



Institute  
and Faculty  
of Actuaries

# A Guide to CM1 and CM2 Examinations

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## Introduction to Actuarial Mathematics (CM1 and CM2)

This guide should help answer your questions about CM1 and CM2, including:

- the format of the online examinations;
- guidance on how to take the examinations;
- administrative information

If you have any further questions that are not covered in this guide, please contact the Assessment Team: [exams@actuaries.org.uk](mailto:exams@actuaries.org.uk)

Past examination papers for CM1 and CM2 are available on the IFoA website: [Past exam papers](#)

## What is covered in CM1 and CM2?

CM1 provides a grounding in the principles of actuarial modelling, focusing on deterministic models and application to financial products. It will equip you with:

- the basic principles of actuarial modelling
- theories of interest rates
- the mathematical techniques used to model and value cashflows which are either certain or are contingent on mortality, morbidity and/or survival.

CM2 provides a grounding in the principles of actuarial modelling, focusing on stochastic and asset liability models and the valuation of financial derivatives. It will equip you with:

- the theories of behaviour of financial markets
- measures of risk
- determining reserves for a non-life insurer
- pricing options.

Subjects CM1 and CM2 assess your competence in the theory (using Microsoft Word) and the practical application (using Microsoft Excel) of these principles.

## The format of the CM1 and CM2 examinations

Details of the syllabus for CM1 and CM2 can be found here: [Actuarial Mathematics Syllabus](#).

The assessment of CM1 and CM2 subjects will each consist of two papers (Paper A and Paper B) which are typically held on consecutive working days. You must sit both papers in the same examination series.

You can expect to answer questions of varying marks across both papers in line with the topic weightings and skill levels outlined in the subject syllabus.

Paper A consists of questions where you will need to construct and type answers in Microsoft Word. The duration of this paper is three hours and 20 minutes and is timed and online.

In Paper B you will use Microsoft Excel to answer another set of questions. The duration of this paper is one hour and 50 minutes and is timed and online.

The final mark awarded for each subject will be the weighted average of the marks awarded in Paper A (70% weighting) and Paper B (30% weighting). To award a pass, this final mark must be equal to or exceed the pass mark for the subject.

Further information on marking is found here: [Marking and Results Publication](#)

## The timing of the CM1 and CM2 examinations

Examination dates can be found online at: [Exam dates](#).

For each subject, Paper A and Paper B will be scheduled over two consecutive working days where possible. Where this is not possible, the papers will be no more than two working days apart. Your examination booking confirmation will show the date and time of each examination.

Joining institutions will be available for candidates to download from the members' area of the IFoA website at least 2 weeks before the start of the examination session. Joining instructions will include information on how to create and verify your details on the IFoA online exam platform and how to complete relevant checks.

Note: Reading time is included in the overall examination time. It is up to you to manage your time between reading through the paper and starting to answer the questions.

There is guidance on exams as well as hints and tips at: [IFoA Examinations](#).

## What examinations should I have passed before sitting CM1 and CM2?

You do not have to pass any other examination prior to attempting CM1 or CM2.

There are a number of foundation topics that are assumed knowledge for CM1, including compound interest, basic probability theory and random variables. You may wish to ensure you are familiar with these topics before studying for CM1.

CM2 builds on many of the principles covered in CM1, so you may wish to ensure you are familiar with the topics covered in CM1 before studying CM2.

You are advised that Formulae and Tables books may be required for these assessments. You may use your own personal copy or you can purchase a copy through the e-shop at: [IFoA e-shop](#)

An electronic copy of the Formulae and Tables will be available on the exam platform during the examinations.

## What software do I need?

The computer on which you will complete your exam will need to have access to the following (please ensure you have access prior to the examinations):

Examination	Microsoft Word/Excel Version Required
CM1A	Microsoft Office 2013 (Word)
CM1B	Microsoft Office 2013 (Excel) <small>see note</small>
CM2A	Microsoft Office 2013 (Word)
CM2B	Microsoft Office 2013 (Excel) <small>see note</small>

**Note:** You will be provided with an Excel answer workbook at the start of the examination.

## What knowledge of Microsoft Word do I need?

Extensive knowledge of Word will **not** be necessary for this examination.

Please note, if you use Excel to aid with calculations in Paper A, any calculations or Excel formulae you use must appear in full in your Word answer script to ensure you receive the appropriate marks. The examiners may not award full marks if they cannot assess how your answer was determined, even if you have produced the correct answer. It is therefore important to include the key steps and method in your answer, particularly if you have used Excel as a calculator in Paper A.

