

*Presentation pattern*    *October to June*

*Module description*

This module is designed to teach students about a variety of mathematical methods that are used in modelling, through their application to solving real world problems. These methods include differential equations, linear algebra and vector calculus. The students will become familiar with new mathematical skills - the module does not require the use of specialised software such as Computer Algebra systems and the study materials and assessment are designed to facilitate this. This module will give them a good foundation for higher-level study and is essential preparation for most Open University Level 3 mathematics, statistics or physics modules and some modules in data science.

*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 degree in any of mathematics, physics or a related subject, where the content includes a significant amount of applied mathematics
- an interest in the application of the mathematics covered in the module
- a good understanding of the mathematical methods covered in the module
- an interest in the relevance of mathematics to everyday life
- an interest in building adults' confidence in the use of mathematics
- an ability to support the development of mathematical skills and study strategies in students who have different interests and aspirations
- a willingness to use e-learning facilities, such as:
  - the module website, and other University websites, to download essential material and to retrieve other information
  - University systems for the purposes of monitoring students' progress
  - email and University forums for asynchronous communication with students, tutors and other staff
  - online tutorials, where appropriate, in line with the module tuition strategy
  - on-screen marking of electronically-submitted tutor-marked assignments.

It would be an advantage to have:

- experience of teaching mathematics at this level to adults or to students from a broad range of educational backgrounds
- taught applied mathematics at second level at a university
- enthusiasm for mathematics and its teaching
- experience of on-screen marking of electronically-submitted tutor-marked assignments at the Open University, especially in a symbolically-rich subject.

### *Additional information*

As students on this module will have the choice to submit their TMAs electronically, via the 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.

If the appointment process 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 student progress and handling TMAs will evolve in future, and you will need to be prepared to adapt accordingly. Please note that, under current University policy, tutors are 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:	30
Number of assignments submitted by the student:	4
Method of submission for assignments:	1b
Level of ICT requirements:	2
Number of students likely to be in a standard group:	20
Salary band:	3
Estimated number of hours per teaching week:	3.5

*There may be opportunities for ALs to undertake associated assessment work for which there will be additional payment and about which you will be contacted separately if applicable.*