

Subject CB2

2024 Study Guide

Introduction

This Study Guide has been created to help you navigate your way through Subject CB2. It contains all the information you will need before starting to study Subject CB2 for the 2024 exams and you may also find it useful to refer to throughout your studies.

The guide is split into two parts:

- Part 1 contains specific information about Subject CB2
- Part 2 contains general information about the Core Business subjects.

Please read this Study Guide carefully before reading the Course Notes, even if you have studied for some actuarial exams before. While you may have already read (the majority of) the Part 2 material in previous subjects, the information in Part 1 is specific to this course.

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1.1 Subject CB2 – background and contents

History

The Business subjects (Subjects CB1, CB2 and CB3) were introduced in the Institute and Faculty of Actuaries' 2019 Curriculum. ActEd is not involved in the delivery of Subject CB3.

Prior to 2024, Subjects CB1 and CB2 were examined using a mixture of multiple-choice and 'free form' answer questions. For the 2024 exams, these subjects will be examined using objective-based assessment (OBA).

Subject CB2 is *Business Economics*.

Predecessors

The topics in the Business subjects (Subjects CB1 and CB2) cover content previously in Subjects CT2 and CT7:

- Subject CB1 replaces Subject CT2.
- Subject CB2 replaces Subject CT7.

Exemptions

In order to be eligible for an exemption in Subject CB2, you will need to have met the Institute and Faculty of Actuaries' requirements based on the current curriculum.

See the Institute and Faculty of Actuaries' website for further details:

actuaries.org.uk/qualify/exam-exemptions

Links to other subjects

Associateship Qualification

Business Economics (CB2) is a fundamental subject contributing to the foundations of the Associateship Qualification. Knowledge gained from this subject is implicitly assumed and applied across many other subjects, in particular:

- Business Finance (Subject CB1)
- Business Management (Subject CB3)
- Financial Engineering and Loss Reserving (Subject CM2)
- Actuarial Practice (Subject CP1)

Fellowship Qualification

An understanding of Business Economics may be required for any of the Specialist Advanced (SA) examinations, as these examinations tend to focus on “real world” scenarios, and the subject is particularly relevant for the potential scenarios presented in Investment & Finance Specialist Principles (SP5), Pensions & Other Benefits (SA4) and Investment & Finance (SA7) examinations. Economic judgement should be applied and considered across all Specialist Principles (SP) and Specialist Advanced (SA) subjects.

Contents

There are eight parts to the Subject CB2 course. The parts cover related topics and are broken down into modules. At the end of each part there is an assignment testing the material from that part.

The following table shows how the parts and modules relate to each other. The final column shows how the modules relate to the days of the regular tutorials. This table should help you plan your progress across the study session.

Part	Module	Title	No of pages	X Assignment	Tutorial – 4 days
1	1	Economic concepts and systems	15	X1	1
	2	Supply and demand (1)	21		
	3	Supply and demand (2)	27		
	4	Background to demand	37		
2	5	Background to supply	37	X2	
	6	Perfect competition and monopoly	24		
	7	Monopolistic competition and oligopoly	24		
3	8	Pricing strategies	22	X3	2
	9	Market failure and government intervention	38		
4	10	The macroeconomic environment	25	X4	
	11	Macroeconomic objectives	20		
	12	International trade	14		
5	13	Balance of payments and exchange rates	11	X5	3
	14	The financial system	34		
	15	The money market and monetary policy	24		
6	16	Main strands of economic thinking	15	X6	
	17	Classical and Keynesian theory	53		
	18	Relationship between the goods and money markets	26		

7	19	Monetarist and new classical schools, and Keynesian responses	34	X7	4
	20	Supply-side policy	16		
	21	Demand-side policy	19		
8	22	Exchange rate policy	20	X8	
	23	Global harmonisation and monetary union	13		
	24	Summary of debates on theory and policy	22		

1.2 Subject CB2 – Syllabus and Core Reading

Syllabus

The Syllabus for Subject CB2 is given here. To the right of each objective are the module numbers in which the objective is covered in the ActEd course.

Aim

Subject CB2 introduces the core economic principles and how these can be used in a business environment to help inform decision-making and behaviour. It includes the fundamental concepts of microeconomics that explain how economic agents make decisions and how these decisions interact. It also explores the principles underlying macroeconomics that explain how the economic system works and how decisions taken by economic agents affect the financial system and relevant aggregate economic and financial variables.

Topics and topic weightings

This subject covers the following topics:

1. Economic schools, the economic way of thinking and recent historical applications (5%)
2. Microeconomics (40%)
3. Macroeconomics (55%)

The topic weighting percentage noted alongside the topics is indicative of the volume of content of a topic within the subject and therefore broadly aligned to the volume of marks allocated to this topic in the examination. For example if a topic is 20% of the subject then you can expect that approximately 20% of the total marks available in the examination paper will be available on that topic.

Students should ensure that they are well prepared across the entire syllabus and have an understanding of the principal terms used within the course.

Objectives

1. Economic schools, economic way of thinking and recent historical applications (5%)

An introduction to economic concepts and models, their use in business as well as recent economic and financial history.

1.1 Relationship between economics and business (Module 1)

1.1.1 Principles of economic choice, including opportunity cost and scarcity

1.1.2 Core economic concepts used by businesses to make choices relevant to selection of outputs, inputs, technology, location and competition

1.1.3 Features of and differences between microeconomics and macroeconomics

1.2 Main economic schools and their key features: (Modules 9, 16, 17, 19 and 24)

- Classical
- Marxian socialism
- Neo-classical, Keynesian, neo-Keynesian and post-Keynesian
- Monetarist
- Austrian

1.3 Recent macroeconomic history (Modules 14, 15, 21, 23 and 24)

1.3.1 Progress of the world economy since the Great Depression, with a particular focus on banking crises, their consequences and irrational behaviour

1.3.2 Banking crisis of 2008, the Great Recession, and recovery, including:

- Effectiveness of monetary policy in the 2008 financial crisis
- Governments actions to combat recession
- Aftershocks in Europe
- Stimulus–austerity debate and regulatory action after the 2008 crisis

2. Microeconomics – the behaviour of consumers, firms and markets (40%)

Understand, in detail, models of consumer choice, the theory of the firm and how these affect business decisions under different conditions.

