Programme
Guide

| Undergraduate Foundation Programme |
| International Foundation Programme |

Business, Economics, Finance and Management

ONCAMPUS
Achieve more.

Programme details

Who is this programme designed for?

The Undergraduate Foundation Programme (also known as International Foundation Programme in some centres) is designed to prepare international students, who have completed high school, for entry into undergraduate studies at top universities across the UK and France. The Undergraduate Foundation Programme (UFP) is set at level 3.

How long will I study for?

This programme lasts one academic year (nine months). The year is divided into three terms of approximately 10 weeks. On average, you will undertake between 16 and (up to) 22 hours of classroom-based study per week. At **ON**CAMPUS Paris students may study up to 25 hours per week.

Please note: Minimum and maximum hours are estimated, hours may vary depending on your academic and English level and may be adjusted throughout the course.

English Language forms up to six hours of your timetable, is compulsory for students who are below the required level for progression, and will be integrated into the teaching of academic subjects as well as being taught separately if you need additional support. If you are at or above the required English level for progression are likely to follow a reduced timetable.

You will be expected to timetable self-study hours in addition to the classroom-based hours.

What will I study?

This programme includes English and three academic subject modules. English will be integrated into the teaching of academic subjects, as well as being taught separately if you need additional support to develop your English language.

Students at **ON**CAMPUS Paris will also study a French for Beginners module which will consist of three hours per week.

How will I be assessed?

You will be assessed at regular intervals throughout the programme to ensure you are making the progress required to successfully complete the programme.

Final assessments for each module will be spread across the academic year.

Assessment methodologies are aligned to those that will be experienced in the University environment, and include project work, essays, presentations and unseen examinations

Modules

Modules vary by **ON**CAMPUS centre as shown in the table below and may change depending on progression degree. All students will have English incorporated into their study plan.

All students studying at **ON**CAMPUS Paris will have a French module incorporated into their study plan.

Centre	English	French for Beginners	Economics and Finance	Business Behaviours	Pure Mathematics	Skills for Business	Mathematics for Economics and Finance	Advanced Mathematics for Business and Finance
ONCAMPUS PARIS	✔	✔	✔	✔		✔		
ONCAMPUS LONDON	✔		✔	✔ *	✔ *	✔		
ONCAMPUS UK NORTH	✔		✔ **	✔	✔ ***	✔		
ONCAMPUS SOUTHAMPTON	✔		✔	✔ *		✔		✔ *
ONCAMPUS ASTON	✔		✔		✔	✔		
ONCAMPUS HULL	✔		✔	✔		✔		
ONCAMPUS LONDON SOUTH BANK	✔		✔	✔		✔		
ONCAMPUS READING	✔		✔	✔ *	✔ *	✔		
ONCAMPUS SUNDERLAND	✔		✔	✔		✔		
ONCAMPUS AMSTERDAM – Amsterdam University of Applied Sciences	✔		✔	✔		✔		
ONCAMPUS AMSTERDAM – University of Amsterdam	✔		✔	✔			✔	

* Students may study one of the two modules indicated dependant on progression degree requirements.

** Globalisation and International Relations may be offered as an alternative module dependent on progression degree requirements and availability. Full Globalisation and International Relations module details can be found in the **ON**CAMPUS Humanities & Social Sciences UFP Programme Guide.

*** The Pure Maths module at **ON**CAMPUS UK North may be studied by some students dependant on progression degree. This module may replace any one of the modules taught at **ON**CAMPUS UK North.

French for Beginners

The aim of the module is to develop students' grammar, vocabulary and skills in listening, reading, writing and speaking to elementary level. The module addresses the varied role of French language skills in students' programme of study, and gives balanced attention to exam preparation, cultural attenuation and language for academic environments and social situations. Students are expected to achieve a level equivalent to at least CEFR A2, using the DELF French language testing methodology.

All teaching is conducted in French and supplemented with English and a variety of different learning and teaching methods and assessments are used.

Methods will include – lectures, seminars and workshops, tutorials, group work, directed study and independent learning.

The module is delivered over three terms/ two semesters with expected learning hours of approximately 200 in total, including independent learning and assessment. Recommended classroom delivery hours are three hours per week.

Tutors will embed transferable skills as relevant throughout delivery.

Students will be assessed at various stages throughout the module. Formative assessments are designed to improve their understanding, help track their own progress and prepare them for final assessments.

It is expected that students will take the final A1/A2 examinations at the end of the programme.

Key topics

01 Listening & Speaking

1. Listening for gist
2. Listening for specific information
3. Requesting clarification/ repetition
4. Identifying sequencing words for instructions/ routines/time order
5. Expressing likes/dislikes/ preferences

02 Reading & Vocabulary

1. Answering simple questions relating to descriptions of people, places, and objects
2. Scanning for specific, factual information
3. Categorise vocabulary by theme (e.g. food, sport, transport)
4. Identify different word forms (e.g. singular/ plural)
5. Identify past, present and future time expressions in simple written texts

03 Writing & Grammar

1. Write short emails, social media posts, and messages referring to the present
2. Describe actions happening in the present
3. Use a range of appropriate question forms to request basic information
4. Use a range of prepositions to show specific location
5. Use adjectives to describe people, places or things

Learning outcomes

01 Understand and express sentences and frequent expressions relating to areas of immediate need/relevance and of personal interest (e.g. personal information, local geography, study and/or employment)

02 Understand and respond to clear, slow standard speech relating to areas of immediate need/relevance, such as personal information, basic transactions, study and/or employment

03 Comprehend short, simple texts containing common, standard expressions, and locate specific information in everyday materials such as timetables, advertisements, and notice boards

04 Communicate in very short social or transactional exchanges, when a direct exchange of information is required on everyday, familiar topics

05 Use a range of frequent, appropriate phrases and structures to describe living arrangements, family, educational background and current or previous occupation

06 Write/type short, simple notes and messages relating to areas of immediate need, using basic connectives to add and show negatives/ contrast when needed

Economics and Finance Module

The aim of the module is to introduce you to the areas of Economics and Accounting and Finance.

