

Subject SA4

2023 Study Guide

Introduction

This Study Guide has been created to help you navigate your way through Subject SA4. It contains all the information that you will need before starting to study Subject SA4 for the 2023 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 SA4
- Part 2 contains general information about the Specialist Advanced (SA) 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 unique to this course.

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1.1 Subject SA4 – background and contents

History

The Specialist Advanced subjects were introduced in the Institute and Faculty of Actuaries' 2019 Curriculum.

Subject SA4 is *Pensions and Other Benefits*.

Predecessors

The Specialist Advanced subjects cover content that was previously in the Specialist Applications subjects. So:

- Subject SA4 replaces Subject SA4.

Exemptions

In order to be eligible for a pass in Subject SA4, you will need:

- to have passed or been granted an exemption from the previous Subject SA4 during the transfer process
- 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/studying/exam-exemptions

Links to other subjects

- Subject SP4 – Pensions and Other Benefits Specialist Principles.
- Subject P4 – Pensions and Other Benefits UK Practice Module.

Contents

There are six parts to the Subject SA4 course. The parts cover related topics and are broken down into chapters. At the end of each part there is an assignment testing the material from that part. The following table shows how the parts and chapters relate to each other. The final column shows how the chapters relate to the days of the regular tutorials. This table should help you plan your progress across the study session.

Part	Chapter	Title	X Assignment	Tutorial – 3 days
1	1	Introduction	X1	1
	2	Key stakeholders		
	3	Taxation		
	4	Security		
	5	Professional guidance		
2	6	Benefit provision	X2	
	7	Scheme design – general		
	8	Scheme design – specific features		
	9	Designing options		
3	10	Risks	X3	
	11	Financing benefits		
	12	Sponsor covenant		
	13	Investment classes		
	14	Investment strategy		
4	15	Valuations	X4	2
	16	Methods and models		
	17	Valuation data		
	18	Assumptions		
	19	Managing experience		
	20	Analysis of experience		
5	21	Accounting	X5	
	22	Corporate activity – general		
	23	Corporate activity – calculations		
6	24	Managing risks	X6	3
	25	Incentive exercises		
	26	Discontinuance		
	27	Problem solving and analysis		
		Glossary		

1.2 Subject SA4 – Syllabus and Core Reading

Syllabus

The Syllabus for Subject SA4 is given here. To the right of each objective are the chapter numbers in which the objective is covered in the ActEd course.

Aim

The aim of this subject is for candidates to develop the ability to apply knowledge of the benefits environment (in the UK and other jurisdictions), and the principles of actuarial practice to the financial management of pensions and other benefits in complex situations.

Competences

On successful completion of this subject, a candidate will be able to:

1. understand the more complex aspects of actuarial practice within benefit provision
2. apply the principles of actuarial practice to the management of pensions and other benefits under complex scenarios
3. compare the approaches by which the principles are applied in practice across different jurisdictions
4. recommend coherent solutions and courses of action in relation to the overall financial management of benefit arrangements.

Syllabus topics

- | | | |
|----|--|-------|
| 1. | Pension and benefit provision and general business environment | (30%) |
| 2. | Regulatory, legislative and taxation environment | (15%) |
| 3. | Design and financing of benefit arrangements | (20%) |
| 4. | Reporting / valuation and management of benefit arrangements | (15%) |
| 5. | General business and risk management | (20%) |

These weightings are indicative of the approximate balance of the assessment of this subject between the main syllabus topics, averaged over a number of examination sessions.

The weightings also have a correspondence with the amount of learning material underlying each syllabus topic. However, this will also reflect aspects such as:

- the relative complexity of each topic and hence the amount of explanation and support required for it
- the need to provide thorough foundation understanding on which to build the other objectives
- the extent of prior knowledge that is expected
- the degree to which each topic area is more knowledge- or application-based.

