



Teaching Discrete Mathematics 2 (TD2)

1st March 2022

Overview

Discrete maths features in all AS/A level Further Mathematics specifications, albeit under different titles:

- Discrete Mathematics - AQA and OCR A
- Decision Mathematics - Edexcel
- Modelling with Algorithms - OCR B (MEI)

Teaching Discrete Mathematics 2 (TD2) is a [sustained professional development course](#) for teachers wishing to build their confidence in teaching discrete/decision mathematics. TD2 builds upon the topics studied in [TD1](#) to cover the additional subject content required for A level Further Mathematics.

TD2 consists of:

- Eight live online tutorials
- Two compulsory study days
- Access to our online Integral platform, including course-specific teaching and learning resources
- Email support from tutors and access to an online group forum

Towards the end of the course a short assignment is issued, for which support and guidance are provided. Course certificates will be available for those participants completing the assignment.

Aims

- Gain a deep understanding of the application of algorithms to a wide range of problems
- Develop skills with using standard algorithms to solve optimisation problems
- Learn project planning processes which minimise overall costs and make the best use of available resources
- Develop confidence with incorporating practical work within maths teaching
- Link topics in discrete maths with other areas of maths

Who will benefit from attending?

TD2 is designed for A level Further Mathematics teachers who are new to teaching discrete/decision mathematics, or those that have previously taught D1 and D2 but wish to broaden and deepen their understanding.

Our sustained courses enable teachers to broaden and deepen their subject, pedagogical and pedagogical content knowledge. Teachers, with enhanced subject knowledge, are therefore better equipped to make links between topics, address students' misconceptions and confidently challenge learners at all attainment levels. Our course aims and intended outcomes are consistent with the principles set out in the Education Inspection Framework.

Content

The TD2 unit follows on from the [TD1](#) unit. Together the two units cover the discrete/decision mathematics content for A level Further Mathematics.

Materials and Equipment

A computer with a reliable internet connection will be required to attend the online tutorials. In addition, a headset with a microphone is suggested to get the best experience of the online tutorials.

Frequently Asked Questions

How much time will I need to devote to studying?

It is difficult to be specific as this will depend on previous experience. In the past, delegates have reported spending between 1 and 4 hours studying each week. Ideally, delegates should aim to study regularly for a few hours each week however, in reality many working teachers have weeks when this is difficult and they use out-of-term time to catch up.

It is not our usual policy to allow teachers to enrol on more than one sustained course (TAM, PALM, TFM, TM, TS, TD) at the same time. Please contact us at cpd@mei.org.uk before making multiple course applications.

Do I have to hand in any work during the course?

The TD2 assignment is the only work that delegates hand in. To receive a certificate at the end of your TD2 course you will need to submit and pass the TD2 assignment. Certification is optional but we strongly encourage you to submit an assignment anyway to help you consolidate what you have learnt. In the past most teachers have chosen to submit an assignment.

Where do study days take place?

We vary face-to-face study day locations. Recently study day locations have included London, Coventry, Manchester or Leeds.

Eligibility

Participants must have a sound understanding of the discrete content of AS level Further Mathematics, ideally through having completed [TD1](#), though this is not compulsory. This requires knowledge of subject content beyond the scope of the D1 modules in the legacy specifications.

Cost

This course is free of charge to teachers working in state-funded schools and colleges in England. For others the course fee is £300.

Schools and colleges located within [Priority Areas](#) are eligible to receive a subsidy of £250 per study day.

Study Schedule

Study days

Online study days will generally take place between 09:00 and 13:00. Attendance at both days is expected.

Study day 1:

Online

Saturday 2 April 2022

Study day 2:

Online

Saturday 14 May 2022

Online sessions

Online sessions take place from 19:00 to 20:15. They are conducted live and recordings are available for playback.

Date	Topic
Tue 1 Mar 2022	Introductory session
Thu 10 Mar 2022	Graph Theory: Planarity
Thu 24 Mar 2022	Dynamic Programming
Thu 28 Apr 2022	Linear Programming: Simplex 1
Thu 12 May 2022	Linear Programming: Simplex 2
Thu 26 May 2022	Transportation
Thu 16 Jun 2022	Group Theory
Thu 30 Jun 2022	Second Order Recurrence Relations

Assignment:

During the summer you will work towards completing an assignment. The deadline for this assignment is 5 September 2022.

Key Facts

Event ref:	#9028
Audience:	Teachers
Curriculum focus:	A level Further Mathematics
Mathematical focus:	Discrete
Event format:	Sustained Professional Development
Event length:	6 months
Study days:	2
Online sessions:	8
Region:	National
Venue:	Online classroom and virtual study days
Start date:	Tue 1st Mar 2022
Fee:	Free for state-funded schools; £300 otherwise
Priority Area subsidy:	2 x £250

Registration

For more information, or to register for this event, please visit <https://amsp.org.uk/events/details/9028>