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**SPRING 2024**

**PHYSICS**



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# NEW: STEPPING UP TO LEADERSHIP IN SCIENCE

CODE 9695

## ABOUT THIS COURSE

Aimed at newly appointed Heads of Science and those that aspire to a leadership role within Science, this practical course has been developed to examine the complex tasks faced by leaders of Science and the strategies necessary for success.

These are exciting and challenging times to lead in Secondary Science. Science faculties have the most rewarding subject to teach, and benefit from many developments and resources for teaching on social media. However, Science can be a more difficult subject to lead than others within a secondary school with a complex curriculum offer, shortages of qualified subject specialists, health and safety responsibilities and practical work with large teams and non-teaching staff to lead.

Delegates will take away practical strategies to enable them to hit the ground running, enabling them to keep on top of the day-to-day issues whilst developing their team and a shared strategic vision.

## PROGRAMME

	TIME
<b>Getting Started: Analysing the challenges of Science leadership</b> <ul style="list-style-type: none"> <li>What are the main duties and responsibilities as a leader in Science</li> <li>Identifying the challenges your department is facing</li> <li>Get to know your team and build quick relationships</li> </ul>	10.00 – 10.45am
Discussion: coffee break	10.45 – 11.00am
<b>Exploring the behaviours of an effective, inspiring and motivating leader</b> <ul style="list-style-type: none"> <li>Exploring the different skills needed to be personally excellent as a teacher, effective as a manager and inspirational as a leader</li> <li>Exploring the behaviours of successful leaders</li> <li>Understanding your natural style of leadership</li> <li>Exploring different styles of leadership and understanding when each style is effective and what the pitfalls might be</li> <li>Accountability: Setting the standards for high performance</li> <li>The power of your strategic plan and curriculum</li> <li>Using Assessment: Monitoring &amp; Tracking</li> </ul>	11.00 – 12.00pm
<b>Building your Team and Managing people with confidence</b> <ul style="list-style-type: none"> <li>How to build your team ethos</li> <li>Understanding when to manage and when to lead to get the best out of your team</li> <li>Managing the ways in which we communicate with our team</li> <li>Exploring different styles of leadership – from being brave enough to delegate or have the conviction to simply tell people what to do, and what the middle ground looks like</li> <li>Strategies to build relationships with all those around you to ensure you have support from all levels</li> <li>Getting everyone on board with your vision</li> </ul>	12.00 – 12.40pm
Lunch and informal discussion	12.40 – 1.40pm
<b>Effective Leadership in Teaching and Learning: High Expectations, High Challenge, High Reward</b> <ul style="list-style-type: none"> <li>Strategies for establishing, maintaining and promoting high quality teaching, learning and assessment in Languages</li> <li>Supporting your team with innovative and engaging teaching</li> <li>The importance of delegating and utilising the strengths of your staff</li> <li>Using data effectively for monitoring and feedback, to lead to outstanding student outcomes</li> <li>Get a “buzz” around Science through enrichment provision</li> </ul>	1.40 – 2.35pm
Discussion: afternoon tea	2.35 – 2.40pm
<b>Dealing with challenging issues</b> <ul style="list-style-type: none"> <li>Monitoring staff performance to ensure outstanding student outcomes across the department</li> <li>Challenging underperformance, sustaining excellence and maintaining standards</li> <li>How to best support staff professional development in line with departmental needs</li> <li>Dealing with difficult conversations</li> </ul>	2.40 – 3.20pm
<b>Selling yourself: How to get the job</b> <ul style="list-style-type: none"> <li>Alignment of values</li> <li>Writing your application and letter</li> <li>The interview day</li> <li>What might be involved and asked: exploring your preparation</li> </ul>	3.20 – 3.40pm

LOCATION/DATE

London

Wednesday 13 March 2024

Thursday 20 June 2024

## COURSE LEADER

**Prishilla Narindar** is currently Deputy head of Faculty and Science lead at Henry Cort College. With over 10 years' experience in KS3 and KS4 science curriculum delivery in mainstream education and private tuition, she has led the local Science GCSE collaboration development group that partners with 8 schools and colleges. She has also successfully led active learning, cognitive load association and assessment workshops whilst coaching PGCE and ITT students for local partnerships.