Detailed syllabus objectives

0. Introduction
- 0.1 Define the main terms used in the provision of benefits in various jurisdictions. (Glossary)
- 1 Pension and benefit provision and general business environment (30%)
- 1.1 Describe the roles that interested parties may play, and responsibilities they may have, in the provision of benefits, including the following: (Chapter 2)
- the State
 - any other central body within the jurisdiction
 - employers
 - individuals
 - trustees
 - actuaries
 - investment advisers
 - other advisers.
- 1.2 Discuss the factors that influence the provision of benefits by the State, employers in the public and private sectors and individuals. (Chapter 6)
- 1.3 Discuss the main saving alternatives to pension savings available to individuals. (Chapter 6)
- 1.4 Discuss the issues surrounding sponsor covenant, including: (Chapter 12)
- what is meant by sponsor covenant
 - when / how it may be measured
 - integration with funding and investment.
- 2 Regulatory, legislative and taxation environment (15%)
- 2.1 Describe how the legal framework attempts to: (Chapters 3, 4 and 11)
- encourage appropriate non-State provision
 - ensure security for non-State provision.
- 2.2 Discuss the implications, for the parties in 1.1, of the environment in which benefits are provided, in particular: (Chapters 5 and 21)
- benefits policy
 - regulation
 - the tax and national insurance regime.
 - accounting standards
 - the Actuarial Standards in relation to actuaries practising or giving advice in relation to pension arrangements.
- 2.3 Compare regulatory, legislative and taxation environments between different jurisdictions. (Chapters 2, 3, 4 and 5)

- 3 Design and financing of benefit arrangements (20%)
- 3.1 Describe the different ways in which providers are able to finance the benefits to be provided, including: (Chapters 11 and 13)
- the timing of contributions (relative to when the benefits are due to be paid)
 - the forms and characteristics of investment that are available
 - financial instruments and contingent funding arrangements that may be used to back benefit promises.
- 3.2 Discuss the factors to consider in determining a suitable design for a pension scheme, or other benefits such as social security benefits, including: (Chapters 7, 8 and 13)
- type of pension scheme (*eg* defined benefit, defined contribution, risk-sharing)
 - the governance requirements
 - the level and form of benefits and/or contributions
 - the method of financing the benefits
 - how risk is shared between parties
 - the choice of assets (when benefits are to be funded)
- and describe how membership and other data analysis can be used to provide insight into individuals' current and future behaviour and therefore inform benefit design.
- 4 Reporting / valuation and management of benefit arrangements (15%)
- 4.1 Describe the issues that arise from the transfer / amendment of benefit rights, for example following significant corporate activity (such as an acquisition or scheme merger), including: (Chapters 22 and 23)
- the interests and responsibilities of the parties involved
 - the terms set out in the legal documentation
 - financial aspects, such as the calculation of the bulk transfer value (if relevant) and benefits provided.
- 4.2 Determine an appropriate method and appropriate financial and demographic assumptions for a valuation of a pension scheme and placing values on benefits and contributions. (Chapters 16 and 18)

- 4.3 Discuss how to determine values for assets, past and future benefits and future contributions, including: (Chapters 15 and 17)
- the data requirements
 - the reasons why the assumptions and methods used may differ in different circumstances
 - the extent to which values should reflect investment/risk management strategy
 - valuing guarantees and options
 - sensitivity analysis and reasonableness checking
- and be able to perform calculations to demonstrate an understanding of the main methods used.
- 4.4 Discuss the issues taken into account in producing information to meet accounting standards, including: (Chapter 21)
- the objectives
 - the disclosure requirements, including those for directors' remuneration
 - the calculations of cost of benefit provision.
- 4.5 Discuss the issues concerning surplus / deficit including: (Chapters 19 and 20)
- identifying the sources
 - the factors that affect the treatment of a surplus/deficit
- and describe how the financial significance of deviations from expectations should be monitored and assessed, including:
- the data required
 - the methods used
 - the use of the results to help identify issues and develop solutions.
- 5 General business and risk management (20%)
- 5.1 Describe the main risks affecting and risk mitigation strategies concerning: (Chapters 7, 10, 24 and 25)
- the level and incidence of benefits
 - the level and incidence of contributions
 - the level and incidence of return on assets
 - the extent to which assets are exhausted during a member's lifetime
 - the overall security of benefits.
- 5.2 Analyse the investment strategy of a provider of benefits, taking into account: (Chapters 14 and 16)
- any asset-liability matching requirements
 - the trade-off between risk and reward
 - an awareness of adding value to the shareholders of the business
- and describe how projection models may be used to develop strategies.
- 5.3 Discuss the principles underlying the use of insurance as a means of risk mitigation. (Chapters 11, 13 and 24)

- 5.4 Discuss the benefit options typically available to individuals: (Chapter 9)
- before retirement
 - at retirement
 - after retirement
- and discuss how to set appropriate terms and consent requirements for these options (where appropriate), taking into account the risk and reward for all relevant parties.
- 5.5 Discuss the issues arising from the discontinuance of benefit provision, including: (Chapter 26)
- the rights and expectations of beneficiaries
 - the availability and selection of a method of provision of discontinuance benefits
 - the level of available assets.
- 6 Solving problems
- 6.1 Recommend coherent solutions and courses of action in relation to the overall financial management of benefit arrangements. (Chapter 27)
- Analyse complex problems in terms of actuarial, economic and financial factors to a level where appropriate analytical techniques may be used.
 - Assess the implications and relevance of such factors, integrating the results into a coherent whole.
 - Evaluate the results critically in a wider context, drawing appropriate conclusions.
 - Propose solutions and actions, or a range of possible solutions and actions, based on this evaluation.

