

Course Information

Mathematics

Mathematics Applications | MAA



ATMAA

Unit 3 Bivariate data analysis, growth and decay in sequences, graphs and networks

Bivariate data analysis introduces you to some methods for identifying, analysing and describing associations between pairs of variables, including the use of the least-squares method as a tool for modelling and analysing linear associations. The content is to be taught within the framework of the statistical investigation process. Growth and decay in sequences employs recursion to generate sequences that can be used to model and investigate patterns of growth and decay in discrete situations.

These sequences find application in a wide range of practical situations, including modelling the growth of a compound interest investment, the growth of a bacterial population, or the decrease in the value of a car over time. Sequences are also essential to understanding the patterns of growth and decay in loans and investments that are studied in detail in unit four. Graphs and networks introduces you to the language of graphs and the ways in which graphs, represented as a collection of points and interconnecting lines, can be used to model and analyse everyday situations, such as a rail or social network.

Unit 4 Time series analysis, loans, investments and annuities, networks and decision mathematics

Time series analysis continues your study of statistics by introducing you to the concepts and techniques of time series analysis. The content is to be taught within the framework of the statistical investigation process. Loans investments and annuities aims to provide you with sufficient knowledge of financial mathematics to solve practical problems associated with taking out or refinancing a mortgage and making investments. Networks and decision mathematics uses networks to model and aid decision making in practical situations.



Prerequisites

Must be in **OLNA category 3** to enrol in. Based on achieving a **C Grade in Year 10 Mathematics** or equivalent standard



Year of Study

Year 12



Type of Assessment

40% Response
20% Investigation
40% Examination



Costs

Unit Cost \$60
iLearn \$120