## WHO SHOULD ATTEND?

- Newly appointed Heads of Science
- Aspiring leaders in Science
- Newly appointed subject leaders in Science
- Newly appointed key stage leaders in Science
- TLR holders in Science
- Heads of Science Faculties

## BENEFITS OF ATTENDING

- Examine how to set the parameters for a Science department to flourish
- Consider the importance of strategies to align your department with whole-school priorities
- Explore the importance and power of your strategic and curriculum planning
- Discuss and highlight the role of assessment and monitoring of pupil progress
- Introduction to middleleadership in schools, with real examples drawn upon by the course leader
- Discuss the process of applying, interviewing, and securing your place as a Head of Science

# LEADERSHIP OUTSTANDING LEADERSHIP OF A SCIENCE DEPARTMENT

CODE 9541

## ABOUT THIS COURSE

Leading in Science can be both exciting and challenging. However, it's no secret that leading a Science department comes with unique complexities. The curriculum is intricate and there are shortages of qualified subject specialists and you'll bear the responsibility of ensuring health and safety compliance and overseeing practical work involving large teams and non-teaching staff.

In this new and updated course, we'll consider what it takes to achieve excellence in a Science department and the pivotal role of the Head of Science in maintaining this excellence. Delegates will take away practical and actionable strategies on how to tackle day-to-day challenges, develop the team and work towards a shared strategic vision.

Whether you are currently a Head of Science or aspire to hold such a position, this course is designed to cater to your interests and needs, unlocking the tools and insights to lead with confidence and success.

## PROGRAMME

### Leadership and Vision

10.00 – 10.30am

*Unleashing Leadership Brilliance in Science Departments*

- Explore key leadership qualities and skills tailored for a Science Department
- Practical applications and tips to elevate your department's performance
- Decipher the significance of vision and its pivotal role in values, strategy, and execution
- Guided session on crafting a compelling vision for your team, enriched with real-world examples

### Effective Techniques to Drive Department Improvement

10.30 – 11.20am

*Journey to Outstanding: Navigating School Inspections*

- Set your sights on excellence with insights into 'outstanding' practices
- Dive into research-backed, achievable tips for departmental improvement
- Elevate teaching and learning with a focus on top-end students, feedback strategies, higher-order thinking, and more
- Master the art of staff recruitment: asking the right questions, identifying excellence in interviews and lessons

Discussion: coffee break

11.20 – 11.40am

### Leading Outstanding Teaching and Learning

11.40 – 12.40pm

*Crafting a Legacy of Excellence in Science Education*

- Review research on outstanding teaching and learning
- Demystify preconceptions, explore student self-regulation, and balance with explicit instruction
- Delve into memory enhancement techniques: retrieval practice, spaced retrieval, interleaved practice
- Unlock the secrets of effective practical work and scientific vocabulary
- Transform your scheme of work into an outstanding educational roadmap
- Harness the power of assessment data for targeted intervention

Lunch and informal discussion

12.40 – 1.40pm

### Staff Development

1.40 – 3.00pm

*Nurturing Excellence at Every Level*

- Embrace the importance of continuous staff development
- Tailored tips for various staff experience levels, ensuring proactive growth
- Elevate science technicians with practical strategies
- Master the art of effective department communication and meetings
- Structure feedback conversations for positive change
- Create an outstanding department handbook, incorporating safety, ICT, SEND, and teacher consistency

Discussion: afternoon tea

3.00 – 3.10pm

### Optimal Time Management

3.10 – 3.30pm

*Efficiency Unleashed in Science Departments*

- Navigate time effectively using the Eisenhower Matrix
- Embrace the art of delegation even in challenging circumstances

LOCATION/DATE

London

Wednesday 27 March 2024

Tuesday 09 July 2024

## COURSE LEADER

**Dr Stephen Belding** is an accomplished teacher and Head of Chemistry at Rugby School. He attended St John's College, Oxford University, where he earned a degree in Chemistry (MChem) and a DPhil in Computational Electrochemistry. With a teaching career that commenced in 2012, Stephen has successfully instructed across five distinct exam specifications at three highly regarded schools in the UK. In 2022, he concluded his MEd research focusing on inspection reports and strategies for school improvement.

