Advanced Higher Statistics (Course Code: C803 77)

SCQF Level 7 (32 Credit Points)

Why study Statistics?

Statistical techniques are vital in today's world to analyse data and make sense of the many aspects of a situation. They are used in business and government to determine the present state of affairs and to form a plan of action. Statistics can also be used to monitor progress and record achievement.

This course will introduce you to experimental design, and develops your ability to make informed judgements on calculated statistics and to communicate appropriate conclusions. You will develop skills in selecting and applying statistical techniques in a wide variety of real-life contexts. These skills will be useful to progression in many careers in these areas, such as actuarial work, financial services, sport analysis, economics, media work, as well as in science, medicine, the humanities and technology.

What do I need to get in?

This is at the discretion of the school/college but you would normally be expected to have attained one of the following:

- **Higher Mathematics**

What will I study?

The course comprises **three** areas of study.

Data Analysis and Modelling

You will:

- develop skills in data collection, presentation and interpretation
- study the notion of probability and be introduced to some probability models, and the theory behind them. Exploratory data analysis will be used as an indicator
- explore the uses of different random variables.

Statistical Inference

You will:

- select and use appropriate statistical models to assist with the analysis of data and interpret results in context
- evaluate the strength and limitations of their models
- be introduced to the practicalities of working with sample data to consider possible population distributions and to obtain best estimates of a population mean
- look at the importance of the distribution of sample means, and the power of the central limit theorem

outlined and used to evaluate the accuracy of the estimated population mean
- conduct a statistical investigation using the skills you have developed in this unit.

Hypothesis Testing

You will:

- develop skills in effectively communicating conclusions reached on the basis of statistical analysis
- conduct a statistical investigation using the skills you have developed in this unit.

How will I be assessed?

Course Assessment

The course assessment consists of **two** components **totalling 120 marks.**

- Component 1: Question paper 1 (worth 30 marks)
- Component 2: Question paper 2 (worth 90 marks).

Both the question papers are set and externally marked by the Scottish Qualifications Authority (SQA).

The grade awarded is based on the total marks achieved across course assessment.

The course assessment is graded A-D.

Study Materials

SQA Past Papers Statistics Advanced Higher
SQA Specimen Statistics Advanced Higher Question Paper 1
SQA Specimen Statistics Advanced Higher Question Paper 2
SQA Additional Specimen Statistics Advanced Higher Question Paper 1

What can I go on to next?

Further study, training or employment in:

- Computing and ICT
- Construction
- Engineering
- Finance
- Mathematics and Statistics
- Science and Mathematics
- Teaching and Classroom Support
- Transport and Distribution