Assessment

The assessment of this subject will consist of one examination. The candidate will be asked to apply actuarial practice and concepts to problems in the pensions and employee benefit environment and to integrate analysis, evaluation and interpretation of results in order to draw conclusions. A number of questions will be set with varying marks, in line with the above syllabus topic weightings and skill levels.

The duration of this examination is three hours and twenty minutes and is timed and online.

Please read the latest version of the IFoA Examinations Handbook and IFoA Examination Regulations on the IFoA website before sitting any IFoA examination.

Core Reading

The Subject SA4 Course Notes include the Core Reading in full, integrated throughout the course.

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

A list of required reading for Subject SA4 has been prepared by the Institute and Faculty of Actuaries and is provided in Chapter 1. A list of further reading and references, which might be useful in providing further insight, is also provided in Chapter 1. The references used to produce the Core Reading material on the topics covered in each chapter are also provided in the introduction to the chapter.

1.3 Subject SA4 – summary of ActEd products

The following products are available for Subject SA4:

- Course Notes
- X Assignments – six 100-mark tests (you are allowed 3¼ hours to complete each of these)
- Series X Marking
- Flashcards
- ASET (2014-17 papers)* – an archive of four years of exam papers, *ie* eight sittings, covering the period April 2014 to September 2017
- ASET (2019-22 papers) – four years of exam papers, *ie* eight sittings, covering the period April 2019 to September 2022
- Mini ASET – covering the April 2023 exam paper
- Mock Exam – one 100-mark test
- Additional Mock Pack (AMP) – two additional 100-mark tests
- Mock Exam Marking
- Marking Vouchers.

Products are generally available in both paper and eBook format. Visit **ActEd.co.uk** for full details about available eBooks, software requirements and restrictions.

* This product is no longer updated each year to reflect changes to the Syllabus and Core Reading. Some of the questions may be used elsewhere in ActEd's product range.

The following tutorials are typically available for Subject SA4:

- Regular Tutorials (three full days / six half days)
- Block Tutorials (three 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**.

1.4 Subject SA4 – skills and assessment

Exam skills

Exam question skill levels

In the Specialist Advanced subjects, the approximate split of assessment across the three skill types is:

- Knowledge – 20%
- Application – 50%
- Higher Order skills – 30%.

Assessment

The Specialist Advanced examinations are in the form of 3¼-hour* examinations.

* The online exams include an additional 5 minutes (*ie* 3 hours 20 minutes in total) for students to download and print the question paper.

1.5 Subject SA4 – frequently asked questions

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

A: The Course Notes have been written assuming that you have already studied, or been exempted from, the Core Principles subjects (or their predecessors).

The principles of Subject SP4 are fundamental to this course and reference to Subject SP4 Core Reading is made through the course. For example in the sponsor covenant chapter the Subject SA4 Core Reading says ‘The Core Reading on sponsor covenant for Subject SP4 is not repeated here. However, it is all relevant to Subject SA4, and is explicitly examinable.’

Subject CP1 (Actuarial Practice), covers the general underlying principles affecting all specialisms.

Q: *What is your advice if I am simultaneously studying Subject SP4?*

A: You need to be aware that the examiners have expressed concerns about the poor pass rates for students who simultaneously attempted the SA series exam alongside the corresponding SP series paper.

If you decide to study for SP4 and SA4 in the same session do not underestimate the work involved and the need for a mature understanding of the pensions environment.

Subject SA4 builds on the common principles developed in Subject SP4, but requires a much greater depth of knowledge and understanding. Consequently, there is a degree of overlap between the two subjects – both in the Core Reading and in the types of questions that are likely to appear on the exam papers. It is therefore important to assimilate the key ideas presented in Subject SP4 before tackling the same ground in Subject SA4.