## WHO SHOULD ATTEND?

- Current Heads of Science Departments
- Aspiring Heads of Science
- Those wishing to take on a leadership role within a Science Department
- Senior leaders responsible for Science

## BENEFITS OF ATTENDING

- Consider what makes a Science department excellent, and the role of the Head of Science in achieving excellence.
- Look at ways in which a Head of Science can develop and improve teaching and learning within the department.
- Enhance your ability to recruit, lead, support and nurture teachers and technicians in the department.
- Reflect on strategies for dealing with the challenges and making the most of the opportunities presented by a Head of Science position.
- Discuss the application of research-based techniques for effective time management and delegation.

# NEW: AQA A-LEVEL PHYSICS: PREPARING STUDENTS FOR EXAM SUCCESS IN 2025 AND BEYOND

CODE **9655**

## ABOUT THIS COURSE

This brand-new course for all teachers of AQA A-Level Physics will explore how you can turn the mistakes made in previous exam series into an opportunity for positive change moving forward, fully preparing your students for success in the year ahead and beyond.

This interactive course will support and challenge teachers in equal measures. You will leave with a thorough overview of the main lessons to be learnt from previous examinations and a wide range of ideas, methods and approaches to prepare students to maximise their potential in the 2025 exams.

Emphasis will be made on the demands of the exams that are not met as well as they could be, and the implications this has for your A-Level teaching and learning.

## PROGRAMME

TIME

### The Exam - Reflections and Approaches

10.00 – 11.00am

- Feedback from recent exams: what is it essential to be aware of?
- The main factors that affect examination success in all 3 papers and the challenges experienced by candidates
- Deep-diving problem questions from the exam papers
- How to engage students in the content of the course, and how to maximise their focus on what brings the most reward in examinations
- Reflections on recent mark schemes and what this means moving forward
- Starting to make a plan of action- what should we do? How should we do it?

Discussion: coffee break

11.00 – 11.20am

### A Focus on Comprehension and Essay Questions

11.20 – 12.20pm

- How do students answer compared to what the exam board want to see
- Strategies to decipher and meet the demands of the questions
- Managing synopticity

Lunch and informal discussion

12.20 – 1.20pm

### Short Answer Headaches

1.20 – 2.20pm

- Dealing with data in the manner that A-Level Physics expects
- Working with new and innovative methods to prepare students for data demands
- Deciphering where marks are lost
- Working on strategies to minimise the silly mistakes

Discussion: afternoon tea

2.20 – 2.30pm

### Moving Forward and Maximising Success in 2025 and Beyond

2.30 – 3.30pm

- Summary of what we have learnt
- Producing a plan of action to maximise student success in 2025
- Specific lessons to be learnt and how to prevent them from happening again
- Ensuring whole department success - managing staff and developing a progressive teaching culture that organically learns and improves

LOCATION/DATE

London

Friday 14 June 2024

## COURSE LEADER

**Howard Dodd** has worked for many years as a teacher, subject leader, university lecturer, A-level Physics Principal Examiner, ITT trainer, QTS assessor and as a consultant to schools and colleges on leadership, management, assessment and pedagogy. He has successfully presented in-service training courses for teachers for over 30 years.

## WHO SHOULD ATTEND?

- Teachers of AQA A-Level Physics
- Heads of Department
- Academic leads for Physics
- Prospective or new teachers of AQA A-Level Physics

## BENEFITS OF ATTENDING

- Understand the main lessons to be learnt from previous examinations
- Gain an informed overview of key areas of concern
- Learn new and innovative ways to deliver areas that target these areas of concern
- Experience and try out novel pedagogy in the classroom
- Produce a strategic approach to maximise student success in 2025 and beyond



# OUTSTANDING ASSESSMENT, MARKING AND FEEDBACK IN AQA A-LEVEL PHYSICS

CODE **9456**

## ABOUT THIS COURSE

This new course focuses on developing a deeper understanding of assessment in AQA A-Level Physics and provides opportunities to explore strategies to enhance exam performance for students of all attainment levels.

The course will enable teachers to develop their understanding and skills needed to assess student responses to the different question types on AQA A-Level Physics exam papers. The course will also emphasise those teaching and learning strategies which will best facilitate improvement in student performance with a focus on the role of assessment for learning.

