

American College Dublin

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IB306 QUANTITATIVE BUSINESS ANALYSIS

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

MODULE DESCRIPTION

In the course we study the theory and application of popular quantitative procedures currently used in business analysis and decision taking. Topics include the mathematics of finance, forecasting, probability networking analysis and Markov chains. The emphasis is on skills acquisition, and the application of theory to problem solving.

MODULE LEARNING OUTCOMES

At the end of this class students will have:

1. Developed a comprehension of the kind of knowledge pertaining to quantitative business analysis.
2. Understood the different quantitative theories, concepts and methods as they apply to business.
3. Developed the skills to solve quantitative financial problems.
4. To teach the student how to proceed logically from a data oriented situation to decision taking position.
5. To introduce the student to the analytical tools underpinning modern optimisation and planning models.
6. A training in the skills of interpretation of analytical results and report presentation.

LEARNING OUTCOMES MAP

Learning Outcomes	Content	Delivery	Assessment
1	All sections	Lectures, readings, and class discussions.	Assignments, exercises, exam and participation.
2	All sections	Lectures, readings, and class discussions.	Assignments, exercises, exam and participation.
3	Section 1	Lectures, readings, and class discussions.	Assignments, exercises, exam and participation.
4	All sections	Lectures, readings, and class discussions.	Assignments, exercises, exam and participation.
5	3 – 12	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

1. Financial mathematics; interest, annuities, sinking funds, present value, future value.
2. Index number system.
3. Time series forecasting.
4. Utility theory and decision analysis.
5. Markov chains as applied in finance and market research.
6. Linear programming.
7. Network analysis.

WEIGHTING

- 20%
- 10%
- 15%
- 10%
- 15%
- 15%
- 15%

REQUIRED TEXT

Applied Mathematics, R.A.Barnett and M.T.Ziegler, Prentice Hall 2006
 Business Mathematics and Statistics, Andre Francis, Thompson 2006
 Calculators are essential in all teaching / learning sessions

ASSESSMENT/GRADING

Assignment One	10%
Assignment Two	10%
Mid Term open book	20%
Positive participation	10%
Final test	50%

A formal list is provided in the final test.

Calculators are essential in 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