2.1 How competitive markets operate (Modules 2 and 3)

2.1.1 Role of the price mechanism and the behaviour of firms and consumers in a free market

2.1.2 Factors that influence market demand and supply

2.1.3 How market equilibrium quantity and price are achieved

2.1.4 How markets react to changes in demand and supply

2.1.5 Calculation of price and income elasticities of demand and price elasticity of supply, using both original and average quantities

2.1.6 Factors that affect elasticity

2.1.7 Effect of elasticity on the short- and long-term operation of markets

2.1.8 How firms deal with risk and uncertainty about future market movements

2.1.9 Price expectations and speculation and how price bubbles develop

2.2 Consumer demand and behaviour (Module 4)

2.2.1 The concept of utility and the representation of consumer preferences as indifference curves

- 2.2.2 How rational choice and optimal consumption choice is determined by using indifference curves and budget lines
- 2.2.3 Rational choice, perfect information and irrational behaviour in the context of behavioural economics
- 2.3 The impact of advertising on sales and demand (Module 3)
- 2.4 Impact of the production function, costs of production, revenue and profit on a firm's price and output decisions (Module 5)
 - 2.4.1 The production function and the relationship between short- and long-term inputs and outputs
 - 2.4.2 Average and marginal physical product
 - 2.4.3 Meaning and measurement of costs and how these vary with short- and long-term output
 - 2.4.4 Total, average and marginal costs
 - 2.4.5 Economies of scale and how a business can achieve efficiency in selecting the level of its inputs
 - 2.4.6 Revenue and profit and how they are influenced by market conditions
 - 2.4.7 Calculation of average and marginal revenue
 - 2.4.8 Measurement of profit and how a firm arrives at its profit-maximising output
 - 2.4.9 The 'shut-down' point in the short and long run
- 2.5 Profit maximisation under perfect competition and monopoly (Module 6)
 - 2.5.1 What determines the market power of a firm
 - 2.5.2 Main features of a market characterised by perfect competition, including how output and price are determined in the short and long term
 - 2.5.3 Monopolies and how they emerge; how they select profit-maximising price and output; and the determination of the profit of a monopolist
 - 2.5.4 Barriers to entry and market contestability and their impact on the profit of a monopolist

- 2.6 Profit maximisation under imperfect competition (Module 7)
 - 2.6.1 Behaviour of firms under monopolistic competition and why in this type of market only normal profits are made in the long run
 - 2.6.2 Main features of an oligopoly and the behaviour of firms in an oligopoly
 - 2.6.3 Competition and collusion of firms in an oligopoly and how strategic decisions of such firms can be explained by game theory
 - 2.6.4 Behaviour of oligopolists and the consumer interest
- 2.7 Pricing strategies that firms in the financial services sector can adopt (Module 8)
 - 2.7.1 How prices are determined in practice and factors that affect the ability of a firm to determine its prices
 - 2.7.2 Average-cost pricing and price discrimination
 - 2.7.3 Pricing strategy for multiple products and how pricing varies with the stage in the life of a product

3. Macroeconomics and the role of government (55%)

Understand aggregate economic variables and concepts which relates them to government policy, business decision making and financial market variables.

- 3.1 Government intervention in a market (Module 9)
 - 3.1.1 Extent to which businesses meet the interests of consumers and society in general
 - 3.1.2 Socially efficient' perfect markets and why most markets fail to achieve the theoretical ideal of social efficiency
 - 3.1.3 Why externalities can lead to inefficient markets
 - 3.1.4 How governments intervene in markets to influence business behaviour and the drawbacks of such intervention
 - 3.1.5 Role of taxation and regulation in correcting shortcomings in markets
 - 3.1.6 Why government intervention might not improve market outcomes in practice even if the existence of 'market failures' suggest they can in theory
 - 3.1.7 Policy instruments that can be used to promote environmental sustainability
- 3.2 Relationship between the government and the individual firm (Modules 9 and 20)
 - 3.2.1 Main targets of 'competition policy' and the extent to which it is effective
 - 3.2.2 Why a free market can fail to achieve the optimal amount of research and development
 - 3.2.3 Government intervention to encourage technological advance and innovation

- 3.3 Globalisation and multinational business (Module 23)
 - 3.3.1 Globalisation and its impact on business
 - 3.3.2 The driving processes of globalisation and the benefit of globalisation
- 3.4 Importance of international trade (Module 12)
 - 3.4.1 Growth of international trade and its benefits to countries and firms
 - 3.4.2 Advantages of specialisation
 - 3.4.3 Arguments for trade restriction and protection of domestic industries
 - 3.4.4 Role of the World Trade Organization (WTO) in international trade
- 3.5 Impact of the macroeconomic environment on business (Modules 10, 11 and 17)
 - 3.5.1 Main macroeconomic variables that governments seek to control
 - 3.5.2 Impact of an economic stimulus on business output
 - 3.5.3 Difference between actual and potential growth
 - 3.5.4 Factors that determine economic growth and the reasons for differences in different nations' growth rates
 - 3.5.5 Why economies experience periods of boom followed by periods of recession and the factors that influence the length and magnitude of the phases of a business cycle
 - 3.5.6 Causes and costs of unemployment and its impact on the level of business activity
 - 3.5.7 Determination of the price level in the economy by the interaction between aggregate supply (AS) and aggregate demand (AD) in a simple AS–AD model
 - 3.5.8 Causes and costs of inflation and its impact on the level of business activity
 - 3.5.9 Gross domestic product (GDP) and its measurement
 - 3.5.10 Representation of the economy as a simple model of the circular flow of income
- 3.6 Balance of payments and the determination of exchange rates (Modules 13, 22 and 23)
 - 3.6.1 What is 'the balance of payments' and how trade and financial movements affect it
 - 3.6.2 How exchange rates are determined and their impact on business
 - 3.6.3 Relationship between the balance of payments and exchange rates
 - 3.6.4 Advantages and disadvantages of fixed and floating exchange rates