The Economics element of the module investigates how society uses its limited resources and how a country deals with the production and consumption of goods and services. The microeconomics element focuses on how individual consumers and firms make decisions, from the choices made by economic agents to the dynamics of supply and demand. The macroeconomics studies the economy on both a national and international level. Topics in macroeconomics include government fiscal and monetary policy, unemployment rates, the level of inflation and the balance of payments. The module is assessed through a short exam to cover microeconomics and a research project to cover the macroeconomics elements of the course.

The Finance element of the module covers the primary financial accounting documents produced by a business. You practice recording double entry book-keeping transactions and transferring balances to a trial balance. You will use income statements and balance sheets to calculate and comment on financial ratios to help analyse a firm's profitability, liquidity, and financial stability.

Key Topics

01

Basic Economic Problem and Function of an Economy

1. Explain the basic economic problem, scarcity, and opportunity costs.
2. Explain the actors/ agents of an economy
3. Explain the 4 factors of production
4. Distinguish between needs and wants, renewable and non-renewable resources
5. Describe and draw 'Production Possibility Frontiers'
6. Distinguish between free, command and mixed economies and analyse the benefits/ problems

02

Introduction to Financial Accounting: Vocabulary 1

1. Explain the nature and purpose of accounting in business
2. Explain the reasons for keeping accounting records and how they are of benefit for a business and its stakeholders
3. Explain the principles and five steps involved in the accounting system
4. Define key terms: sales revenue, credit sales, cash sales, purchases, sales returns , overheads and profit
5. Recognise the primary elements of an income statement
6. Calculate profit (TR-TC)

03

Specialisation and Division of labour

1. Describe the Sectors of the Economy
2. Distinguish between the 3 sectors of the economy and apply the knowledge to a variety of economies, industries and job roles
3. Explain/ discuss the impact of 'Division of Labour' and its importance in modern society
4. Explain / discuss the impact of specialisation by countries, and regions

04

Introduction to Financial Accounting: Vocabulary 2

1. Define key terms (of the balance sheet): assets (tangible and non-tangible) liabilities, capital, trade receivables/ debtors, trade payables / creditors
2. Distinguish between short term (current) and long term assets and liabilities
3. Explain capital/ owner's equity
4. Apply the accounting equation
   Assets = liabilities + Capital

05

Economics: Demand Curve Supply Curve

1. Understand the principles of demand and supply
2. Draw and interpret the demand and supply curves
3. Explain factors that cause a movement along the demand curve and the supply curve
4. Explain the various factors that cause shifts in the demand curve and the supply curve
5. Demonstrate graphically how demand and supply curves shift
6. Define and explain equilibrium
7. Draw and explain how shifts to the curves lead to change in price and quantity

06

Double Entry Book-Keeping (Mid-term test)

1. Explain the term double-entry book-keeping
2. Explain the difference between credit entry and debit entry and rules guiding entries of debit/ credit
3. Identify the debit and credit entry for transactions covering assets, liabilities and capital
4. Create a double entry account for assets, liabilities and capital transactions
5. Record the debit and credit entries for sales, returns, expenses, purchases, bank account, drawings, creditors and debtors
6. Balance T accounts to show bal b/d and c/d accounts
7. Construct a basic trial balance from T-Accounts

07

Market Failure and Government intervention

1. Understand the principles of market failure
2. Explain the main types of market failure such as externalities, under provision of public goods and information gaps
3. Understand and assess the ways governments intervene in the market. Ways are to include: Indirect taxes, Subsidies, Maximum and minimum prices and Provision of public and merit goods
4. Discuss the positive and negative impacts on economic agents of each of the above types of government intervention

08

Economics: National economic performance, economic growth and welfare

1. Understand national economic performance indicators such as current balance, inflation, economic growth, unemployment and government objectives relating to these indicators
2. Understand and illustrate the Business cycle characteristics
3. Understand and distinguish between GDP and GDP per capita
4. Explain and analyse causes of economic growth and their implications
5. Explain alternative ways of measuring welfare –e.g. Political Freedom, Social and Cultural Freedoms, Pollution, Crime levels, The working environment
6. Explain the difference between exclusive and inclusive economic growth
7. Students should be made aware of the country they will research for their eco essay

09

Revision (Term 1)

1. Explain the topics covered weeks 1-9
2. Recap eco topics in preparation for the exam in term 2
3. Recognise the country they have been assigned for the eco coursework
4. Receive verbal feedback on general progress

10

Final Accounts

1. Prepare extracts of the income statement, and statement of financial position from existing trial balance. (Students will not need to be able to do a full preparation of accounts with adjustments)
2. Explain the contents of an income statement; The trading account section; gross profit and operating profit; expenses
3. Calculate Cost of Goods Sold
4. Distinguish between revenue expenditure and capital expenditure
5. Explain the constituents of the statement of financial position; non-current assets, current assets, current liabilities, long-term liabilities and capital (equity)
6. Calculate working capital
7. Define and explain reserves: Capital reserves, Revenue reserves
8. Define depreciation
9. Calculate depreciation using reduced balance and straight line methods
10. Explain the terms prepayments, accrual and doubtful debt

11

Employment and Unemployment

1. Define unemployment
2. Understand the measures of unemployment: such as the claimant count and the ILO
3. Assess the significance of changes in the rates of unemployment
4. Understand the causes of unemployment: structural, frictional seasonal, and cyclical
5. Explain how government seeks to reduce these types of unemployment and discuss the impact of these actions
6. Understand the significance of migration for employment and unemployment
7. Analyse the effects of unemployment on economic agents and the economy as a whole
8. Discuss factors that may lead to an increase in unemployment, factors can be: government policies: minimum wages unemployment benefits and business cycles

12

Inflation

1. Understand the terms: inflation, deflation and disinflation
2. Understand how inflation is measured such as CPI and RPI
3. Explain the differences between demand pull and cost push inflation
4. Evaluate benefits of low inflation
5. Evaluate the costs of high inflation
6. Understand what is meant by the balance of payments account
7. Explain the term current account, current account surplus and deficits
8. Analyse deficits and surpluses of a variety of economies

13

Sources of finance (limited companies only)

1. Explain methods that limited companies can use to fund/ expanding the business
2. Distinguish between debt financing and share equity financing
3. Distinguish between revenue reserves and capital reserves
4. Explain the advantages and disadvantages of debt financing and share equity financing
5. Distinguish between ordinary shares, preference shares and deferred shares
6. Define the terms: Authorised share capital; Issued share capital; called-up shares; nominal/ par value, premium share account
7. Explain the term dividends
8. Calculate share revenue following authorisation and issue of shares

