

Presentation pattern *October to June*

Module description

This Level 3 module gives a broad overview of topics that are important in the modern development and theory of pure mathematics. It builds on students' knowledge of our Level 2 module, M208 Pure Mathematics.

M303 contains an introduction to number theory, develops the group theory introduced in M208, introduces the algebraic theory of rings and fields, and also introduces the theory of metric spaces, which builds on the real analysis in M208. Applications of these ideas to cryptography and fractals are given.

Person specification

The person specification for this module should be read in conjunction with the [generic person specification](#) for an associate lecturer at The Open University.

As well as meeting all the requirements set out in the generic person specification, you must:

- have a good degree (or equivalent) in mathematics (2.1 or above)
- be able to provide evidence of a complete understanding of the majority of material covered in the module (by, for example, successfully completing a pre-interview marking exercise) and demonstrate the ability and willingness to quickly develop an understanding of the remainder of the material
- have experience of successfully teaching pure mathematics at third year/level 3 (or higher) in both algebra and analysis (ideally in two or more of the following areas: metric spaces, group theory, and the theory of rings and fields)
- be able to give online tutorials, using materials that you may need to produce, that are appropriate for the module and students
- be willing to give face to face tutorials if required
- be willing and able to use e-learning facilities, such as:
 - the module website, and other University websites, to download essential material and to retrieve other information
 - the University systems for the purposes of monitoring students' progress
 - email and University forums for asynchronous communication with students, tutors, and other staff
 - online tutorials, as an alternative to face-to-face sessions
 - on-screen marking of electronically submitted tutor-marked assignments (eTMAs).

It would be an advantage to have:

- a higher degree in pure mathematics
- experience of teaching third year/level 3 pure mathematics to mature students and/or to students from a broad range of mathematical backgrounds

Additional information

- part of each TMA will be formative.

As students on this module usually submit their TMAs electronically, via the University's online TMA/EMA service, you will be required to mark and provide feedback on TMAs submitted electronically and to return the marked work as an electronic file, in the prescribed form, to the online TMA/EMA service. You may also need to mark paper TMAs. If you are invited for an interview and the latter involves an electronic marking exercise, some guidance will be given for this. Further information and advice will be available should you be appointed to the role.

The exact nature of e-learning facilities and university systems for monitoring the progress of students will evolve over the life of the module, and you will need to be prepared to adapt accordingly. Please note that, in accordance with usual University policy, tutors will be expected to use their own equipment for all aspects of e-learning.

Module related details - a full explanation can be found on the website

Credits awarded to the student for the successful completion of a module:	60
Number of assignments submitted by the student:	6
Method of submission for assignments:	1b
Level of ICT requirements:	2
Number of students likely to be in a standard group:	20
Salary band:	6
Estimated number of hours per teaching week:	5.5