- 3.6.5 How governments and/or central banks seek to influence the exchange rates and the implications of such actions for other macroeconomic policies and for business
- 3.6.6 Purpose and effectiveness of monetary union and single currencies, with reference to the European Economic and Monetary Union, the Exchange Rate Mechanism and the creation of a single Currency
- 3.7 Role of money and interest rates in the economy (Modules 14, 15 and 18)
 - 3.7.1 Functions of money
 - 3.7.2 Factors that determine the amount of money in the economy, what causes it to grow and the role of banks in this process
 - 3.7.3 Concept of the money multiplier
 - 3.7.4 Determination of interest rates
 - 3.7.5 Relationship between money and interest rates
 - 3.7.6 Why central banks play a crucial role in the functioning of economies
 - 3.7.7 How a change in the money supply and/or interest rates affects the level of business activity
- 3.8 Role, structure and stability of the financial system (Module 14)
 - 3.8.1 Functions of the financial sector
 - 3.8.2 Role and functions of investment funds, banks and insurance companies/pension funds
 - 3.8.3 Different ways banks and insurance companies can be exposed to credit risk and liquidity risks through:
 - Bank loans
 - Corporate bonds
 - Securitisations (which can be owned by the non-bank sector)
 - Syndicated loans
 - Credit derivatives
 - 3.8.4 Why the banking sector is more likely to be exposed to systemic risk than the non-bank financial sector
 - 3.8.5 How financial innovation could lead to some functions of the banking sector being performed by non-banks
 - 3.8.6 Basic principles on which Islamic finance is based

- 3.8.7 Evaluation of the features of an Islamic finance product against the principles of Islamic finance
- 3.9 Factors that determine the level of business activity and how they also affect unemployment and inflation (Modules 11, 17, 18 and 19)
 - 3.9.1 Determination of the equilibrium level of income within a simple aggregate demand–expenditure model
 - 3.9.2 Concept of the multiplier and the calculation of its value
 - 3.9.3 Impact of a rise in money supply on output and prices
 - 3.9.4 Relationship between unemployment and inflation and whether the relationship is stable
 - 3.9.5 How business and consumer expectations affect the relationship between unemployment and inflation and the formation of such expectations are formed
 - 3.9.6 Inflation targeting and its effect on the relationship between unemployment and inflation
 - 3.9.7 Course of a business cycle and its turning points
 - 3.9.8 Whether the business cycle is caused by changes in aggregate demand or changes in aggregate supply (or both)
- 3.10 Impact of macroeconomic policies on businesses (Modules 15 and 21)
 - 3.10.1 Types of macroeconomic policy that are likely to have an impact on business and the way in which this impact takes effect
 - 3.10.2 Impact of fiscal policy on the economy and business and the factors that determine its effectiveness in smoothing out economic fluctuations
 - 3.10.3 Fiscal rules and their efficacy
 - 3.10.4 How monetary policy works in the UK and the eurozone and the roles of the Bank of England and the European Central Bank
 - 3.10.5 Targeting inflation to influence interest rates and the economic activity
 - 3.10.6 The merits of central banks following a simple inflation target and possible alternatives
- 3.11 Supply-side policies and their impact on businesses (Module 20)
 - 3.11.1 Effect of supply-side policies on business and the economy
 - 3.11.2 Types of supply-side policies that can be pursued and their effectiveness
 - 3.11.3 Impact of cutting taxes on business

3.11.4 Major forms of government policy that can be used to encourage competition

Core Reading

Accreditation

The Core Reading consists of references to material from:

Sloman, J., Garratt, D., Guest, J., 2022, Economics, 11th ed., Pearson

ISBN: 978-1-292-40533-9 (print)

ISBN: 978-1-292-40539-1 (PDF)

ISBN: 978-1-292-40540-7 (ePub)

In addition, there are a number of extra sections of Core Reading, which are included within the relevant modules in the ActEd Course Notes.

Further reading

The exam will be based on the relevant Syllabus and Core Reading (including the textbook). The ActEd course material will be the main source of tuition for students.

There is also further information available on the website linked to the textbook as well as relevant external websites (indicated at the end of some chapters of the textbook). This material is a useful source of additional material but it is not directly examinable.

A list of additional resources to support student learning and development for this subject can be found on the Module pages on the IFoA website: <https://actuaries.org.uk/curriculum/>

1.3 Subject CB2 – summary of ActEd products

ActEd might release additional products throughout the year so please keep an eye on our website at [ActEd.co.uk](https://www.acted.co.uk) for the latest news on products.

The following products are available for Subject CB2:

- Course Notes
- X Assignments – eight assignments (X1-X8)
- Online classroom
- Flashcards
- Past Exam Questions with ActEd Solutions (PEQAS)
- Mock Exam – one 60-mark test
- Additional Mock Pack (AMP) – two additional 60-mark tests.

Products are generally available in both paper and eBook format. Visit [ActEd.co.uk](https://www.acted.co.uk) for full details about available eBooks, software requirements and restrictions.

Course Notes, Flashcards and PEQAS are available in both paper and eBook format. The eBook version might be particularly convenient for checking details during the exam and is available at a significant discount if you also have the same version of the paper product. Visit [ActEd.co.uk](https://www.acted.co.uk) for full details about available eBooks, software requirements and restrictions.

X Assignments and mock exams are delivered through our virtual learning environment, The Hub. Given the online, objective-based assessment of Subject CB2, marking is not available to purchase, however, feedback will be available following each attempt.

The following tutorials are typically available for Subject CB2:

- Regular Tutorials (four full days / eight half days)
- Block Tutorials (four days).

Tutorials are typically available both face-to-face and live online.

Full details are set out in our *Tuition Bulletin*, which is available on our website at [ActEd.co.uk](https://www.acted.co.uk).