14

Aggregate demand and aggregate supply

1. Explain the components of AD
2. Explain the causes of shifts in the AD curve
3. Illustrate and interpret AD charts
4. Illustrate and interpret AS long run and short run curves
5. Explain and discuss fiscal policy and monetary policy
6. Explain / discuss how aggregate demand can be influenced by fiscal policy and the effect of multiplier effect
7. Evaluate the impact of fiscal and monetary policy to either grow the economy or control inflation
8. Explain the terms expansionary and tight (deflationary) policy

15

Interpreting and Analysing financial statements; ratio analysis

1. Calculate ratios (as given in the formula sheet)
2. Compare and comment on the ratios
3. Distinguish between profitability ratios, liquidity ratios, gearing and efficiency ratios
4. Explain the use of accounting ratios as a means of assessing the financial position of an organisation
5. Explain the importance of liquidity in business
6. Explain the usefulness and limitations of financial statements and ratio analysis when assessing business performance
7. Analyse and interpret financial accounts using ratio analysis

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Revision and exams

1. One to one meetings with students (tutor to advise of timings)
2. Revision of finance topics
3. Workshops/ guidance on economics coursework
4. Exam week
5. Re-sit exam work

Business Behaviours Module

The module investigates the purpose and nature of business and its primary business objectives. The content includes the role of managers, leaders and stakeholders and the impact of external influences on the business. The module also explores the functional decisions made by a business including; the importance of the marketing strategy adopted by the business, how human resources can impact business performance, plus the importance of operational performance and financial analysis.

Key Topics

01

The nature and purpose of business

1. Explain why businesses exist
2. Explain the role of an entrepreneur
3. Distinguish between missions and objectives
4. Explain why businesses set objectives
5. Recognise and explain common business objectives

02

Legal structures

1. Define sole trader, partnerships, private and public limited company
2. Distinguish between private and public sector organisations
3. Explain the advantages and disadvantages of sole trader, partnerships, private limited companies and public limited companies
4. Recognise other forms of business ownership such as co-operatives and not for profit organisations
5. Recognise the use of franchises to grow a business
6. Evaluate the changes that will take place when changing from one structure to another

03

External influences

1. List external factors influencing a business
2. Explain how market conditions, competition, changes in household income, changes in interest rates, demographic factors and environmental issues impact business operations
3. Evaluate the extent to which external factors affect a business
4. Analyse the effect of external factors on business as part of a SWOT analysis

04

Role of managers leaders and stakeholders

1. Explain the role of managers
2. Distinguish between leaders and managers
3. Distinguish between autocratic, paternalistic, democratic and laissez faire styles of leadership
4. Discuss the advantages and disadvantages of styles of leadership
5. List the primary stakeholders of a business
6. Evaluate the conflicting needs of stakeholder groups

05

Marketing Objectives and Market Research

1. List examples of marketing objectives
2. Explain marketing objectives: sales value/ volumes, market share, market growth, and brand loyalty
3. Analyse internal and external influences on marketing objectives
4. Identify methods of primary and secondary research
5. Explain the advantages and disadvantages of primary and secondary research
6. Distinguish between quantitative and qualitative research

06

Marketing mix - 7 Ps

1. Explain the importance of a USP to a business
2. Identify the 7 elements of the marketing mix
3. Explain how the marketing mix is used
4. Explain a range of pricing strategies, including competitive, cost-plus, skimming, penetration, premium and discounted
5. Discuss channels of distribution used by businesses

07

Marketing Mix and Portfolio Analysis

1. Explain promotional methods (including advertising, branding and public relations)
2. Suggest a suitable promotional strategy for a company/product
3. Explain the use of the product life cycle and extension strategies
4. Discuss the use of the Boston Matrix to assess the product portfolio

08

Operational objectives

1. Define operational objectives
2. Explain key operational objectives (cost, quality, speed of response, environmental and added value)
3. Distinguish between efficiency and productivity
4. Define labour productivity
5. Recall the formula for labour productivity
6. Discuss methods used to increase labour productivity
7. Define lean production
8. Recognise lean production techniques (TQM, JIT, Kaizen and Time based management)
9. Discuss the merits and limitations of lean production techniques
10. Define capacity utilisation
11. Calculate capacity utilisation
12. Discuss methods used to increase capacity utilisation

09

Financial planning

1. Explain types of financial objectives (return on investment, financial safety and cost minimisation)
2. Define and calculate revenue, costs and profit
3. Discuss methods to improve profit
4. Distinguish between fixed and variable costs
5. Calculate Break Even, contribution and margin of safety
6. Interpret a break even chart
7. Discuss the merits of break even analysis
8. Define cash flow forecasting
9. Explain the purpose and significance of using a cash flow forecasting
10. Explain the advantages and limitations of a cash flow forecast
11. Construct a cash flow forecast
12. Discuss methods of improving cash flow
13. Assess the uses and limitations of cash flow forecasting
14. Calculate budgetary variance
15. Distinguish between adverse and favourable variances
16. Assess the uses and limitations of budgeting
17. Distinguish between internal and external sources of finance
18. Discuss advantages and disadvantages of sources of finance (refer to the sources in chapter 43 of the Marcouse text book)

10

HR Objectives

1. Define Human Resource Management (HRM)
2. Identify HR objectives (employee engagement, talent development, Training, Diversity)
3. Identify ways of improving employer/ employee relations
4. Explain the importance of employee motivation
5. Discuss motivational theorists (Taylor, Maslow, Herzberg, Mayo)
6. Explain the importance of having a motivated workforce
7. Distinguish between financial and non-financial incentives
8. List and explain financial and non-financial methods of motivation
9. Explain the advantages and disadvantages of a business using financial and non-financial incentives
10. Suggest different methods of motivation in different business situations and justify the choice
11. Explain organisational design/ structure
12. Explain Span of control, chain of command, delayering, centralised and decentralised
13. Discuss the advantages and disadvantages of tall and flat structures
14. Discuss the advantages and disadvantages of centralised and decentralised structures
15. Evaluate the impact of changing the organisational structure

11

Revision and exams

1. Revision of finance topics
2. Revise operational objectives
3. Revise HR Objectives
4. Practise Essay writing
5. Exam week
6. Resit revision
7. Re-sit exam week
8. Harvard referencing to prepare students for university

Pure Mathematics Module

The aim of the module is to enable you to develop your understanding of mathematics using a variety of techniques and methods to solve given problems. It gives you the opportunity to apply your knowledge to real life contexts and prepares you for future undergraduate studies across multiple disciplines.

