

# QUANTITATIVE METHODS FOR BUSINESS

INTERNATIONAL YEAR ONE BUSINESS (IYOne Business)



# SYLLABUS OVERVIEW

<b>Module Code</b>	IDBQM001
<b>Module Name</b>	Quantitative Methods for Business
<b>Programme Name</b>	International Year One Business
<b>Percentage breakdown of Coursework</b>	25%
<b>Percentage breakdown of Exam/Test</b>	75%
<b>Delivery period</b>	The syllabus will usually be delivered over a single 15 week semester
<b>Recommended minimum teaching hours</b>	5 hours per week (over 15 weeks)
<b>Recommended minimum independent study hours</b>	5 hours per week (over 15 weeks)

## AIMS


This module aims to:


- ⇒ Develop mathematical and statistical literacy in students, including the ability to make numbers meaningful, focussing on conceptual understanding and recognising the demands for dealing with “big data” in an information age
- ⇒ Enable students to use mathematical and statistical methods to investigate business-related data, emphasising application and interpretation rather than fundamental theorems and proofs
- ⇒ Develop in students the concept of mathematical and statistical modelling in business and economics, and an appreciation that applied mathematics and statistics can be more subjective than commonly assumed
- ⇒ Prepare students for entry to more advanced modules dealing with quantitative analysis in business
- ⇒ Develop students’ skills in the use of spreadsheet software and calculators

## TOPICS OF STUDY

- ⇒ Data and Variability in Business
- ⇒ Summarising Data:
  - Measures of Location and Dispersion
  - Graphical Presentation and Frequency Distributions
- ⇒ Index Numbers
- ⇒ Correlation Techniques
- ⇒ Regression Techniques
- ⇒ Time Series Analysis
- ⇒ Differentiation and Applications
- ⇒ Integration and Applications

# ASSESSMENT

 <p><b>Coursework: Assignment/ Project</b></p>	<b>What is Assessed?</b>	Topics A-F
	<b>Duration/Word Count</b>	1000 words
	<b>Total Marks</b>	25
	<b>Rubric</b>	A short research paper based on a given data set
	<b>Contribution to Overall Grade</b>	25%

 <p><b>Examination</b></p>	<b>What is Assessed?</b>	Topics A-I
	<b>Duration/Word Count</b>	2 hours 30 mins
	<b>Total Marks</b>	75
	<b>Rubric</b>	Section A (35 marks): ⇒ A selection of compulsory short questions. Section B (40 marks): ⇒ 2 questions for a choice of 4 (20 marks each)
	<b>Contribution to Overall Grade</b>	75%

# GENERAL LEARNING OUTCOMES

On successful completion of this module, a student will be able to:

<p><b>Knowledge and understanding</b></p>	<ul style="list-style-type: none"> <li>⇒ Recognise, recall and apply specific mathematical and statistical facts and techniques/tools</li> <li>⇒ Select an appropriate mathematical or statistical technique for a business or economics problem</li> </ul>
<p><b>Intellectual skills</b></p>	<ul style="list-style-type: none"> <li>⇒ Recognise common sources of bias and limits to accuracy in statistical results</li> <li>⇒ Introduce academic reading and writing in the context of mathematical modelling and data analysis</li> <li>⇒ Critique articles and news stories that include statistical and quantitative information, recognising that variability is natural, predictable and quantifiable, and that association is not the same as causation</li> </ul>
<p><b>Practical skills</b></p>	<ul style="list-style-type: none"> <li>⇒ Use computer software to carry out quantitative analysis and present results</li> <li>⇒ Select or collect data for use in quantitative problem-solving or descriptive analysis</li> </ul>
<p><b>Transferable skills</b></p>	<ul style="list-style-type: none"> <li>⇒ Select, organize, and present relevant information clearly and logically</li> <li>⇒ Discuss and interpret results and present a well-structured report (written and verbal) in support of findings</li> <li>⇒ Present data in a variety of formats</li> <li>⇒ Formulate, derive and assess quantitative modelling approaches to solving problems</li> </ul>