1.4 Subject CB2 – skills and assessment

Technical skills

Subjects CB1 and CB2 are less mathematical than the other Core Principles subjects, instead involving in-depth understanding of economics, business and accounting principles.

Exam skills

In Subject CB2, the approximate split of assessment across the three skill types is:

- Knowledge – 20%
- Application – 60%
- Higher Order skills – 20%.

These skill types are described in Section 2.4.

Assessment

Assessment is in the form of a 2 hour timed, online objective-based assessment (OBA) examination. This is likely to consist of 60 questions of varying styles (such as multiple choice, matching pairs, fill-in the blank and numerical entry). Sample questions illustrating the form of the question types are available on the IFoA website.

1.5 Subject CB2 – frequently asked questions

Q: *I have an older edition of the textbook, rather than the current eleventh edition. How does the new version differ from the old versions and what should I do to prepare for the new exam??*

A: There are a number of changes and additions to the textbook. The 2024 exams will be based on the eleventh edition of the textbook, so we recommend that you use it.

Q: *What knowledge of earlier subjects should I have?*

A: No knowledge of earlier subjects is required.

Q: *What level of mathematics is required?*

A: There is some use of basic arithmetic and algebra in Subject CB2 and you may also need to use basic calculus.

Q: *What other skills are required?*

A: Even though you will not be required to produce and submit them, diagrams are part of an economist's toolkit, so it is important that you are able to interpret the diagrams within the course. Being able to produce the diagrams yourself is one of the best ways of ensuring a good understanding of the principles and theories.

You also need to be able to use language precisely. For example, the observation that 'prices are falling' is not the same as 'the inflation rate is falling'.

Q: *How relevant are past exam papers to the new objective-based assessment questions?*

A: Although past exam questions are often in a different format to those that will be used for the 2024 examinations, the material / theories / concepts / methods / ideas being tested are largely the same, so many of the past exam questions will still be useful. If attempting past exam questions that are not in the format that will be used from 2024, try to focus on the material being tested rather than the presentation of your answers. You may even wish to consider how the questions might be modified to be objective-based assessment questions.

Q: *I have previously studied Subject CB2. What's the best way to adapt my learning for the new objective-based assessment format?*

A: The material that you have studied previously will still be relevant under the new format, so any notes or aids you have should still be useful. Spend some time familiarising yourself with the different possible question formats and think about how different parts of the course might be assessed through these. Then you may wish to attempt as many objective-based questions as you can. X assignments and the mock exams should be useful here.

Q: *Should I read the various boxes in the textbook?*

A: The boxes are part of the Core Reading on which you will be tested. The guidance issued by the Institute and Faculty of Actuaries states that '*Each unit... will be directly examinable on the underlying theory and its application*'.

Some units include content on the mathematical application of the concepts. You do not need to know the theoretical derivation of formulae but you should understand the numerical examples and be able to do similar calculations.

Q: *Should I do the Review Questions in the textbook?*

A: Only if you find them interesting and *have the time*. It is probably more sensible to concentrate on practising the questions throughout and at the end of the modules, the assignments and the past exam papers. This is because these questions have been designed specifically to prepare you for the Subject CB2 exam and/or represent the types of questions you will actually need to answer in the Subject CB2 exam.

Q: *What should I do if I discover an error in the course?*

A: If you find an error in the course, please check our website at:

ActEd.co.uk/paper_corrections.html

to see if the correction has already been dealt with. Otherwise please send details via email to **CB2@bpp.com**.

Q: *Who should I send feedback to?*

A: We are always happy to receive feedback from students, particularly details concerning any errors, contradictions or unclear statements in the courses.

If you have any comments on this course in general, please email them to **CB2@bpp.com**.

If you have any comments or concerns about the Syllabus or Core Reading, these can be passed on to the Institute and Faculty of Actuaries via ActEd. Alternatively, you can send them directly to the Institute and Faculty of Actuaries' Examination Team by email to **memberservices@actuaries.org.uk**.

2.1 General information and support

Before you start

When studying for the Institute and Faculty of Actuaries' exams, you will need:

- a copy of the **Formulae and Tables for Examinations of the Faculty of Actuaries and the Institute of Actuaries, 2nd Edition (2002)** – these are referred to simply as the *Tables*
- a **scientific calculator** and/or **software package** to help with calculations.

The *Tables* are available from the Institute and Faculty of Actuaries' eShop. Please visit **actuaries.org.uk**.

Institute and Faculty of Actuaries

The Institute and Faculty of Actuaries has produced a Qualification Handbook containing important information and guidance on:

- requirements for qualifying as an Associate or Fellow
- preparing for the exams, including how to book them
- the regulations, policies and procedures to be aware of while studying
- the range of support and resources available to students when they join the Institute and Faculty of Actuaries.

The Institute and Faculty of Actuaries advises students to ensure they read through the Qualification Handbook.

The Qualification Handbook can be found at:

actuaries.org.uk/qualify/student-and-associate-exam-news/qualification-handbook

BPP learning support

BPP's Learning Support team offers a wide range of support for all students who disclose a learning difficulty or disability, including sensory difficulties, mobility difficulty, ADHD, Asperger Syndrome, mental health difficulties, dyslexia, dyspraxia and general health problems. This support is accessible to all ActEd students free of charge.

This support includes:

- accessible and inclusive learning facilities
- a dedicated team that provides information, advice, guidance and support.

Please contact the Learning Support team at **LearningSupport@bpp.com** for more information.

Safeguarding

Safeguarding means protecting people's health, wellbeing and human rights, and enabling them to live free from harm, abuse and neglect.

For ActEd, safeguarding is recognising when someone needs support to help them achieve their learning goals while maintaining their safety, both face-to-face and online.

We want you to feel comfortable within our learning environment and safe in the knowledge that if you ever needed support, you would know where to go.

If you need support, please contact BPP's Safeguarding team at safeguarding@bpp.com or for urgent concerns call 07464 542 636.

The Prevent Duty

As a Government-regulated training provider, we are responsible for ensuring our learners are well informed and staying safe.