It is adapted from the Edexcel AS and A level Pure Mathematics course with appropriate modifications. Statistical methods and mechanics will be covered in the 'Skills for Science' element of the pathway.

Key Topics

01 Review of prior learning

1. To be able to successfully apply basic operations to calculations
2. To be able to identify prime numbers and prime factors of a number
3. To be able to perform simple operations on fractions and decimals
4. To be able to write a number to a given number of significant figures
5. To be able to perform calculations involving percentages
6. To be able to perform calculations involving ratio

02 Algebra and functions

1. Simplify expressions by collecting like terms
2. To apply the rules of indices
3. Expand expressions
4. Factorise expression
5. Factorise quadratic equations
6. Extend the rules of indices to all rational exponents
7. To use and manipulate surds
8. To rationalise the denominator of a fraction when it is a surd

03 Economics: national economic performance, economic growth and welfare

1. Understand national economic performance indicators such as current balance, inflation, economic growth, unemployment and government objectives relating to these indicators
2. Understand and illustrate the business cycle characteristics
3. Understand and distinguish between GDP, GNI and GDP per capita
4. Understand the term HDI and explain the components
5. Explain and analyse causes of economic growth and their implications
6. Explain and assess alternative ways of measuring welfare – e.g. Political Freedom, Social and Cultural Freedoms, Pollution, Crime levels, the working environment
7. Explain the difference between exclusive and inclusive economic growth

04 Equations and inequalities

1. Solve simultaneous linear equations by both elimination and substitution
2. Solve simultaneous equations involving one quadratic and one linear
3. Solve both linear and quadratic inequalities

05

Sketching curves

1. Sketch and interpret cubic functions
2. Sketch the reciprocal function
3. Use the intersection points of functions to solve equations
4. Perform transformations of on curves using the rules
5. Discuss factors that may lead to an increase in unemployment, factors can be: government policies: minimum wages unemployment benefits and business cycles

06

Co-ordinate geometry in the X and Y plane

1. Interpret straight lines in the forms y=mx+c and ax+by+cy=0
2. Calculate both the gradient and equation of a line using the form y–y1 =m(x – x1)
3. Find the equation of a straight line given 2 co-ordinates
4. Understand the conditions for parallel and perpendicular lines and be able to determine the equation of perpendicular and parallel lines
5. Find the mid–point of a line
6. Find the distance between two points on a line

07

Basic complex numbers

1. Solve quadratic equations with complex roots

08

Differentiation

1. Differentiate a function (simplifying first if necessary) of the form axn and find the gradient at a point
2. Find the second derivative
3. Find the rate of change of a function at a particular point
4. Find the equation of the tangent and normal to a curve at a point

09

Integration

1. Integrate a function(simplifying first if necessary) of the form axn
2. Use the integral sign
3. Find the constant of integration

10

Algebra and functions

1. Simplify algebraic fractions by division
2. Divide a polynomial by (x+p) or (x–p)
3. Factorise a polynomial using the factor theorem
4. Use the Remainder Theorem

