



Advanced Mathematics
Support Programme®

Continuing Professional
Development
Standard

National Centre
for Excellence in the
Teaching of Mathematics



A level Mechanics Professional Development Day

Brighthouse

20th March 2019

Overview

A one-day event for teachers to develop their own subject knowledge and classroom practice. This professional development is suitable for any teachers wishing to develop their own subject knowledge and classroom practice in teaching mechanics for the new A level maths specification.

To apply, please email Raj Kumar (raj.kumar@amsp.org.uk) using the 'apply' button below.

Aims

- To introduce the fundamental ideas of mechanics and ground it in the pure mathematics side of the A level syllabus
- To address misconceptions and assumptions associated with the subject
- To explore and discuss some simple practical activities to take into the classroom
- To be able to apply mechanics to tackling A level questions
- To give a view of what lies over the horizon for students who go on to study subjects such as engineering and physics at university or on apprenticeship courses

Who will benefit from attending?

The course will suit teachers who have taught the M1 modules on the legacy A levels, and who want to upskill to mechanics in the new A levels.

Content

Delegates will be shown some practical demonstrations of mechanics principles, and there will be a lot of discussion on modelling.

You are encouraged to bring with you any questions that you have about mechanics, whatever the source, e.g. your own worries and concerns about teaching the subject, questions from text books, A level questions etc. Towards the end of sessions there will be opportunities to have these questions addressed as well as during refreshment and lunch breaks.

Other Information

Presenter details:

Tom Roper spent 17 years teaching in schools and colleges before moving to Leeds University as a lecturer in mathematics education training teachers of mathematics. He was one of the first teachers to work with the Mechanics in Action Project writing classroom materials, co-authoring A-level mechanics textbooks and using the mechanics kit in school. He has written articles on the application of A-level mechanics in sport and has a strong interest in mathematics in other subjects on the curriculum. He was President of The Mathematical Association 2017-18. Now retired he is still very much involved with mechanics and mathematics in general.

Cost

This event is £50 per teacher for state-funded schools.

Schools and colleges located within [Priority Areas](#) are can attend for free

Study Schedule

| Time | Session |
|-------|--|
| 09:30 | Arrival, registration and refreshments |
| 10:00 | Newtons Laws <ul style="list-style-type: none">● Statement of the laws● Misconceptions● Assumptions● Applications to A level dynamics questions |
| 11:15 | Break |
| 11:30 | Statics including moments and the law of friction <ul style="list-style-type: none">● What is friction?● What assumptions do we make about it?● Drawing force diagrams.● Application of statics to A level questions |
| 12:45 | Lunch |
| 13:30 | Kinematics and projectiles <ul style="list-style-type: none">● Vector notation● Application to A level questions |
| 14:45 | Break |
| 15:00 | Ay questions and a view over the horizon |
| 15:45 | Plenary/feedback |
| 16:00 | Depart |

Key Facts

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| Event ref: | #5413 |
| Audience: | Teachers |
| Curriculum focus: | A level Mathematics |
| Mathematical focus: | Mechanics |
| Event format: | Face-to-face Professional Development |
| Event length: | 1 day |
| Region: | Yorkshire and the Humber |
| Venue: | Junction 25 Conference Centre, Kirkdale House, Armytage Road, HD6 1QF |
| Date: | Wed 20th Mar 2019 |
| Course times: | 09:30 - 16:00 |
| Fee: | £50 |
| Priority Area subsidy: | £50 |

Registration

For more information, or to register for this event, please visit <https://amsp.org.uk/events/details/5413>