The Prevent Duty is to protect people from radicalisation and being drawn into extremist views and terrorism. ActEd has a duty to ensure that our learners are well informed and stay safe, and to empower our students to know what to look for and when to report concerns.

Please be aware of:

- people sharing or accessing extremist materials
- homophobic, disability-related, religious or racist bullying
- expressions of hatred towards or incitement to harm particular groups
- use of derogatory language towards particular groups.

Please report any concerns to a tutor or email safeguarding@bpp.com.

More information is available at:

officeforstudents.org.uk/advice-and-guidance/student-wellbeing-and-protection/counter-terrorism-the-prevent-duty/

2.2 Core study material

This section explains the role of the Syllabus, Core Reading and supplementary ActEd text. It also gives guidance on how to use these materials most effectively in order to pass the exam.

Some of the information below is also contained in the introduction to the Core Reading produced by the Institute and Faculty of Actuaries.

Syllabus

The Syllabus for Subject CB2 has been produced by the Institute and Faculty of Actuaries. The relevant individual syllabus objectives are included at the start of each course module and a complete copy of the Syllabus is included in Section 1.2 of this Study Guide. We recommend that you use the Syllabus as an important part of your study.

Core Reading

The Core Reading has been produced by the Institute and Faculty of Actuaries. The purpose of the Core Reading is to assist in ensuring that tutors, students and examiners have clear shared appreciation of the requirements of the Syllabus for the qualification examinations for Associateship of the Institute and Faculty of Actuaries.

The Core Reading supports coverage of the Syllabus in helping to ensure that both depth and breadth are re-enforced. It is therefore important that students have a good understanding of the concepts covered by the Core Reading.

In examinations, students will be expected to demonstrate their understanding of the concepts.

The exams in April and September 2024 will be based on the Syllabus and Core Reading as at 31 May 2023. We recommend that you always use the up-to-date Core Reading to prepare for the exams.

Examiners will have this Core Reading and the textbook when setting the examinations. In preparing for examinations, students are advised to work through past examination questions and will find additional tuition helpful. The Core Reading will be updated each year to reflect changes in the Syllabus, to reflect current practice, and in the interest of clarity.

Accreditation

The Institute and Faculty of Actuaries would like to thank the numerous people who have helped in the development of the material contained in this Core Reading.

Textbook

Each module of the course covers one or more syllabus objectives.

Each module will refer to the relevant part(s) of the textbook. This material will be directly examinable. Some units include content on the mathematical application of the concepts. **You do not need to know the theoretical derivation of formulae but you should understand the numerical examples and be able to do similar calculations.**

The referenced material will sometimes cover objectives from other modules where it is useful to consider the material together.

There is also further information available on the website linked to the textbook as well as relevant external websites (indicated at the end of some chapters of the textbook). This material is a useful source of additional material but it is not directly examinable.

ActEd text

Core Reading deals with each syllabus objective and covers what is needed to pass the exam. However, the tuition material that has been written by ActEd enhances it by giving examples and further explanation of key points. Here is an excerpt from some ActEd Course Notes to show you how to identify Core Reading and the ActEd material. **Core Reading is shown in this bold font.**

In the example given above, the index *will* fall if the actual share price goes below the theoretical ex-rights share price. Again, this is consistent with what would happen to an underlying portfolio.

After allowing for chain-linking, **the formula for the investment index then becomes:**

$$I(t) = \frac{\sum_i N_{i,t} P_{i,t}}{B(t)}$$

where $N_{i,t}$ is the number of shares issued for the i th constituent at time t ;

$B(t)$ is the base value, or divisor, at time t .

This is
ActEd
text

This is Core
Reading

Copyright

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Legal action will be taken if these terms are infringed. In addition, we may seek to take disciplinary action through the Institute and Faculty of Actuaries or through your employer.

These conditions remain in force after you have finished using the course.

2.3 ActEd study support

This section gives a description of the products offered by ActEd.

Successful students tend to undertake three main study activities:

1. *Learning* – initial study and understanding of subject material
2. *Revision* – learning subject material and preparing to tackle exam-style questions
3. *Rehearsal* – answering exam-style questions, culminating in answering questions at exam speed.

Different approaches suit different people. For example, you may like to revise material gradually over the months running up to the exams or you may do your revision in a shorter period just before the exams. Also, these three activities will almost certainly overlap.

We offer a flexible range of products to suit you and let you control your own learning and exam preparation. The following table shows the products that we produce. Not all products are available for all subjects.

IMPORTANT NOTE: For Subject CB2, due to the new objective-based assessment methods, some of the standard ActEd products described below are not available or are available in a format that differs from the standard description here. A key example of this is that marking services (X Assignment Marking and Mock Marking) are not available. See Section 1.3 for details of the products available for this subject. ActEd might release additional products throughout the year, so please keep an eye on our website at ActEd.co.uk for the latest news on products.

LEARNING	LEARNING & REVISION	REVISION	REVISION & REHEARSAL	REHEARSAL
Course Notes	X Assignments Combined Materials Pack (CMP) Tutorials Online Classroom	Flashcards Sound Revision	Revision Notes ASET PEQAS	Mock Exam Additional Mock Pack (AMP)

The products and services are described in more detail below.

'Learning' products

Course Notes

The Course Notes will help you develop the basic knowledge and understanding of principles needed to pass the exam.

Each module includes:

- the relevant syllabus objectives
- guidance on how to work through the Core Reading
- detailed checklists of the things you need to be able to do to pass the exam
- practice questions (including some past exam questions) with full solutions.

'Learning & revision' products

X Assignments

The Series X Assignments are assessments that cover the material in each part of the course in turn. They can be used to develop and test your understanding of the material.

For objective-based assessment (OBA) subjects, the X Assignments are delivered online through our virtual learning environment, The Hub, and include explanations of the correct answer choices.

Combined Materials Pack (CMP)

The Combined Materials Pack (CMP) comprises the Course Notes, the Series X Assignments and a Mock Exam.

CMP Upgrade

The purpose of the CMP Upgrade is to enable you to amend last year's study material to make it suitable for study for this year.