11

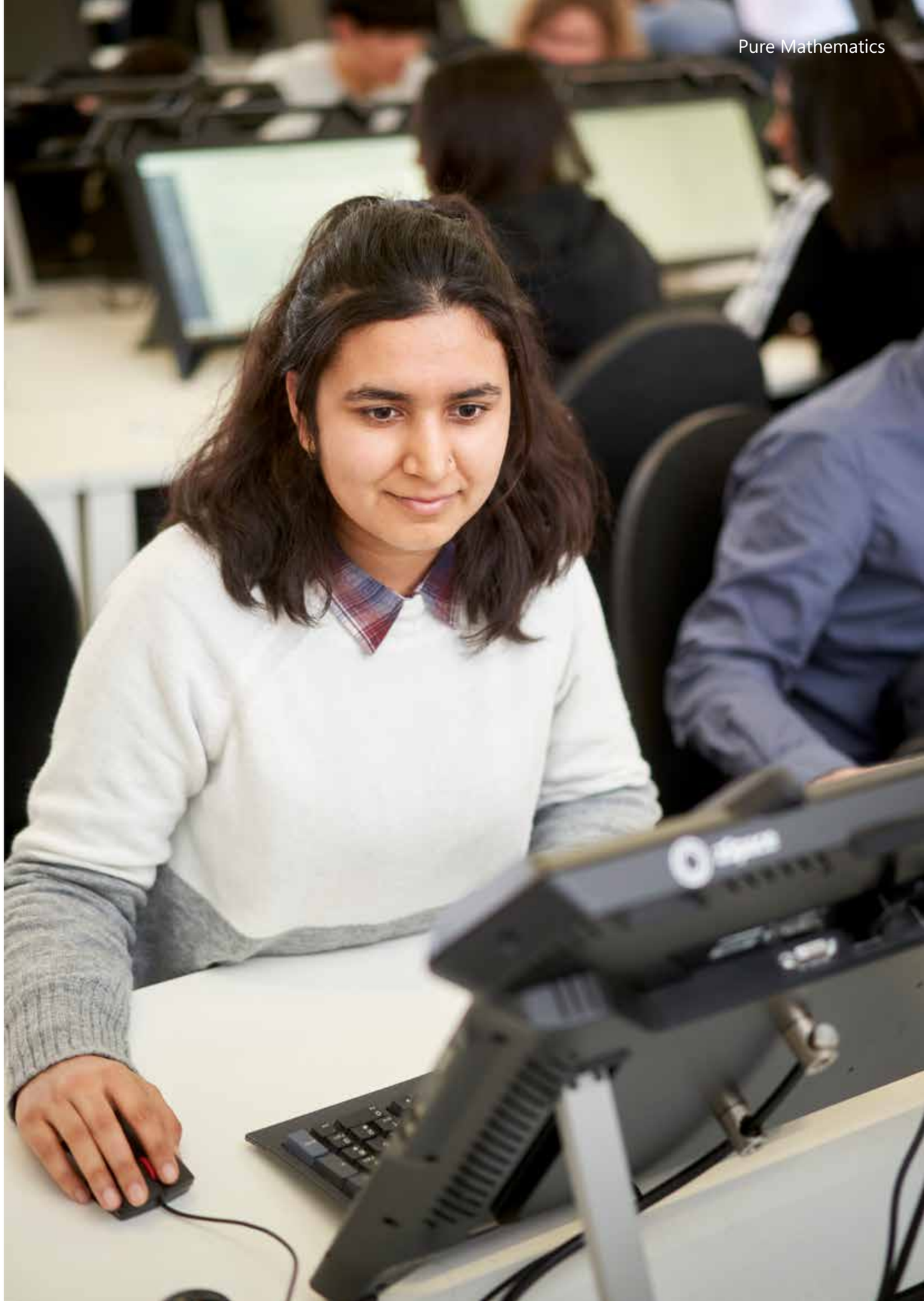
Basic trig ratios and Pythagoras

1. Use Pythagoras to find the length of a right angled triangle, given 2 sides
2. Use the trig ratios to find the length of a side and an angle in a right angled triangle
3. Use both the Sine Rule and cosine rule to find missing sides/angles of triangles
4. Apply the formula: A=0.5absinC to find the area of a triangle

12

The Binomial Expansion

1. Use Pascal's Triangle to expand expressions
2. Use combinations factorial notation to help expand expressions
3. Use (n /r) to determine the coefficients in the binomial expansion
4. Expand (ax + b)n using the Binomial expansion
5. Find approximations using the binomial expansion



13

Radian measure and applications

1. Convert Degrees to Radians and vice-versa
2. Use the arc length and Area of a Sector formula
3. Find the area of a Segment

14

Further differentiation

1. Use Differentiation to calculate when a function is increasing or decreasing, where the stationary points are and be able to determine their nature
2. Use Differentiation to Solve practical problems involving maximum and minimum

15

Trigonometrical identities and simple equations

1. Simplify trigonometric identities
2. Solve trigonometric equations
3. Solve more complicated trigonometric equations, including quadratics, double angles

16

Further integration

1. Solve problems involving definite integrals
2. Use integration to calculate the area under a curve and between two curves
3. Use the Trapezium Rule to estimate an area under a curve

17

Further calculus 1

1. Differentiate a function using the chain rule and product rule
2. Differentiate a function using the quotient rule
3. Differentiate the exponential function, the logarithmic function, sin x, cos x and tan x
4. Differentiate combinations of the above, as well as sec x, cosec x and cot x

18

Further calculus 2

1. Integrate by using standard functions
2. Integrate by using the reverse chain rule
3. Integrate by using trigonometric functions
4. Use integration to solve differential equations that arise out of a context

19

Vectors

1. Use Vector Definitions and diagrams
2. Use Vector Arithmetic and the Unit Vector
3. Understand points in 2 or 3 dimensions
4. Use Cartesian components of a vector in 2D
5. Use Cartesian components of a vector in 3D
6. Be able to extend 2D results to 3D
7. Find the Scalar Product of Vectors
8. Use and find the Vector Equation of a straight Line
9. Find the Intersection point of straight line vector equations
10. Find the angle between 2 straight line vectors

Skills for Business Module

This module aims to equip you with the skills and strategies required for successful completion of your ONCAMPUS programme and prepare you for future studies.

Topics will develop your ability to become an independent learner, including critical evaluation and reflective skills. You will learn how to conduct research, write in an academic style, provide references for your work and present information effectively to an audience.

Key Topics

01
My learning style / SWOT

1. Recognise the 3 main learning styles (Visual, Auditory and Kinesthetic)
2. Identify own individual learning style
3. Recognise the elements of a SWOT analysis (strengths, weaknesses, opportunities, and threats)
4. Identify areas for personal improvement as a student

02
Reflective writing

1. Understand the term reflective writing
2. Distinguish between descriptive and reflective writing
3. Recognise reflective writing frameworks including Gibbs and Bains
4. Discuss examples of reflective writing
5. Write a reflective diary entry for reflective writing assessment

03
Harvard Referencing

1. Understand the terms referencing and plagiarism
2. Distinguish between in-text citations and reference lists
3. Demonstrate the ability to reference sources in written work
4. Recognise how Turnitin checks for similarity and plagiarism

04
Research skills

1. Distinguish between primary and secondary research
2. Identify methods for collecting primary and secondary research
3. Demonstrate the ability to create a short survey
4. Distinguish between open-ended and closed questions
5. Explain ways to avoid bias in a survey

05
Analysing, Interpreting and producing graphs

1. Distinguish between line, bar and pie charts
2. Explain X-axis and Y-axis of a graph
3. Demonstrate the ability to produce graphs using Excel (or similar application)
4. Present results from primary research in Excel or a similar software program
5. Demonstrate how to turn results into percentages, or how to find the average score

06
How to deliver a convincing presentation

1. Explain the features of an engaging, successful presentation
2. Understand the importance of body language in a presentation
3. Recognise the importance of eye contact and pace in a presentation

07
Preparing a PowerPoint (or similar)

1. Explain the important of font style and size on a presentation slide
2. Recognise the importance of using bullet points
3. Discuss the appropriate number of words to use on a slide
4. Demonstrate the ability to produce a Microsoft PowerPoint presentation (or similar)

08
Reflective writing

1. Write a reflective entry
2. Distinguish between descriptive and reflective writing
3. Explain the requirements of the reflective summative assessment

09
Research project

1. Explain the requirements of the research project
2. Recognise the elements of a research task
3. Explain the impact of plagiarism
4. Demonstrate awareness of a literature review

10
Academic writing

1. Distinguish between writing in the first, second and third person
2. Distinguish between an essay and a report
3. Describe the main sections / layout of a report
4. Demonstrate the ability to write an effective introduction
5. Explain the importance of proofreading, making multiple drafts and correcting/editing work
6. Recognise the importance of using paragraphs
7. Distinguish between analysis and evaluation
8. Explain the importance of context/application in an essay
9. Explain the structure of a conclusion
10. Demonstrate the ability to write academically showing analysis and application
11. Identify strengths and weaknesses in a study
12. Use comparative language to compare conflicting ideas
13. Summarise arguments in a conclusion