## PROGRAMME

### Ensuring that you assess students' work in a reliably and time-effective manner

TIME

10.00 – 10.20am

- Understanding the different requirements and demands of the 3 exam papers.
- Understanding the finer details of mark-schemes to know how marks are gained and lost.
- Understanding how to use the Principal Examiner's to help future students – avoiding common errors and following the advice being offered by AQA.
- The importance of the 'student learning outcomes' stated in the specification and the implications for teaching and learning.
- Maximising the feedback provided for your centre via AQA's Enhanced Results Analysis (ERA)

Discussion: coffee break

10.50 – 11.10am

### Effective assessment and feedback to students on the Paper 1 topics and questions

11.10 – 12.00pm

- The most common student misconceptions of the paper 1 topics and how to challenge and eradicate these.
- Using the AQA guidance provided in the Paper 1 PE reports to improve students' performance.
- Recommended teaching and learning strategies for the trickiest topics in Paper 1.
- Resources and assessment methods that have been found to improve students' understanding and performance in answering questions on the Paper 1 topics.

### Effective assessment and feedback to students on Paper 2 topics and questions

12.00 – 12.50pm

- The most common student misconceptions of the paper 2 topics and how to challenge and eradicate these.
- Using the AQA guidance provided in the Paper 1 PE reports to improve students' performance.
- Recommended teaching and learning strategies for the trickiest topics in Paper 2.
- Resources and assessment methods that have been found to improve students' understanding and performance in answering questions on the Paper 2 topics.

Lunch and informal discussion

12.50 – 1.50pm

### Effective assessment and feedback to students on the Paper 3 requirements

1.50 – 2.40pm

- Why students find Section A of Paper 3 the most difficult part of the A-level Physics assessment: where most of the marks are lost.
- The AQA guidance on Paper 3, Section A from the PE reports and how best to implement these.
- Recommended teaching and learning strategies for improving students' practical skills and how to improve their data analysis ability.
- How to decide which OPTION is best for your students – the pros and cons of each and what the assessment data indicates.

Discussion: afternoon tea

2.40 – 2.45pm

### Improving students' revision and exam technique

2.45 – 3.30pm

- The most reliable revision methods for students.
- Getting the most from AQA past-papers and mark-schemes.
- Detailed guidance on students' examination technique and to persuade them to follow these.

LOCATION/DATE

**London**

**Monday 18 March 2024**

**Monday 17 June 2024**

## COURSE LEADER

**Howard Dodd** has worked for many years as a teacher, subject leader, university lecturer, A-level Physics Principal Examiner, ITT trainer, QTS assessor and as a consultant to schools and colleges on leadership, management, assessment and pedagogy. He has successfully presented in-service training courses for teachers for over 30 years.

## WHO SHOULD ATTEND?

- All teachers of AQA A-Level Physics
- Curriculum Leaders of Science and Physics
- Teachers who are new to teaching A-Level Physics

## BENEFITS OF ATTENDING

- Develop a deeper understanding of the assessment demands in AQA A-Level Physics
- Discover what examiners are looking for in Papers 1, 2 and 3.
- Improve your ability to analyse and improve student responses for the short-answer, long-answer and multiple-choice questions in Papers 1 and 2.
- Special focus on the requirements of the Paper 3, Section A questions that test students' practical skills and their ability to analyse experimental data.
- How to help your students to become more self-sufficient.
- Take away strategies and approaches to maximise students' marks in the exams.

# AQA A-LEVEL PHYSICS: MAXIMISING STUDENT OUTCOMES IN THE EXAM PAPERS

CODE **9548**

## ABOUT THIS COURSE

Irrespective of how well staff prepare students for the AQA exam papers in A-Level Physics, each year many marks are lost because of poor exam technique or quite simply students not knowing exactly what a question is asking for.

This new course will look at the different types of questions featured across the 3 exam papers and how the initial reading and dissecting of a question is key to actually answering the question in the way that the question setter intended it to be answered.

There will be examples of answers from across a range of units to illustrate the differences between high scoring answers and mediocre answers, which, when grade boundaries are very 'tight', could mean the loss of one or more grade.

Other common exam technique errors will also be addressed, and strategies introduced to help students monitor improvement in their exam technique.

A methodology for marking, grading and evaluating student work will be introduced.