Wherever possible, it lists the changes to the syllabus objectives, Core Reading and the ActEd material since last year that might realistically affect your chance of success in the exam. It is produced so that you can manually amend your notes. The upgrade includes replacement pages and additional pages where appropriate.

However, if a large number of changes have been made to the Course Notes and X Assignments, it is not practical to produce a full upgrade, and the upgrade will only *outline* the most significant changes. In this case, we recommend that you purchase a replacement CMP (printed copy or eBook) or Course Notes at a significantly reduced price.

The CMP Upgrade can be downloaded free of charge from our website at **ActEd.co.uk**.

A separate upgrade for eBooks is not produced but a significant discount is available for retakers wishing to re-purchase the latest eBook.

Tutorials

Our tutorials are specifically designed to develop the knowledge that you will acquire from the course material into the higher-level understanding that is needed to pass the exam.

We run a range of different tutorials including face-to-face tutorials at various locations, and Live Online tutorials. Full details are set out in our *Tuition Bulletin*, which is available on our website at **ActEd.co.uk**.

Regular and Block Tutorials

In preparation for these tutorials, we expect you to have read the relevant part(s) of the Course Notes before attending the tutorial so that the group can spend time on exam-style questions and discussion to develop understanding rather than basic bookwork.

You can choose *one* of the following types of tutorial:

- **Regular Tutorials** spread over the session
- a **Block Tutorial** held two to eight weeks before the exam.

Online Classroom

The Online Classroom acts as either a valuable add-on or a great alternative to a face-to-face or Live Online tutorial.

At the heart of the Online Classroom in each subject is a comprehensive, easily-searched collection of tutorial units. These are a mix of:

- teaching units, helping you to really get to grips with the course material, and
- guided questions, enabling you to learn the most efficient ways to answer questions and avoid common exam pitfalls.

The best way to discover the Online Classroom is to see it in action. You can watch a sample of the Online Classroom tutorial units on our website at **ActEd.co.uk**.

‘Revision’ products

For most subjects, there is ***a lot of material*** to revise. Finding a way to fit revision into your routine as painlessly as possible has got to be a good strategy. Flashcards and Sound Revision are inexpensive options that can provide a massive boost. They can also provide a variation in activities during a study day, and so help you to maintain concentration and effectiveness.

Flashcards

Flashcards are a set of A6-sized cards that cover the key points of the subject that most students want to commit to memory and/or have handy for reference during the examination. Each flashcard has questions on one side and the answers on the reverse. We recommend that you use the cards actively and test yourself as you go.

Sound Revision

It is reported that only 30% of information that is read is retained but this rises to 50% if the information is also heard. Sound Revision is a set of audio files, designed to help you absorb the most important aspects of the Core Reading.

The files cover the majority of the course, split into a number of manageable topics based on the chapters in the Course Notes. Each section lasts no longer than a few minutes.

Choice of revision product

Different students will have preferences for different revision products.

So, what might influence your choice between these study aids? The following questions and comments might help you to choose the revision products that are most suitable for you:

- Do you have a regular train or bus journey?
Flashcards are ideal for regular bursts of revision on the move.
- Do you want to fit more study into your routine?
Flashcards are a good option for 'dead time', eg using flashcards on your phone or sticking them on the wall in your study.
- Do you find yourself cramming for exams (even if that's not your original plan)?
Flashcards are an extremely efficient way to do your pre-exam preparation.
- Do you have some regular time where carrying other materials isn't practical, eg commuting, at the gym, walking the dog?
Sound Revision is an ideal 'hands-free' revision tool.
- Do you have a preference for auditory learning, eg do you remember conversations more easily than emails?
Sound Revision will suit your preferred style and be especially effective for you.

Choosing more than one revision product

As there is some degree of overlap between revision products, we do not necessarily recommend using them simultaneously. However, if you are retaking a subject, then you might consider using a different product than on a previous attempt to keep your revision fresh and effective.

'Revision & rehearsal' products

Past Exam Questions with ActEd Solutions (PEQAS)

The Past Exam Questions with ActEd Solutions has been designed to give you as much question practice as possible, with detailed solutions to aid your understanding. This product is available in both paper and eBook format.

PEQAS covers relevant OBA past exam questions since 2011, and the past exam questions are arranged by topic, allowing you to break your study into bite-sized chunks and focus on each area of the course in turn.

For subjects that use the objective-based assessment (OBA) format, this product replaces the Revision Notes and ASET products.

‘Rehearsal’ products

Mock Exam

The Mock Exam is a 60-mark online assessment that provides a realistic test of your exam readiness.

It is based on the Mock Exam from last year but it has been updated to reflect any changes to the Syllabus, Core Reading and examination format.

For objective-based assessment (OBA) subjects, the Mock Exam is delivered online through our virtual learning environment, The Hub, and include explanations of the correct answer choices.

Additional Mock Pack (AMP)

The Additional Mock Pack (AMP) consists of two further 60-mark online assessments, Mock Exam 2 and Mock Exam 3. This is ideal if you are retaking and have already sat the Mock Exam, or if you just want some extra question practice.

For objective-based assessment (OBA) subjects, Mock Exam 2 and Mock Exam 3 are delivered online through our virtual learning environment, The Hub, and include explanations of the correct answer choices.

2.4 Study skills and assessment

Technical skills

The Core Reading and exam papers for these subjects tend to be very technical. The exams themselves have a range of objective-based assessment questions, including multiple-choice, multiple-response, matching, reasoning and calculations. The emphasis in the exam will therefore be on *knowing* and *understanding* the main concepts, and being able to *apply* them to various, sometimes unfamiliar, situations. Where there are calculations involved, it is important to have a feel for what the numerical answer should be by having a deep understanding of the material and by doing reasonableness checks.

The aim of the exams is to test your ability to apply your knowledge and understanding of the key principles described in the Core Reading to specific situations presented to you in the form of exam questions. Therefore your aim should be to identify and understand the key principles, and then to practise applying them. You will also need to be thoroughly familiar with the Core Reading to score well and quickly on any knowledge-based questions.