11
Harvard referencing

1. Identify suitable and unsuitable sources for conducting research
2. Explain how a reference list should be ordered
3. Demonstrate the ability to paraphrase
4. Demonstrate the ability to reference sources in written work
5. Categorise sources of information as reliable or unreliable
6. Identify sources of bias in factual information
7. Outline ethical issues that arise when conducting research

12
Preparing for a debate

1. Explain the features of a successful debate
2. Explain the importance of body language in a debate
3. Distinguish between arguments made on logic and those on emotions
4. Explain the importance of research for a debate
5. Build arguments and support these with figures and facts

13
In-Class Discussion and Debate

1. Participate in a debate
2. Demonstrate how to create a persuasive argument
3. Speak publicly in front of the class

14
Exam preparation and time management

1. Create a revision plan / detailed planner
2. Explain methods to improve time management
3. Explain methods to alleviate stress at exam time
4. Explain common pitfalls that lead to underachievement in exams

15
Revision skills and memory

1. Develop a personal revision strategy
2. Explain the use of revision cards/ flowcharts and mind-maps
3. Discuss the use of study groups

16
Exam technique

1. Explain the exam paper (s) general structure]/ number of sections
2. Develop a personal strategy for each paper
3. Explain exam command words such as define, explain, discuss, to what extent

17
Practising essay writing

1. Distinguish between analysis and evaluation
2. Explain the structure of an essay
3. Explain the importance of application/context in the exam
4. Demonstrate the ability to produce a short essay

18
Working on Reflective writing for final submission

1. Demonstrate the ability to write reflectively about learning experiences

19
Dealing with feedback

1. Identify strategies for dealing with feedback
2. Create a plan to improve coursework

20
Preparing for university

1. Identify ways to prepare prior to starting university
2. Identify ways to be properly prepared for academic study

Advanced Mathematics for Business and Finance Module

The aim of this module is to provide you with a strong foundation of mathematical skills and modelling, with specific relation to the fields of Business and Finance. You will cover pre-calculus, calculus and descriptive statistics and probabilities, using a variety of techniques and methods to solve given problems. It gives you the opportunity to apply your knowledge to real life contexts and prepares you for future undergraduate studies across multiple disciplines.

Key Topics

01 Review of Algebra

1. Recall the sets of real numbers
2. Recall and use the properties of real numbers
3. Use exponents and radicals
4. Simplify expressions
5. Factorise expressions
6. Add, subtract, multiply and divide fractions
7. Rationalise fractions
8. Solve linear equations
9. Determine whether two or more equations are equivalent
10. Solve literal equations
11. Solve fractional equations
12. Solve radical equations
13. Solve quadratic equations both with the use of the quadratic formula and by factoring
14. Solve higher-degree equations by factoring

02 Applications and more algebra

1. Apply and solve different types of equations to practical problems
2. Solve linear inequalities
3. Apply and solve different forms of linear inequalities to practical problems
4. Use and solve absolute-value equalities and inequalities
5. Recall and use the properties of absolute values
6. Use summation notation and evaluate sums
7. Apply the change of bounds formula

03 Functions and graphs

1. Recognise functions and identify their domain and range
2. Identify and determine equality of functions
3. Identify, use and solve constant functions; polynomial functions; rational functions and absolute-value functions
4. Use factorials
5. Combine functions and identify their domain and range
6. Combine functions by using composition and identifying the new domain and range
7. Identify and determine one-to-one functions
8. Find inverse functions and identify their domain and range
9. Use rectangular coordinates, find intercepts and identify the graphs of different types of functions
10. Identify domain and range of a function by looking at its graph

04 Lines, parabolas, and systems

1. Determine the slope of a line
2. Recall and use the various forms of equations for straight lines
3. Identify and determine parallel and perpendicular lines
4. Identify and use demand and supply curves
5. Determine linear functions
6. Identify parabolas and graph them by using vertex and intercepts
7. Solve systems of two-variables by using different techniques
8. Solve non-linear systems
9. Apply systems of equations on practical problems (equilibrium, break-even)

05

Exponentials and Logarithmic functions

1. Identify and solve exponential functions
2. Graph exponential functions
3. Determine compound interest and compound amounts
4. Solve exponentials functions with base other than e
5. Determine domain and range of exponential functions
6. Identify and solve logarithmic functions
7. Graph logarithmic functions
8. Solve logarithmic functions
9. Determine domain and range of logarithmic functions
10. Find logarithms
11. Recall and use the properties of logarithmic and exponential functions

06

Limits and continuity

1. Estimate a limit from a graph
2. Identify limits that do not exist from a graph
3. Recall and apply the properties of limits
4. Use algebraic manipulation to find a limit
5. Evaluate one-sided limits
6. Evaluate infinite limits
7. Evaluate limits at infinity
8. Identify when a function is continuous
9. Locate discontinuities in a function
10. Apply continuity to inequalities

07

Differentiation

1. Interpret the slope of a curve
2. Evaluate the slope of a curve
3. Find the slope of a tangent
4. Use the definition of a derivative to find a derivative
5. Find the equation of a tangent line
6. Understand the relationship between continuity and differentiability
7. Recall and apply the rules for differentiation
8. Use the derivative as a rate of change and apply it to economic and practical problems
9. Use the product and quotient rule
10. Find marginal
11. Use the chain rule and the power rule
12. Evaluating the marginal revenue product with the use of the chain rule
13. Differentiate logarithmic functions
14. Differentiate exponential functions
15. Calculate elasticity of demand and supply
16. Determine whether demand/supply is elastic, inelastic etc
17. Evaluate higher order derivatives (second order only)

08

Curve Sketching

1. Identify whether a function is increasing/decreasing in an interval
2. Identify extrema and determine whether it is a minimum or a maximum, and global or local
3. Identify critical values
4. Using the first-derivative test to find extrema
5. Evaluate concavity
6. Identify inflection points
7. Use the second-derivative test to test for relative extrema
8. Identify and evaluating asymptotes (exclude oblique asymptotes)
9. Apply maxima and minima to economic and practical problems