We suggest that you aim to cover the Subject SP4 course as quickly as possible, so as to get a general feel for the principles together with an overview of the course content. It also makes sense to quickly review the relevant Subject SP4 material prior to working through each chapter in Subject SA4.

From time to time over the study session, and particularly at the revision stage, it might also be a good idea to review the Subjects SP4 and SA4 Course Notes at the same time, along with the Assignments and past exam papers. In particular, it is always worth thinking about how each idea or principle is presented in each of SP4 and SA4 and hence how it might consequently be examined in either 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](https://www.acted.co.uk/paper_corrections.html)

to see if the correction has already been dealt with. Otherwise please send details via email to **SA4@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 to **SA4@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 **education.services@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](https://www.actuaries.org.uk).

BPP learning support

BPP's Learning Support team offer 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.

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 SA4 has been produced by the Institute and Faculty of Actuaries. The relevant individual syllabus objectives are included at the start of each course chapter 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 Fellowship 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 given in the Syllabus and described in the Core Reading; this will be based on the legislation, professional guidance, *etc* which are in force when the Core Reading is published, *ie* on 31 May in the year preceding the examinations.

Therefore the exams in April and September 2023 will be based on the Syllabus and Core Reading as at 31 May 2022. We recommend that you always use the up-to-date Core Reading to prepare for the exams.

Examiners will have this Core Reading when setting the papers. In preparing for examinations, students are recommended to work through past examination questions and may 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 current and previous versions of the Core Reading.

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

All study material produced by ActEd is copyright and is sold for the exclusive use of the purchaser. The copyright is owned by Institute and Faculty Education Limited, a subsidiary of the Institute and Faculty of Actuaries. Unless prior authority is granted by ActEd, you may not hire out, lend, give out, sell, store or transmit electronically or photocopy any part of the study material. You must take care of your study material to ensure that it is not used or copied by anybody else.

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.

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

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. They incorporate the complete Core Reading and include full explanation of all the syllabus objectives, with worked examples and questions (including some based on past exam questions) to test your understanding.

Each chapter includes:

- the relevant syllabus objectives
- a chapter summary
- practice 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.

The X Assignments come with full marking schedules, and are available with or without marking (see below).

Combined Materials Pack (CMP)

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

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 on 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.

X Assignment Marking

We are happy to mark your attempts at the X assignments. Marking is not included with the Assignments or the CMP and you need to order it separately.

IMPORTANT NOTE: You must submit your script on our virtual learning environment, 'The Hub', in the format detailed in your assignment instructions. You will also be able to download your marked script, including marker feedback, from The Hub, as well as being given the opportunity to provide comments on the quality of the marking.

Don't underestimate the benefits of attempting and submitting assignments for marking:

- Question practice during this phase of your study gives an early focus on the end goal of answering exam-style questions.
- You're incentivised to keep up with your study plan and get a regular, realistic assessment of your progress.
- Objective, personalised feedback from a high quality marker will highlight areas on which to work and help with exam technique.

In a recent study, we found that students who attempt more than half the assignments and get them marked have significantly higher pass rates.

There are two different types of marking product: Series Marking and Marking Vouchers.

Series Marking

Series Marking applies to a specified subject, session and student. If you purchase Series Marking, you will **not** be able to defer the marking to a future exam sitting or transfer it to a different subject or student.

We typically provide full solutions with the Series X Assignments. However, if you order Series Marking at the same time as you order the Series X Assignments, you can choose whether or not to receive a copy of the solutions in advance. If you choose not to receive them with the study material, you will be able to download the solutions from The Hub when your marked script is returned (or following the final deadline date if you do not submit a script).

If you are having your attempts at the assignments marked by ActEd, you should submit your scripts regularly throughout the session, in accordance with the schedule of recommended dates set out on our website at **ActEd.co.uk**. This will help you to pace your study throughout the session and leave an adequate amount of time for revision and question practice.

The recommended submission dates are realistic targets for the majority of students. Your scripts will be returned more quickly if you submit them well before the final deadline dates.

Any script submitted *after* the relevant final deadline date will not be marked. It is your responsibility to ensure that we receive scripts in good time.

Marking Vouchers

Marking Vouchers give the holder the right to submit a script for marking at any time, irrespective of the individual assignment deadlines, study session, subject or person.

Marking Vouchers can be used for any assignment. They are valid for four years from the date of purchase and can be refunded at any time up to the expiry date.

