

Presentation pattern *October to June*

This module is presented in alternate odd-numbered years.

Programme information

Most of the MSc modules are based on guided reading of an individual set textbook. Students need to successfully complete six modules worth 180 points to be awarded the degree.

Module description

An exciting area of active research, with both theory and applications still being developed, fractals are sets whose geometry cannot easily be described in classical terms. There's no simple definition, but all fractals have a highly intricate structure. Many fractals contain copies of themselves at many different scales, and are a very good representation of shapes of natural phenomena, such as clouds, mountains and ferns. In this module, students will deal with the theory of fractals and their geometry and look at examples to which the theory can be applied. The set book is *Fractal Geometry: Mathematical Foundations and Applications* (third edition) by K. J. Falconer (Wiley).

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 should:

- have a good honours degree in mathematics or a subject directly relevant to the module contents, together with evidence of successful postgraduate study in mathematics, such as a higher degree in mathematics
- have evidence of having worked in an area directly relevant to the module content
- be able to provide evidence of a complete understanding of a large proportion of the 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 the ability to present mathematics electronically and mark pdfs
- be willing to use elearning 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
 - the university's online tutorial software (training provided) to communicate with students where applicable
- on-screen marking of electronically submitted (in pdf format) student assignments (Online TMA system). It would be an advantage to have:

- a PhD in a relevant area
- experience of teaching and examining, particularly in distance education at postgraduate level
- teaching experience in the relevant specialist subject area at postgraduate or third year level.

Additional information

You will be required to mark assignments electronically. These will be in pdf format. You may also be required to mark paper assignments.

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

Credits awarded to the student for the successful completion of a module:	30
Number of assignments submitted by the student:	4
Method of submission for assignments:	1a
Level of ICT requirements:	2
Number of students likely to be in a standard group:	15
Salary band:	2
Estimated number of hours per teaching week:	2.5