Study skills

Overall study plan

We suggest that you develop a realistic study plan, building in time for relaxation and allowing some time for contingencies. Be aware of busy times at work, when you may not be able to take as much study leave as you would like. Once you have set your plan, be determined to stick to it. You don't have to be too prescriptive at this stage about what precisely you do on each study day. The main thing is to be clear that you will cover all the important activities in an appropriate manner and leave plenty of time for revision and question practice.

Aim to manage your study so as to allow plenty of time for the concepts you meet in these courses to 'bed down' in your mind. Most successful students will probably aim to complete the courses at least a month before the exam, thereby leaving a sufficient amount of time for revision. By finishing the courses as quickly as possible, you will have a much clearer view of the big picture. It will also allow you to structure your revision so that you can concentrate on the important and difficult areas.

You can also try looking at our discussion forum, which can be accessed at [ActEd.co.uk/forums](https://www.acted.co.uk/forums) (or use the link from our home page at [ActEd.co.uk](https://www.acted.co.uk)). There are some good suggestions from students on how to study.

Study sessions

Only do activities that will increase your chance of passing. Try to avoid including activities for the sake of it and don't spend time reviewing material that you already understand. You will only improve your chances of passing the exam by getting on top of the material that you currently find difficult.

Ideally, each study session should have a specific purpose and be based on a specific task, eg 'Finish reading Module 3 and attempt Practice Questions 3.4, 3.7 and 3.12', as opposed to a specific amount of time, eg 'Three hours studying the material in Module 3'.

Try to study somewhere quiet and free from distractions (eg an area at home dedicated to study). Find out when you operate at your peak, and endeavour to study at those times of the day. This might be between 8am and 10am or could be in the evening. Take short breaks during your study to remain focused – it's definitely time for a short break if you find that your brain is tired and that your concentration has started to drift from the information in front of you.

Order of study

We suggest that you work through each of the modules in turn. To get the maximum benefit from each module you should proceed in the following order:

1. Read the syllabus objectives. These are set out in the box at the start of each module.
2. Read the **introduction** to the module. We try to set the scene for the forthcoming module so that you know what's coming next. We might also place it in context with what has come before and/or what is still left to come. We will also state whether or not the material is new to Subject CB2.
3. For **each section**:
 - Read 'What's included in this section'. The main items identified here as bullet points will usually correspond to the main subheadings in the textbook. We have sometimes used different bullet points if we think our structure is more helpful in the context of the Subject CB2 Syllabus and exam.
 - Read 'Guidance'. This highlights a variety of issues, such as important concepts, beliefs and distinctions, common mistakes made by students, hints for drawing diagrams, important points that are mentioned in boxes but not in the main body of the text, topics that will be discussed in more detail in later modules and types of questions that have tended to be asked in the past.
 - Scan the 'Checklist' to gain a sense of the key learning objectives of reading the Core Reading.
 - Read the Core Reading in the textbook, being mindful of the objectives or tasks listed in the 'Checklist'.
 - Make your own notes (using the subheadings given in the 'What's included' section and the tasks listed in the 'Checklist') or review the ActEd flashcards.
 - Attempt the questions in the 'Questions' section. This is a **very important part of your study**. Tackling these questions should develop your knowledge and understanding and increase your confidence. We have tried to ensure good coverage of the Syllabus, have included lots of exam-style questions (including many past exam questions) and have included helpful hints and comments in the solutions.
 - Revisit your notes or the ActEd flashcards. Having attempted the questions, they should now make more sense to you. You might wish to annotate them.

4. When you have finished all of the sections, read the introduction to the module again, which could be used as a brief summary of the module.
5. Attempt the 'Practice Questions' at the end of the module. Most of these are exam-style questions and many are actual past exam questions. Again, this is a very important stage in your study.
6. When you have completed the above steps for each module, use the flashcards as a revision tool to ensure there are no gaps in your understanding of the course content. The flashcards have been designed to correspond to the checklists; there is at least one flashcard for most checklist items.
7. Think about what specifically you might want to include from each module in the reference materials that you choose to have to hand during the exam. For example, you might want to put together some easy-reference lists of key concepts or formulae that can be referred to quickly and conveniently.

It's a fact that people are more likely to absorb something if they review it several times. So, do look over the modules you have studied so far from time to time. It is useful to work through the checklists or to try the Practice Questions again a few days after reading the module itself. It's a good idea to annotate the questions with details of when you attempted each one. This makes it easier to ensure that you try all of the questions as part of your revision without repeating any that you got right first time.

Once you've read the relevant part of the notes and tried a selection of questions from the Practice Questions (and attended a tutorial, if appropriate) you should attempt the corresponding assignment. Ensure you take the time to review your answers and in particular that you understand any answers that you got wrong. It can seem a bit depressing to analyse the errors you made, but you will increase your chances of passing the exam by learning from your mistakes.

To be really prepared for the exam, you should not only be fully familiar with and understand the Core Reading but also be aware of what the examiners will expect. Your revision programme should include plenty of question practice so that you are aware of the typical style and content of exam questions. You should attempt as many exam-style questions as you can.

Active study

Here are some techniques that may help you to study actively.

1. Don't believe everything you read. Good students tend to question everything that they read. They will ask 'why, how, what for, when?' when confronted with a new concept, and they will apply their own judgement. This contrasts with those who unquestioningly believe what they are told, learn it thoroughly, and reproduce it (unquestioningly?) in response to exam questions.
2. Another useful technique as you read the Course Notes is to think of possible questions that the examiners could ask. This will help you to understand the examiners' point of view and should mean that there are fewer nasty surprises in the exam. Use the Syllabus to help you make up questions.