Although you may submit your script with a Marking Voucher at any time, you will need to adhere to the explicit Marking Voucher deadline dates to ensure that your script is returned before the date of the exam. The deadline dates are provided on our website at **ActEd.co.uk**.

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 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. 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 remember 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

Revision Notes

Our Revision Notes have been designed with input from students to help you revise efficiently. They are suitable for first-time sitters who have worked through the ActEd Course Notes or for retakers (who should find them much more useful and challenging than simply reading through the course again).

The Revision Notes are a set of A5 booklets – perfect for revising in places where taking large amounts of study material with you is not practical. Each booklet covers one main theme or a set of related topics from the course and includes:

- Core Reading with a set of integrated short questions to develop your bookwork knowledge
- relevant past exam questions with concise solutions from the last ten years
- other useful revision aids.

ActEd Solutions with Exam Technique (ASET)

The ActEd Solutions with Exam Technique (ASET) contains our solutions to a number of past exam papers, plus comment and explanation. In particular, it highlights how questions might have been analysed and interpreted so as to produce a good solution with a wide range of relevant points. This will be valuable in approaching questions in subsequent examinations.

Choice of revision & rehearsal product

Different students will have preferences for different revision & rehearsal products, and there is some overlap in that both the Revision Notes and ASET contain past exam paper questions from recent years. However:

- ASET is designed to be educational. It aims to allow you to fully understand the solution points, and to assist you in improving your own answers through focussed explanations and tips on tackling the questions.

It is likely to be most appropriate if you are attempting the questions by producing answers in full, eg under exam conditions.

- The past exam question and solution sections of the Revision Notes are designed to give you a greater volume of question practice. They allow you to focus on specific topic areas one at a time.

They are likely to be most appropriate if you are using the questions to develop and practise your idea generation techniques, enabling you to work quickly through more questions than if you were producing full, detailed answers.

'Rehearsal' products

Mock Exam

The Mock Exam is a 100-mark mock exam paper 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.

The Mock Exam comes with a full marking schedule, and is available with or without marking (see below).

Additional Mock Pack (AMP)

The Additional Mock Pack (AMP) consists of two further 100-mark mock exam papers – 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.

Mock Exam 2 and Mock Exam 3 come with full marking schedules, and are available with or without marking (see below).

Mock Marking

We are happy to mark your attempts at the mock exams. The same general principles apply as for the X Assignment Marking. In particular:

- Mock Exam Marking applies to a specified subject, session and student
- Marking Vouchers can be used for each mock exam paper. Marking vouchers have to be used for marking the AMP exam papers and can be used for marking the Mock Exam.

Recall that:

- marking is not included with the products themselves and you need to order it separately
- you should submit your script via The Hub in the format detailed in the mock exam instructions
- you will be able to download the feedback on your marked script, the solutions if you have Mock Exam Marking, and provide comments on the quality of the marking via The Hub.

2.4 Study skills and assessment

The Subject SA exams

The SA subjects demand a very different study approach to that of the other subjects.

There is only one paper in each of the SA Subject exams, consisting of up to four questions. Although you still need to know the factual information you have covered in the Course Notes, the paper will predominantly be a test of higher-order skills rather than a lengthy test of detailed factual knowledge. These higher-order skills are:

- analysis
- synthesis
- critical judgement
- communication.

In order to become adept at these skills, more is required of you over and above simply reading the Course Notes and practising some questions.

There are likely to be fewer knowledge-based questions in the SA Subject exam than you have been used to in the SP Subject exams. More thinking and planning will be required in the exam, which is difficult when you are under time pressure. You need to realise this and do something about it *before* you sit the exam.

A greater understanding is needed of the material being covered, beyond what you read in the Course Notes. This means you should be prepared to read around the subject and be aware of current topics within the field of the subject.

You will need a good knowledge of how the course links together. In particular, you should be ready to discuss 'big' topics, such as risk, scheme design and investment. In addition, you need to be able to assimilate efficiently all the necessary parts of both the subject SA and equivalent subject SP course, in order to prove you understand the subject fully. You will also need to employ your communication skills learned in Subject CP3.

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 this course to 'bed down' in your mind. Most successful students will probably aim to complete the course at least six weeks before the exam, thereby leaving a sufficient amount of time for revision. By finishing the course 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 of the course.

