



# UCD Curriculum Archive for Academic Year 2014/2015

## Introduction to Data Analytics (Online) (STAT40720)

**School: Mathematics and Statistics**

Level: 4

Credits: 5

Pass Mark: 40

Semester: One

Module Coordinator: Professor Andrew Parnell

### Description

This module covers introductory probability and statistical inference, focusing on understanding concepts and methodologies. Topics include: descriptive statistics, probability, sampling distributions, confidence interval estimation, hypothesis testing and regression.

### Learning Outcomes

Having successfully completed this module, students will be able to:- Summarise a data set using appropriate graphical and numerical methods.- Understand the basic laws of probability and compute probabilities for several different distributions.- Understand the principle of inferential statistics, estimate population characteristics and provide confidence intervals for those estimates.- Understand the principles of hypothesis testing and for a specified investigation, given the background, identify an appropriate test and interpret the results.- Understand and compute the equation of the least squares line, compute confidence intervals and prediction intervals from the least square estimates and perform some basic diagnostic checks on the performance of regression models.

### Associated Programmes

N/A

### Workload

Specified Learning Activities	24 hrs
Autonomous Student Learning	72 hrs
Online Learning	24 hrs
<b>Total Hours</b>	<b>120 hrs</b>

### Assessment Strategies

Description	Timing	%Final Grade
2 hour end of semester written exam	Unspecified	70
Online assessments	Thr_Sem	30