



LOPD | AS and A level Maths: Mechanics

Online series

2nd October 2021

Overview

Course length: One term, weekly sessions

LOPD | AS and A level Maths: Mechanics is a Live Online Professional Development course: the synchronous sessions will concentrate on the modelling of subject knowledge delivery including the use of technology and will cover content from all major specifications for A level Mathematics. Examples of pedagogy will be modelled by the tutors and participants will be encouraged to share their approaches.

Course features:

- Nine online sessions, approximately weekly, each up to 90 minutes long
- Access to course-specific teaching and learning resources in our Integral online platform
- A year of access to resources and recordings of the live sessions

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 AS and A level Mathematics course and those who are seeking to refresh their approach in this context. Please note this is not suitable for those wishing to study the content in order to gain an A level qualification.

If this course is not quite what you are looking for, you may like to consider:

- [Teaching Mechanics 1 \(TM1\)](#) for A level Maths content
- [Teaching Mechanics 2 \(TM2\)](#) for A level Further Maths content
- [On Demand | Imperial mA*ths project teacher support](#)

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 must have access to audio, to speak as well as listen, to engage with the live sessions and you may also find a means of sharing handwritten maths, such as a mini-whiteboard and webcam, a visualiser or a graphics tablet, useful. Full details of how to set these up can be found on our [online classroom support page](#).

Frequently Asked Questions

I am a trainee teacher, can I join this course? Will there be a fee?

Trainee teachers are eligible to join all our LOPD courses, although this will be at the standard fee. If you have already secured a role in a state funded school/college in England, or are undertaking a placement in such a school, and the school is happy to be stated on your application, then you can join the course free of charge.

I can't make the time or the day that this course is being offered, is there an alternative? Can I access the course via recordings only?

LOPD courses run in seasons and this course will be available again next term. We will also add additional instances of a course if there is sufficient demand in the current season. Please complete the [register of interest form](#) giving details of your needs and this will be taken into account in our planning. We will then contact you as soon as a suitable course becomes available.

LOPD courses are designed specifically for synchronous study and we feel strongly that live attendance, where you can interact with the tutor and other participants, is necessary to get the best experience of the course. We would recommend therefore that you seek alternative professional development which fits with your situation.

If, however, this is the only opportunity available, we will accept recordings-only participation. We would appreciate it if you would make it clear on your application that this is what you require as the viability of our courses depends on live participation numbers.

Please note that if you do not attend the live sessions, you will not qualify for a course certificate and any fees due will remain unchanged.

Will this course include ideas for teaching the content as well as subject knowledge?

This course will take a peer-to-peer approach: we will be delivering subject knowledge whilst modelling recommended pedagogies. Participants will be encouraged to reflect on the practices demonstrated as well as their own teaching approaches to the content. If you require greater focus on pedagogy, we recommend our [sustained professional development programmes](#).

Will this course cover all of the topics in my specification?

LOPD courses cover a majority of the topics in each of the major specifications for the relevant course but should not be considered comprehensive. We will ensure a focus on those parts of the content which we feel teachers would find most useful: this will mean the some topics are touched on only lightly to allow more depth of work in the key areas.

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 02 Oct	Constant acceleration
Sat 09 Oct	Introduction to forces in one dimension
Sat 16 Oct	Newton's laws
Sat 06 Nov	Motion under gravity in two dimensions
Sat 13 Nov	Variable acceleration
Sat 20 Nov	Friction
Sat 27 Nov	Resolving forces
Sat 04 Dec	Dynamic motion
Sat 11 Dec	Moments

Key Facts

Event ref:	#8837
Audience:	Teachers
Curriculum focus:	A level Mathematics
Mathematical focus:	Mechanics
Event format:	Live Online Professional Development
Online sessions:	9
Region:	National
Start date:	Sat 2nd Oct 2021
Course times:	09:00 - 10:30
Fee:	Free for state-funded schools; £195 otherwise

Registration

For more information, or to register for this event, please visit <https://amsp.org.uk/events/details/8837>