



# LOPD | AS and A level Maths: Mechanics

## Online Series

8th January 2022

### Overview

*Live Online Professional Development (LOPD)* courses form a programme of innovative online courses, designed to enable teachers to develop their teaching with confidence in a convenient, stress-free way.

LOPD courses are delivered using a browser-based online classroom that allows participants to collaborate online in real time. The courses aim both to cover subject content common to all current specifications and to facilitate the exchange of teaching ideas. Rather than attending a one or two day course away from school or college, participants will use the internet to meet weekly online.

This course comprises eight online sessions with an experienced tutor, each between 60 and 90 minutes in length and delivered in a small group of teachers allowing opportunities for interaction and discussion. An optional introductory session is also available for those teachers who are fully new to teaching Mechanics.

### Aims

- To provide teachers with an opportunity to improve or refresh their subject knowledge of the main topics that typically feature in AS and A level mechanics
- To provide opportunities to interact with the course tutors and other delegates in a small group to discuss subject content, resources and teaching ideas.

### Who will benefit from attending?

Teachers who are new to offering the mechanics element of the A level Mathematics course and those who are seeking to refresh their approach in this context.

### Content

- Kinematics
- Newton's laws and simple equilibrium
- Motion under gravity - 1D and 2D
- Friction
- Resolving forces
- Dynamics for motion on a plane
- Moments in simple static contexts

## Materials and Equipment

You will need access to a good internet connection, using Chrome or Firefox as a browser. You will need a headset with a microphone to engage with the live sessions and most courses also require a means of sharing handwritten maths, such as a mini-whiteboard and webcam, a visualiser or a graphics tablet. Full details of how to set these up can be found on our [online classroom support page](#).

## Other Information

The order of topics may be subject to change.

## Eligibility

All teachers are eligible for this course, however free places are available only to teachers in state-funded schools, colleges and academies in England. Applications for free places will be checked to verify eligibility.

Teachers must ensure that they are able to attend the live sessions before applying for a place as our courses are subject to very high demand: please do not apply for a place if you will not be able to attend at least 75% of sessions. Further instances of our courses will be added to meet demand; if you are not able to attend 75% of the sessions in this course, you might like to consider completing our [register of interest form](#) (this is NOT an application form) and letting us know when would be better for you.

## Cost

This course is free of charge to teachers working in state-funded schools, colleges and academies in England, otherwise the fee is £195.

## Study Schedule

Date	Session content
Sat 08 Jan	Kinematics 1 - constant acceleration, graphs
Sat 15 Jan	Motion under gravity - 1D
Sat 22 Jan	Newton's laws and simple equilibrium
Sat 29 Jan	Motion under gravity - 2D (projectiles)
Sat 05 Feb	Kinematics 2 - variable acceleration
Sat 26 Feb	Friction
Sat 05 Mar	Resolving forces
Sat 12 Mar	Dynamics for motion on a plane
Sat 19 Mar	Moments in simple static contexts

## Key Facts

Event ref:	#9186
Audience:	Teachers
Curriculum focus:	A level Mathematics
Mathematical focus:	Mechanics
Event format:	Live Online Professional Development
Online sessions:	9
Region:	National
Next session:	Sat 22nd Jan 2022
Course times:	09:00 - 10:30
Fee:	Free for state-funded schools; £195 otherwise

## Registration

Managed by **MEI**  
Mathematics Education Innovation

For this event, please visit <https://amsp.org.uk/events/details/9186>

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