09

Integration

1. Calculate integrals
2. Calculate integrals with initial conditions
3. Apply the power rule for integration
4. Calculate integrals involving logarithmic and exponentials functions
5. Use algebraic manipulations, long division and substitutions to calculate integrals
6. Calculate definite integrals
7. Recall and use the properties of definite integrals
8. Evaluate the area between curves with the use of definite integrals
9. Assess whether the outcome of a definite integral can be interpreted as an area
10. Use definite integrals to calculate consumers' and producers' surplus

10

Descriptive Statistics

1. Distinguish between population and sample
2. Distinguish between discrete and continuous variables
3. Evaluate and interpret measures for central tendency and variability for grouped and ungrouped data (mode, median, mean, IQR, standard deviation, variance, coefficient of variation)
4. Apply linear regression
5. Interpret the relationship between two variables

11

Introduction to probabilities and statistics

1. Use the basic counting principle
2. Distinguish between permutations and combinations
3. Use combinations and permutations
4. Construct a sample space
5. Identify events
6. Calculate complements, unions and intersections
7. Identify mutually exclusive events
8. Create probability trees
9. Identify equiprobable spaces
10. Recall and use properties of probabilities
11. Identify and calculate conditional probabilities
12. Use the general multiplication law
13. Identify stochastic processes
14. Calculate probabilities in stochastics processes
15. Determine, identify and calculate independent events
16. Use Bayes' formula

13

Additional topics in probability

1. Identify discrete random variables
2. Calculate the probability of a discrete random variable
3. Find the mean, variance and standard deviation of a discrete random variable
4. Identify and calculate continuous random variables
5. Calculate probabilities by using their density functions
6. Calculate cumulative distribution functions
7. Calculate the mean, variance and standard deviation of continuous random variables
8. Identify a variable that is distributed normally
9. Calculate probabilities for the standard normal variable
10. Calculate probabilities for a normal variable by transforming it to a standard normal variable
11. Use the table for the Standard Normal Variable

Mathematics for Economics and Finance Module

The aim of the module is to enable you to develop a strong foundation of mathematical skills and modelling, with specific relation to the fields of Economics and Finance. You will study pre-calculus, calculus and descriptive statistics and probabilities, using a variety of techniques and methods to solve given problems. This module gives you the opportunity to apply your knowledge to real life contexts and prepares you for your future undergraduate studies across multiple disciplines.

Key Topics

01
Review of Algebra

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5. Simplify expressions
6. Add, subtract, multiply and divide fractions
7. Rationalise fractions
8. Solve linear equations
9. Determine whether two or more equations are equivalent
10. Solve literal equations
11. Solve fractional equations
12. Solve radical equations
13. Solve quadratic equations both with the use of the quadratic formula and by factoring
14. Solve higher-degree equations by factoring

02
Applications and more algebra

1. Apply and solve different types of equations to practical problems
2. Solve linear inequalities
3. Solve non-linear inequalities
4. Apply and solve different forms of linear inequalities to practical problems
5. Use and solve absolute-value equalities and inequalities
6. Recall and use the properties of absolute values
7. Use summation notation and evaluate sums
8. Apply the change of bounds formula

03
Functions and graphs

1. Recognise functions and identify their domain and range
2. Identify and determine equality of functions
3. Identify, use and solve constant functions
4. Identify, use and solve polynomial functions
5. Identify, use and solve rational functions
6. Identify, use and solve rational functions
7. Identify, use and solve absolute-value functions
8. Use factorials
9. Be able to solve quadratic inequalities

04
Lines, parabolas, and systems

1. Combine functions and identify their domain and range
2. Combine functions by using composition and identifying the new domain and range
3. Identify and determine one-to-one functions
4. Find inverse functions and identify their domain and range
5. Use rectangular coordinates, find intercepts and identify the graphs of different types of functions

05

Lines

1. Identify domain and range of a function by looking at its graph
2. Use the vertical-line test to determine whether a curve is a graph of a function
3. Use the horizontal-line test to determine whether a function is one-to-one
4. Test for symmetry about the y-axis, the x-axis, the origin, and the line y=x
5. Graph functions by using symmetry and intercepts
6. Determine translations and reflections
7. Determine the slope of a line
8. Recall and use the various forms of equations for straight lines
9. Identify and determine parallel and perpendicular lines

06

Lines, parabolas, and systems (continued)

1. Identify and use demand and supply curves
2. Determine linear functions
3. Identify parabolas and graph them by using vertex and intercepts
4. Find the inverse of a parabola after restricting its domain and making it a one-to-one function

07

Systems of linear equations

1. Solve systems of two-variables by using different techniques
2. Solve non-linear systems
3. Apply systems of equations on practical problems

08

Exponentials and Logarithmic functions

1. Identify and solve exponential functions
2. Graph exponential functions
3. Determine compound interest and compound amounts
4. Solve exponentials functions with base other than e
5. Determine domain and range of exponential functions
6. Identify and solve logarithmic functions
7. Graph logarithmic functions
8. Solve logarithmic functions
9. Determine domain and range of logarithmic functions
10. Find logarithms
11. Solve logarithmic and exponential inequalities
12. Recall and use the properties of logarithmic and exponential functions
13. Use logarithms to solve an exponential equation or inequality

09

Limits and continuity

1. Estimate a limit from a graph
2. Identify limits that do not exist from a graph
3. Recall and apply the properties of limits
4. Use algebraic manipulation to find a limit
5. Evaluate one-sided limits
6. Evaluate infinite limits
7. Evaluate limits at infinity
8. Identify when a function is continuous
9. Locate discontinuities in a function
10. Apply continuity to inequalities

10

Differentiation

1. Interpret the slope of a curve
2. Evaluate the slope of a curve
3. Find the slope of a tangent
4. Use the definition of a derivative to find a derivative
5. Find the equation of a tangent line
6. Understand the relationship between continuity and differentiability
7. Recall and apply the rules for differentiation
8. Use the derivative as a rate of change and apply it to economic and practical problems
9. Use the product and quotient rule
10. Find marginal
11. Use the chain rule and the power rule
12. Evaluating the marginal revenue product with the use of the chain rule