3. Annotate your notes with your own ideas and questions. This will make you study more actively and will help when you come to review and revise the material. These notes may also be useful to refer to in the exam. Do not simply copy out the notes without thinking about the issues.
4. Attempt the questions in the modules as you work through the course. Come up with your answer before you refer to the solution.
5. Attempt other questions and assignments on a similar basis, *ie* decide on your answer and the reason given for it. Attempting the assignments under timed conditions has some particular benefits:
 - It forces you to think and act in a way that is similar to how you will behave in the exam.
 - When you review the answers in your assignment attempts it is *much* more useful if you have a realistic assessment of your performance under timed conditions than your performance when you are under no time pressure.
6. Revisit the assignment questions as you get closer to the exam. Attempting the assignment questions again will help to consolidate your knowledge and understanding, and allow you to review questions that you have struggled with previously. There is no limit on the number of times that you can attempt the online tests.
7. Sit a mock exam four to six weeks before the real exam to identify your weaknesses and work to improve them. Ensure that you have your reference materials handy, as you plan to in the actual exam, so that you can practise finding what you need in them quickly and efficiently. (You might even be able to add to / modify your reference materials to increase their usefulness.)

You can find further information on how to study in the Institute and Faculty of Actuaries' Qualification Handbook, which you can download from their website at:

actuaries.org.uk/qualify/student-and-associate-exam-news/qualification-handbook

Revision and exam skills

Revision skills

You will have sat many exams before and will have mastered the exam and revision techniques that suit you. However it is important to note that due to the high volume of work involved in the Core Principles subjects it is not possible to leave all your revision to the last minute. Students who prepare well in advance have a better chance of passing their exams on the first sitting.

Unprepared students find that they are under time pressure in the exam. Therefore it is important to find ways of maximising your score in the shortest possible time. Part of your preparation should be to practise a large number of exam-style questions under timed conditions as soon as possible. This will:

- help you to develop the necessary understanding of the techniques required
- highlight the key topics, which crop up regularly in many different contexts and questions

- help you to practise the specific skills that you will need to pass the exam.

The main sources of exam-style questions are the Practice Questions at the end of each chapter, assignments and mock exams.

Exam question skill levels

Exam questions are not designed to be of similar difficulty. The Institute and Faculty of Actuaries specifies different skill levels that questions at which questions may be set.

In each examination, students will be expected to demonstrate, through their answers, that they have knowledge of, can apply and use higher order skills in this subject:

- Knowledge will be demonstrated through answering questions that assess understanding of that knowledge as well as through questions that ask for the application of relevant knowledge to scenarios.
- Application will be demonstrated through answering questions that assess the ability to identify and apply relevant concepts and skills to solve problems (both numerical and non-numerical).
- Higher order skills will be demonstrated through questions that will assess the ability to use relevant knowledge, concepts and skills to solve problems, draw appropriate conclusions, and make meaningful and appropriate comments on those conclusions.

Past exam papers

You can download past exam papers and Examiners' Reports for exam sittings up to and including September 2023 from the Institute and Faculty of Actuaries' website at:

actuaries.org.uk/qualify/prepare-for-your-exams

While not all of the past exam questions will be in the objective-based assessment style:

- some of the questions – in particular the multiple-choice questions – should be of the required style
- some of the questions – in particular short-answer calculation questions – could easily be converted into an objective-based format
- some of the remaining questions may still be useful for developing your understanding and practising applying the theory in alternative ways.

The examination

The Institute and Faculty of Actuaries has produced an:

- Examinations Handbook, which contains practical assistance on how to sit an Institute and Faculty of Actuaries' examination
- Assessment Regulations document, which includes rules on eligibility, entry and conduct during an online assessment.

The Institute and Faculty of Actuaries advises students to ensure they read and have understood the Assessment Regulations ahead of their exam(s).

The Examinations Handbook and Assessment Regulations document, along with additional information about preparing for, booking and sitting the Institute and Faculty of Actuaries' exams can be found at:

actuaries.org.uk/qualify/my-exams/ifo-exams

IMPORTANT NOTE: These documents may be updated and published in the weeks leading up to each exam session. It is important that you keep up-to-date with any changes and developments.

For the exam, ensure you have ready:

- your reference materials, with helpful bookmarks
- rough paper and a pen / pencil
- a calculator / Excel (or equivalent)
- a copy of the *Tables*.

2.5 Queries and feedback

Questions and queries

From time to time you may come across something in the study material that is unclear to you. The easiest way to solve such problems is often through discussion with friends, colleagues and peers – they will probably have had similar experiences whilst studying. If there's no-one at work to talk to then use our discussion forum at **ActEd.co.uk/forums** (or use the link from our home page at **ActEd.co.uk**).

Our online forum is dedicated to actuarial students so that you can get help from fellow students on any aspect of your studies from technical issues to study advice. You could also use it to get ideas for revision or for further reading around the subject that you are studying. ActEd tutors will visit the site regularly to ensure that you are not being led astray and we also post other frequently asked questions from students on the forum as they arise.

If you are still stuck, then you can send queries by email to the relevant subject email address (see Section 1.5), but we recommend that you try the forum first. We will endeavour to contact you as soon as possible after receiving your query but you should be aware that it may take some time to reply to queries, particularly when tutors are away from the office running tutorials. At the busiest teaching times of year, it may take us more than a week to get back to you.

If you have many queries on the course material, you should raise them at a tutorial or book a personal tuition session with an ActEd tutor. Information about personal tuition is set out in our current brochure. Please email **ActEd@bpp.com** for more details.

Feedback

If you find an error in the course, please check the corrections page of our website (**ActEd.co.uk/paper_corrections.html**) to see if the correction has already been dealt with. Otherwise please send details via email to the relevant subject email address (see Section 1.5).

Each year our tutors work hard to improve the quality of the study material and to ensure that the courses are as clear as possible and free from errors. We are always happy to receive feedback from students, particularly details concerning any errors, contradictions or unclear statements in the courses. If you have any comments on this course, please email them to the relevant subject email address (see Section 1.5).

Our tutors also work with the Institute and Faculty of Actuaries to suggest developments and improvements to the Syllabus and Core Reading. If you have any comments or concerns about the Syllabus or Core Reading, these can be passed on via ActEd. Alternatively, you can send them directly to the Institute and Faculty of Actuaries' Examination Team by email to **memberservices@actuaries.org.uk**.