Course Title:	**Forecasting**
Course Code:	**STAT603**
Descriptor Start Date:	**01/01/2026**
POINTS:	**15.00**
LEVEL:	**6**
PREREQUISITE/S:	**STAT500 or STAT502 or 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

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

LEARNING & TEACHING STRATEGIES

A fully online learning approach, with the following activities:
- Lectures and computer laboratory online sessions
- Assignments (a series of relevant assessible 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