Decomposition Models
- Exponential Smoothing
- ARIMA Models
- Forecasting vs Prediction

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

## LEARNING & TEACHING STRATEGIES

A fully online learning approach, with the following activities:

- Lectures and computer laboratory online sessions
- Assignments (a series of relevant assessable exercises) e-delivered

## ASSESSMENT PLAN

Assessment Event	Weighting %	Learning Outcomes
Assignment 1	30.00	1-5
Assignment 2	30.00	1-5
Controlled Assessment	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

A list of recommended readings will be provided.

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

**Principal Programme:** DJ1041, Bachelor of Science

**Related Programme/s:** AK1271  
AK1301  
AK1302  
AK2040  
AK3001  
AK3697  
AK3698  
AK3750  
AK3756  
DJ1042  
DJ1043  
HA1041  
HA1042  
HA1043  
ICE1  
INEXCH1  
SABRD1

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