## PROGRAMME

TIME

### Introduction to Ways to Prepare Students for Examination

10.00 – 11.00am

- Overview of good practice in preparation for any exam series; reflection, knowledge and skills audit, action plan, set targets and reflect/review regularly using trackers, long term planning, question matrix per each topic/paper, revision aids
- Using historical centre-based information to address issues with the current cohort
- Identifying the common pitfalls that students make at both ends of the ability spectrum and ways to avoid this

Discussion: coffee break

11.00 – 11.15am

### Exploring the Different Type of Questions Across the Exam Papers

11.15 – 12.30pm

- Identifying the range of question types; multiple choice, short structured, longer structured, data response and extended synoptic questions
- Developing student's exam skills; scaffolding, fill in gaps, part paragraphs, so-called model answers, write a mid-band response, structure strips, essay feedback sheets, using technology (visualisers), and developing literacy
- Deepening the understanding of command words and the impact on an answer and subsequent marks gained when the command word in a question is not accurately addressed

Lunch and informal discussion

12.30 – 1.30pm

### Extracting the Correct Information from the Question

1.30 – 2.30pm

- A question is more than just a test of subject knowledge – how to ensure that students dissect a question correctly
- Strategies to standardise the dissection of a question across different units, irrespective of the member of staff delivering the area of the specification
- Strategies for selecting appropriate content and utilising effective presentation for both structured and extended synoptic questions
- How students can monitor their own exam technique in homework and assessment tasks

Discussion: afternoon tea

2.30 – 2.45pm

### Accurate Staff and Peer Marking

2.45 – 3.30pm

- How to approach teaching A-Level exam skills with confidence
- The use of appropriate and meaningful annotation to give students the greatest amount of accurate information to help them improve their answers

LOCATION/DATE

London

Friday 22 March 2024

## COURSE LEADER

**Alessio Bernardelli** has over 18 years of teaching experience and has worked as Head of KS3 Science and Head of Physics. He also worked as Science Subject Lead at TSL Education (TES) and as National Support Programme Partner in Wales with CfBT. He has recently completed an MSc in Teacher Education at the University of Oxford, he is a Chartered Science Teacher (CSciTeach) and a Chartered Physicist (CPhys), as well as a Senior Facilitator with STEM Learning.

## WHO SHOULD ATTEND?

- Heads of Science Departments
- Teachers who deliver any of the units for AQA A-Level Physics

## BENEFITS OF ATTENDING

- Identify the main areas where students lose marks when answering exam questions
- Identify the range of question types across all three exam papers
- Focus on how to extract information from a question to allow access to all the marks available
- Analysing how; a lack of examples, repetition of information, failure to focus on key terms, insufficient points and vague comments can impact the final outcome
- Develop strategies for student self-monitoring and evaluation of their exam technique
- Develop an understanding of accurate staff and peer marking

# NEW TO TEACHING AQA A-LEVEL PHYSICS

CODE 9312

## ABOUT THIS COURSE

This course is designed for teachers who are new to teaching AQA A-Level Physics, or who wish to improve their understanding to enable their students to achieve higher grades. The sessions are designed to improve delegates' understanding of AQA A-Level Physics specification and ensure that candidates have the best opportunity to maximise their potential grades.

Delegates will receive new teaching approaches as well as key guidance in how to develop exceptional examination and practical techniques in AQA A-Level Physics to maximise students' success when delivering the course for the first time.

## PROGRAMME

### Introduction: identifying methods that will enhance performance from the start

TIME  
10.00 – 11.15am

- Overview of the specification – introducing the scheme of work and baseline assessment
- Analysing the assessment criteria and looking how to incorporate AO1, AO2 and AO3 in your lessons
- Recognising which areas will be the most challenging and preparing for these
- Identifying your support network and making the most of it

Discussion: coffee break

11.15 – 11.30am

### Tackling the Challenging Content of AQA A-Level Physics

11.30 – 12.15pm

- Planning and teaching the more demanding topics – what these are and how to factor them into your teaching
- Making complicated concepts easy
- Teaching ideas, related questions and supporting resources to help improve student understanding
- Teaching for the different types of questions, with examples, so that you can help students access all the available marks
- Designing formative assessment and feedback through focussed starters and plenaries into your teaching