You can also try looking at our discussion forum, which can be accessed at **ActEd.co.uk/forums** (or use the link from our home page at **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 Chapter 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 Chapter 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 chapters in turn. To get the maximum benefit from each chapter you should proceed in the following order:

1. Read the syllabus objectives. These are set out in the box at the start of each chapter.
2. Read the Chapter Summary at the end of each chapter. This will give you a useful overview of the material that you are about to study and help you to appreciate the context of the ideas that you meet.
3. Study the Course Notes in detail, annotating them and possibly making your own notes. Try the self-assessment questions as you come to them. As you study, pay particular attention to the listing of the syllabus objectives and to the Core Reading.
4. Read the Chapter Summary again carefully. If there are any ideas that you can't remember covering in the Course Notes, read the relevant section of the notes again to refresh your memory.
5. Attempt (at least some of) the Practice Questions that appear at the end of the chapter.
6. Think about what specifically you might want to include from that chapter 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 idea generation prompts 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 chapters you have studied so far from time to time. It is useful to re-read the Chapter Summaries or to try the Practice Questions again a few days after reading the chapter 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. If you submit your assignment for marking, spend some time looking through it carefully when it is returned. 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. The markers will try their best to provide practical comments to help you to improve.

To be really prepared for the exam, you should not only know 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, content and marking structure of exam questions. You should attempt as many past exam 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. As you study each chapter, condense the *key* points (not whole chunks of text) on to a double side of A4 or less. This is essential as otherwise, when you come to revision, you will end up having to re-read the whole course again, and there won't be time.
5. Try to use memory aids, such as mind maps and acronyms, to remind you of the material when you come back to it later and help you to digest it further. Such aids may also be useful to have in your reference materials.
6. Attempt the questions in the notes as you work through the course. Produce your answer before you refer to the solution.
7. Attempt other questions and assignments on a similar basis, *ie* produce your answer before looking at the solution provided. 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 have your assignments marked it is *much* more useful if the marker's comments can show you how to improve your performance under timed conditions than your performance when you are under no time pressure.
 - The knowledge that you are going to do an assignment under timed conditions and then submit it (however good or bad) for marking can act as a powerful incentive to make you study each part as well as possible.
 - It is also quicker than trying to produce perfect answers.

8. Sit a mock exam four to six weeks before the real exam to identify your weaknesses and work to improve them. You could use a mock exam written by ActEd or a past exam paper. 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

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 Subject SA4, 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 the exam on the first sitting.

We recommend that you prepare for the exam by practising a large number of exam-style questions under timed conditions. This will:

- help you to develop the necessary knowledge and understanding of the key principles described in the Core Reading
- highlight exactly which are the key principles that crop up time and time again in many different contexts and questions
- help you to practise the specific skills that you will need to pass the exam.

There are many sources of exam-style questions. You can use past exam papers, the Practice Questions at the end of each chapter (which include many past exam questions), assignments, mock exams and ASET.

Exam question skill levels

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

Questions may be set at any skill level:

- Knowledge – demonstration of a detailed knowledge and understanding of the topic
- Application – demonstration of an ability to apply the principles underlying the topic within a given context
- Higher Order – demonstration of an ability to perform deeper analysis and assessment of situations, including forming judgements, taking into account different points of view, comparing and contrasting situations, suggesting possible solutions and actions, and making recommendations.

Command verbs

The Institute and Faculty of Actuaries use command verbs (such as 'Define', 'Discuss' and 'Explain') to help students to identify what the question requires. The Institute and Faculty of Actuaries has produced guidance on 'Command verbs used in the Associate and Fellowship examinations', to help students to understand what each command verb is asking them to do.

The Institute and Faculty of Actuaries also gives the following advice:

- The use of a specific command verb within a syllabus objective does not indicate that this is the only form of question which can be asked on the topic covered by that objective.
- The examiners may ask a question on any syllabus topic using any of the agreed command verbs, as are defined in the document.

You can find the relevant document on the Institute and Faculty of Actuaries' website at:

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

Past exam papers

You can download past exam papers and Examiners' Reports from the Institute and Faculty of Actuaries' website at **actuaries.org.uk**.

The examination

The Institute and Faculty of Actuaries has produced an:

- Examinations Handbook, which includes guidance around notation, suggesting possible standard keyboard notation that students could use when typing solutions in Word during their examinations
- Assessment Regulations document, which includes rules on eligibility, entry and conduct during an online assessment.

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: For the 2023 examinations, these documents will 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 printer (if you wish to print out the exam paper)
- 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](https://www.acted.co.uk/forums) (or use the link from our home page at [ActEd.co.uk](https://www.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 from time to time 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](https://www.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 education.services@actuaries.org.uk.

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