Module Details for ST2002 INTRODUCTION TO REGRESSION

Current Record

Module Details

Module Code  ST2002
Module Name  ST2002 INTRODUCTION TO REGRESSION

Module Short Title

ECTS 5
weighting

Semester/term taught

Contact Hours  Lectures/Tutorials/Statistical Laboratories

Module Personnel  Lecturer - Arnab Bhattacharya

Learning Outcomes  Regression is probably the most widely used tool in statistics. When students have successfully completed this module they should:
- Understand the concepts involved in simple and multiple linear regression analysis
- Understand how to use R software for regression
- Understand how to diagnose performance
- Understand how to create better models

Module Learning Aims  To introduce students to the statistical ideas and techniques involved in regression analysis. Regression is probably the most widely used tool in Statistics. When students have successfully completed this module, they should:

- Understand the concepts involved in simple and multiple linear
regression analysis;

- Understand how to use R software for regression;
- Understand how to diagnose performance;
- Understand how to create better models.

**Module Content**

Specific topics addressed in this module include:


* Confidence intervals and statistical significance tests on model parameters;

* Issues in the interpretation of the multiple parameters;

* Transformation of variables;
* Prediction intervals;

* Analysis of variance in regression: F-tests, r-squared

Model validation: residuals, residual plots, normal plots, diagnostics

**Recommended Reading List**


N.R Draper and H Smith - Applied Regression Analysis (Wiley Series in Probability and Statistics) - interested students who are comfortable with a lot of algebra may find this quite helpful.


Module Pre Requisite

Module Co Requisite

Assessment Details One 2-hour examination (80%) and one mid-term assignment (20%). In supplemental examination the performance is based on a single 2-hour examination.

Module Website

Module approval date

Approved By

Academic Start Year

Academic Year of Data 2015/16