American College Dublin

2 Merrion Square, Dublin 2
T: +353 1 676 89 39
F: +353 1 676 89 41
admissions@iamu.edu
www.iamu.edu | www.acd.ie

IB209 PROBABILITY AND STATISTICS

Credits:	3 US credits / 6 ECTS credits
Credit level:	Stage one
Prerequisites:	None
Mandatory:	Yes
Contact hours:	40
Academic Year:	2016/17
Semester:	2
Lecturer:	Michael Clark

MODULE DESCRIPTION

A study of applying the concepts of probability theory to problems. Topics include data collection using different sampling designs, processing raw data, extracting relevant information from processed data, testing for the significance of this data, presenting statistical data in standard format and studying the basics of experimental design in business.

MODULE LEARNING OUTCOMES

At the end of this module students will have:

1. Developed a comprehension of the kind of knowledge pertaining to probability and statistics.
2. An ability to identify and collect the appropriate data using different sampling designs, and to process raw data from different areas of research.
3. Recognised and applied the elements of probability.
4. Demonstrate the ability to make decisions based on test of significance.
5. Apply the appropriate statistical techniques to analyse data.
6. The know how to extract good quality information from processed data and present statistical data in standard format.

TEACHING METHODS

Lectures, group and class discussions, group and individual exercises.

LEARNING OUTCOMES MAP

Learning Outcomes	Content	Delivery	Assessment
1	All sections	Lectures, readings, and class discussions.	Assignments, exercises, exam and participation.
2	1 - 4	Lectures, readings, and class discussions.	Assignments, exercises, exam and participation.
3	5 - 7	Lectures, readings, and class discussions.	Assignments, exercises, exam and participation.
4	8, 11	Lectures, readings, and class discussions.	Assignments, exercises, exam and participation.
5	6 - 10	Lectures, readings, and class discussions.	Assignments, exercises, exam and participation.
6	All sections	Lectures, readings, and class discussions.	Assignments, exercises, exam and participation.

COURSE OUTLINE		WEIGHTING
1.	Population and sampling	10%
2.	Organising data	10%
3.	Measures of central location	10%
4.	Measurers of dispersion	10%
5.	Rules of probability	5%
6.	Binomial probability model	10%
7.	Normal probability model	10%
8.	Statistical inference	10%
9.	Correlation	10%
10.	Linear regression analysis	10%
11.	Chi square test	5%

REQUIRED TEXT

Using Statistics, James Reily, Gill and Macmillan, 2006 edition. This text has a support student website

SUPPLEMENTARY READING LIST

Basic Business Statistics; concepts and approaches by Berenson M.L, Levine D.M, Krehbiel T.C., Prentice Hall, 2006.

Introduction to the Practice of Statistics, Moore and McCable, 2006, Freeman.

ASSESSMENT/GRADING

Assignment one	10%
Assignment two	10%
Mid term open book	20%
Positive Participation	10%
Final Test	50%
	100%

A formula list is provided in the final test.
(Please bring a calculator to all teaching learning sessions.)

Grading

Each component of the course will be assessed separately. Students will be graded according to the attached grading system as outlined in the NCEA Marks and Standards 2001, available at http://www.hetac.ie/pdf/hetac_marks_standards_2001.pdf (page 35).

ATTENDANCE

Attendance is crucial. In the case of illness it is the student's responsibility to telephone the College office to notify the lecturer. See Academic Policies and Procedures in the ACD Catalogue.

ACADEMIC DISCIPLINE

Refer to the subsection on Academic Discipline in the current ACD Catalogue.