## What knowledge of Microsoft Excel do I need?

Extensive knowledge of Excel is **not** part of the examination. However, candidates will be expected to perform calculations effectively using Excel.

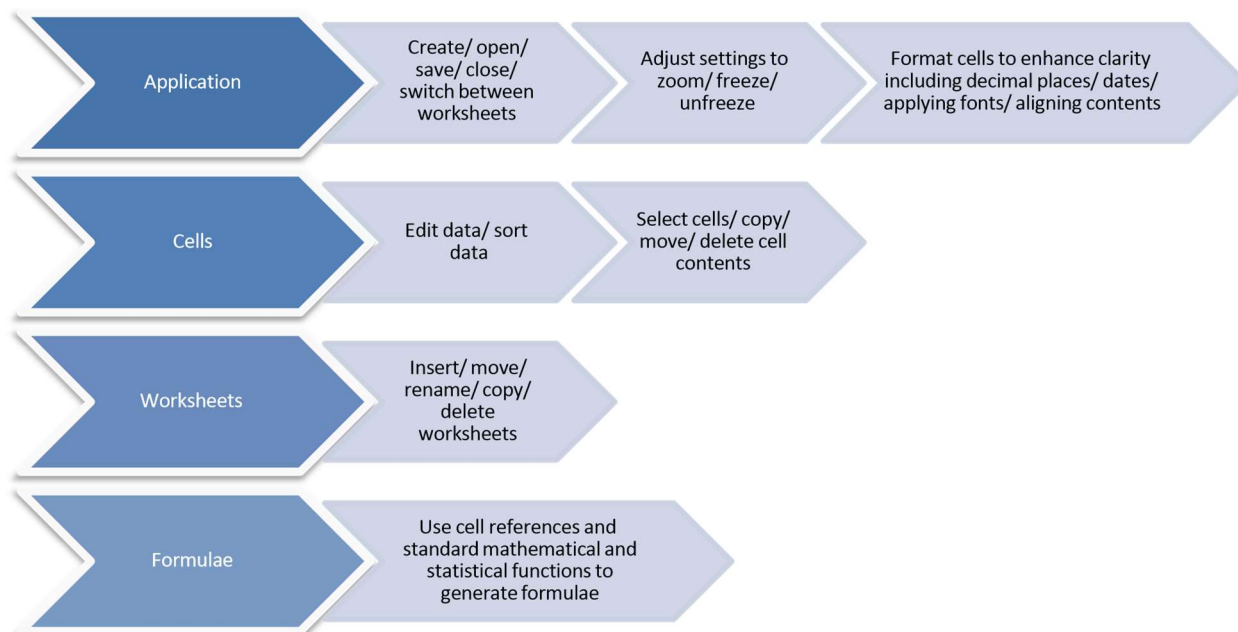
Candidates who have limited experience or rarely have an opportunity to create spreadsheets are encouraged to practise before sitting the examination. Past papers for CM1 and CM2 are available online: [Past Papers and Examiners' Reports](#).

Following is an indication of the Excel functions that candidates should be able to use. In addition, candidates are expected to know how to sort data and create and modify charts. Examination questions are designed **not** to require advanced Excel techniques. Candidates should not use in-built employer Excel functions nor user defined Excel functions.

Candidates are unlikely to be required, in any one examination, to use all of the functions listed here:

AVERAGE STDEV MIN / MAX / MEDIAN LARGE / SMALL SUMPRODUCT SUMIF	COUNT COUNTIF VLOOKUP HLOOKUP INDEX OFFSET	IF AND/OR NOT ROUND ABS INT	The "Goalseek" function, found under "What-If analysis" in the "Data" tab.
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Candidates are recommended to look up the details of how to use the below features before the exam. Further information and help is available free and online, as well as through many reference books and the Help facility in Excel itself.



## Where can I find more information?

Candidates should be familiar with the current [Examinations Handbook](#) for further information to prepare for IFoA examinations. The Handbook contains more information on how to prepare for your IFoA exam, what happens on the day of your exam and what happens after your exam.

The IFoA [Qualification Handbook](#) contains key information, guidance and support for all Student members of the IFoA and Associate members who are working towards Fellowship qualification.

The IFoA [Assessment Regulations](#) contain the regulations that all candidates are required to follow when sitting an IFoA assessment. If you fail to follow these regulations your assessment may be investigated.

**END**