11

Additional Differention topics

1. Differentiate logarithmic functions
2. Differentiate exponential functions
3. Calculate elasticity of demand and supply
4. Determine whether demand/supply is elastic, inelastic etc
5. Apply implicit differentiation
6. Apply logarithmic differentiation
7. Evaluate higher order derivatives

12

Curve sketching

1. Identify whether a function is increasing/decreasing in an interval
2. Identify extrema and determine whether it is a minimum or a maximum, and global or local
3. Identify critical values
4. Using the first-derivative test to find extrema
5. Graph a curve with the use of extrema, intercepts and symmetry
6. Evaluate absolute extrema on a closed interval
7. Evaluate concavity
8. Identify inflection points
9. Graph a curve with the use of concavity, extrema, symmetry and intercepts
10. Use the second-derivative test to test for relative extrema

13

Integration

1. Calculate integrals
2. Calculate integrals with initial conditions
3. Apply the power rule for integration
4. Calculate integrals involving logarithmic and exponentials functions
5. Use algebraic manipulations, long division and substitutions to calculate integrals
6. Calculate definite integrals
7. Recall and use the properties of definite integrals
8. Evaluate the area between curves with the use of definite integrals
9. Assess whether the outcome of a definite integral can be interpreted as an area
10. Use definite integrals to calculate consumers' and producers' surplus

14

Descriptive Statistics

1. Distinguish between population and sample
2. Distinguish between nominal, ordinal, interval and ratio variables
3. Use frequency distributions for ratio-data
4. Distinguish between discrete and continuous variables
5. Evaluate measures for central tendency and variability
6. Interpret the measures for central tendency and variability
7. Apply linear regression
8. Identify the relationship between two variables
9. Interpret correlation coefficient and the line of regression

15

Introduction to probabilities and statistics

1. Use the basic counting principle
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3. Use combinations and permutations
4. Construct a sample space
5. Identify events
6. Calculate complements, unions and intersections
7. Identify mutually exclusive events
8. Create probability tries
9. Identify equiprobable spaces
10. Recall and use properties of probabilities
11. Identify and calculate conditional probabilities
12. Use the general multiplication law
13. Identify stochastic processes
14. Calculate probabilities in stochastics processes
15. Determine, identify and calculate independent events
16. Use Bayes's formula

16

Additional topics in probability

1. Identify discrete random variables
2. Calculate the probability of a discrete random variable
3. Find the mean, variance and standard deviation of a discrete random variable
4. Calculate binomial distributions
5. Identify binomial distributions
6. Identify Bernoulli trials

17

Poisson distribution and approximation of the binomial by the Poisson distribution

1. Identify a Poisson distribution
2. Calculate a Poisson distribution
3. Learn how to use the table of a Poisson distribution
4. Approximate the binomial with the Poisson distribution
5. Identify and calculate continuous random variables
6. Determine when a variable is a continuous random variable
7. Identify a density function
8. Calculate probabilities by using their density functions
9. Calculate cumulative distribution functions
10. Calculate the mean, variance and standard deviation of continuous random variables
11. Locate discontinuities in a function
12. Apply continuity to inequalities
13. Identify a variable that is distributed normally
14. Calculate probabilities for the standard normal variable
15. Calculate probabilities for a normal variable by transforming it to a standard normal variable
16. Use the table for the Standard Normal Variable
17. Calculate the binomial distribution by approximating it with the normal distribution
18. Calculate the Poisson distribution by approximating it with the normal distribution

Resources and reading list

Economics and Finance

Core (Economics):
- Pearson Edexcel International AS Level Economics Student Book (Edexcel International) Tracey Joad and Alan Hewison ISBN-10 : 1292239190; ISBN-13 : 978-1292239194

Core (Finance):
- Business Accounts by David Cox (5th edition, 2017) ISBN: 9781911198147

Business Behaviours

- Business for AS by Ian Marcouse, Andrew Hammond, Nigel Watson; (3rd edition). ISBN 978-1-471-83580-3

Skills for Business

- The Study Skills Handbook, 4th edition, by Stella Cottrell, Publisher: Palgrave Macmillan, Print: ISBN-10 1-137-28925-2, ISBN-13 978-1-137-28925-
- Presentation Skills for Students, Palgrave Study Skills, 2nd edition, by Joan van Emden and Lucinda Becker, Publisher: Palgrave, ISBN: 9780230243040

Advanced Mathematics for Business and Finance

- Introductory Mathematical Analysis for Business, Economics and the Life and Social Sciences. By Haeussler, Paul and Wood Published by Pearson ISBN: 978-0134141107

Mathematics for Economics and Finance

- Haeussler, Paul and Wood: Introductory MATHEMATICAL ANALYSIS for Business, Economics and the Life and Social Sciences. Pearson International Edition, Fourteenth Edition

Pure Mathematics

- Edexcel AS and A level Mathematics Pure Mathematics Year 1/AS Textbook Published by Pearson ISBN: 978–1292183398

French for Beginners

- Le DELF 100% reussite: Livre A2 & CD MP3. Dorothee Dupleix. (2016) (ISBN 978-2278086269)
- Reussir le DELF 2010 edition: Livre A2 & CD audio. Maud Launay (2010). (ISBN 978-2278064489)
- ABC DELF: Livre A2 + CD + Entrainement en ligne - nouvelle format 2020. Jugurta Bentifraouine. (2020). (ISBN 978-2090351996)

Mathematics for Economics and Finance

- Haeussler, Paul and Wood: Introductory MATHEMATICAL ANALYSIS for Business, Economics and the Life and Social Sciences. Pearson International Edition, Fourteenth Edition

Example Timetable

Please note this is an example timetable and will vary for every student. Students should anticipate lessons starting earlier than 9am or later than 5pm. Students will be expected to allocate self study and revision hours within their timetable which will be given at the start of the academic term.

	9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5
Mon	English	English		Lunch	Business Behaviours	Business Behaviours		
Tues		Business Behaviours	Business Behaviours	Lunch	English	English		
Wed	Skills for Business	Personal Tutorial			Economics and Finance	Economics and Finance		
Thur	Economics and Finance	Economics and Finance		Lunch	English	English	Skills for Business	Skills for Business
Fri	Economics and Finance	Economics and Finance		Lunch		Business Behaviours	Business Behaviours	

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