



Advanced Mathematics  
Support Programme®

Continuing Professional  
Development  
Standard

National Centre  
for Excellence in the  
Teaching of Mathematics



# Teaching Mechanics 1 (TM1)

## Online and Manchester or London

12th September 2019

### Overview

FOR THE NEWEST VERSION OF THIS COURSE PLEASE GO TO: <https://amsp.org.uk/events/details/7425>

Teaching Mechanics 1 (TM1) is a [sustained professional development course](#) for teachers wishing to build their confidence in teaching mechanics. TM1 covers the mechanics content from all major specifications for AS/A level Mathematics.

TM1 features:

- 10 live online tutorials
- Two study days
- Access to online teaching and learning resources
- Email support from a tutor 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.

After TM1, participants have the opportunity to continue to [TM2](#), which will further expand understanding of mechanics teaching and cover the mechanics content from AS/A level Further Mathematics.

### Aims

- Gain a deeper understanding of the principles of mechanics
- Develop skills with mathematical modelling and problem solving
- Develop confidence with incorporating practical work within maths teaching
- Improve subject knowledge and build on pedagogical skills
- Link topics in mechanics with other areas of maths

### Who will benefit from attending?

TM1 is designed for teachers who are currently teaching AS/A level Mathematics, or who wish to teach it at some point in the near future.

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

TM1 covers the mechanics content for AS/A level Mathematics. This includes the following topics:

- Kinematics in one dimension
- Introduction to forces and Newton's laws
- Applications of forces and Newton's laws
- Forces in two dimensions
- Connected particles
- Kinematics in two dimensions
- Projectiles
- Moments
- Variable acceleration

## 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

### **Do I need to have taught A level Mathematics before doing the TM1 course?**

There is no requirement that applicants have taught A level Mathematics before undertaking TM1.

### **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.

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

The TM1 assignment is the only work that delegates hand in. To receive a certificate at the end of your TM1 course you will need to submit and pass the TM1 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.

Teachers working at state-funded schools/colleges need to demonstrate that they have engaged with the course unit to trigger a course fee reimbursement at the end of the course. If you have missed either study day you may be required to submit the TM1 assignment in order to qualify for the course fee reimbursement whether or not you wish to certify.

### **When do the TM1 course fees have to be paid?**

An invoice for course unit fees is issued after enrolment at the start of the course unit. Invoices are issued no later than one month after a delegate has started their course.

### **How does the subsidy for teachers in state-funded schools/colleges work?**

The AMSP is supported by the Department for Education and therefore only course fees for teachers working in state-funded schools/colleges in England are eligible for a subsidy. If the course fee is paid by the applicants school /college then the same school/college will receive the subsidy when the course is completed by the applicant.

### **Can I pay my own course fee?**

Yes, you may choose to pay your own course fee. Applicants who are teachers working in state-funded schools/colleges in England are still eligible for a course fee subsidy. If the course fee is paid directly by the applicant then the applicant will receive the fee reimbursement on completion of the course. It is a requirement that the applicant submits an email address that has been issued by the state-funded school/college where they are employed and that the applicants email address is substantiated.

### **What happens if I can't attend one or more of the study days?**

Teachers on the course enjoy the study days and appreciate the chance to meet up with other teachers on the course. Study day materials are shared with all course delegates afterwards. If you are a teacher working at a state-funded school/college then to be eligible for a course subsidy you will need to demonstrate that you have engaged with the course, which includes the expectation that you will attend the face-to-face study days.

If you are unable to attend a study day and this is due to unforeseen or special circumstances then the course fee reimbursement may still be granted at the discretion of the Course Leader. You may be required to submit the TM1 assignment as additional evidence of engagement with the course. If you pass the end of unit assignment, you will still be eligible for a TM1 course certificate.

## Cost

The course fee for TM1 is £300.

If you are working in a state-funded school or college, participation in this course attracts a reimbursement of course fees, subject to engagement and completion of the course.

Schools and colleges located within [Priority Areas](#) are eligible to receive a further subsidy of £500 to support staff cover and travel costs.

# Study Schedule

## Study days

Please note that the London study days are now full, but we are still accepting applications for Manchester.

### Study day 1:

#### Manchester

Thursday 28 November 2019

or

#### London (Full)

Saturday 30 November 2019

### Study day 2:

#### Manchester

Thursday 6 February 2020

or

#### London (Full)

Saturday 8 February 2020

### Venue details:

Venue	Address	Directions
Manchester	Manchester Meeting Place, University of Manchester, Sackville Street Campus, Manchester, M1 3AL	<a href="#">?</a>
London	NCVO, Society Building, 8 All Saints Street, London, N1 9RL	<a href="#">?</a>

## Online sessions:

Online sessions are conducted live and recordings are available for playback

Evening online tutorials (19:00-20:15)	Study content
Thursday 12 September 2019	Introductory session
Thursday 19 September 2019	Kinematics in 1D
Thursday 3 October 2019	Introduction to forces and Newton's laws
Thursday 17 October 2019	Applications of forces and Newton's laws
Thursday 7 November 2019	Forces in 2D
Thursday 21 November 2019	Connected particles
Thursday 5 December 2019	Kinematics in 2D
Thursday 19 December 2019	Projectiles
Thursday 16 January 2020	Variable acceleration
Thursday 30 January 2020	Moments

## Assignment:

During February and March you will work toward completing an assignment. The deadline for this assignment is 31 March 2020.

Unit certification: 30 April 2020 (or before)

## Participant feedback

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*I loved absolutely all of it!*

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*...really enthused me to go away and DO some mechanics.*

?

*...it made sense!*

## Key Facts

<b>Event ref:</b>	#5983
<b>Audience:</b>	Teachers
<b>Curriculum focus:</b>	A level Mathematics
<b>Mathematical focus:</b>	Mechanics
<b>Event format:</b>	Sustained Professional Development
<b>Event length:</b>	6 months
<b>Study days:</b>	2
<b>Online sessions:</b>	10
<b>Region:</b>	National
<b>Venue:</b>	Online classroom with study days in Manchester or London
<b>Start date:</b>	Thu 12th Sep 2019
<b>Fee:</b>	£300
<b>State-sector subsidy:</b>	£300
<b>Priority Area subsidy:</b>	£800

## Registration

For more information, or to register for this event, please visit <https://amsp.org.uk/events/details/5983>