### Strategies and Approaches to teaching the toughest topics

12.15 – 1.15pm

- Why are these so challenging for many students?
- Planning for success, teaching methodologies and using retrieval practice to boost student performance
- Teaching ideas with associated questions and resources
- Getting students involved in their learning – making theory 'practical'

Lunch and informal discussion

1.15 – 2.15pm

### Managing the Required Practical Activities

2.15 – 3.15pm

- What you have to teach and what the students have to do
- The AQA standard at different grades and getting your students to reach it
- How to structure a programme of practical teaching and assessment that helps your students gain the best marks
- Structured v Investigative approaches – finding the opportunities
- Techniques to help students construct excellent written responses in the exams: where and why they can struggle in A-Level with this skill

### Effectively tackling the Exam Papers

3.15 – 3.45pm

- How to approach teaching A-level exam skills with confidence
- Teaching towards the 'endgame', what language to use, ensure you are marking 'like the examiner' and secure grading
- Focus on essay structure in exams, how to pick up easy marks, and what top grade responses look like
- Marking and assessment strategies: supporting students to access the higher-level grades
- Extended answers – ideas for development

LOCATION/DATE

London

Thursday 29 February 2024

Thursday 13 June 2024

## COURSE LEADER

**Alessio Bernardelli** has over 18 years of teaching experience and has worked as Head of KS3 Science and Head of Physics. He also worked as Science Subject Lead at TSL Education (TES) and as National Support Programme Partner in Wales with CfBT. He has recently completed an MSc in Teacher Education at the University of Oxford, he is a Chartered Science Teacher (CSciTeach) and a Chartered Physicist (CPhys), as well as a Senior Facilitator with STEM Learning.

## WHO SHOULD ATTEND?

- All teachers new, or nearly new, to teaching AQA A-Level Physics
- Those who lack confidence, or who feel they would benefit from a refresher course

## BENEFITS OF ATTENDING

- Obtain excellent understanding of the complexities of the AQA A-Level Physics specification
- Gain insight into the content, the exam structure and how the exams are marked
- Develop your teaching in specific topic areas to raise standard of achievement
- Examples of extended A-Level questions: how to prepare students to get the most possible marks



# AIMING FOR A/A\* IN AQA A-LEVEL PHYSICS

CODE **9313**

## ABOUT THIS COURSE

This new course will demonstrate how to guide your best students to achieve Grades A & A\* in future AQA A-Level Physics examinations. The course will explore the characteristics of A/A\* students identified in research and why and how we must challenge our most able Physics students.

Focused extensively on evidence-based teaching, learning and assessment practice as well as feedback from the most recent exams, you will leave with a vast range of resources and practical strategies that will enable you to meet the needs of your most able students and ultimately increase A and A\* grade attainment.

Finally, we will look beyond the course to focus on preparing these students to continue studying Physics at university.

## PROGRAMME

### Challenging our most able students

10.00 – 10.45am

- Who are our most able students?
- Why do we have to challenge our most able students?
- How are A/A\* achieved?

Discussion: coffee break

10.45 – 11.00am

### Focus on assessment demands for A/A\* students

11.00 – 12.00pm

- Examine the assessment demands of all components including the use of assessment objectives as a framework for assessment
- Consider the most effective models for delivery of the course to ensure effective assessment
- Feedback and grading analysis from the most recent exam. What is required for A/A\*?
- Analysis of mark schemes – which sections/questions differentiated candidates?
- Grades A & A\*: what are the differences between these?
- Key attributes of Grade A/A\* students in the classroom
- Avoiding potential hazards: what can cost a top student their A/A\* grade?

### Structuring an excellent teaching course

12.00 – 1.00pm

- Developing a deep understanding of core Physics concepts
- Supporting students to write top band answers to 6 mark “explain” questions
- Developing a personalised approach to note taking to support recall
- Applying Physics concepts to consistently write top band evaluation
- Activating prior knowledge to improve retention of key topic areas

Lunch and informal discussion

1.00 – 2.00pm

### Stretching and Challenging the most able students

2.00 – 3.00pm

- Moving on from GCSE approaches – encouraging students to become sensitive readers
- Using wider reading to prepare for exams
- What makes a strong A-Level response? How can we build up to this?
- Working up to full 6-mark questions, and using them to stretch students
- Planning with and designing support for students aiming for top grades
- Extra-curricular ideas that help get A and A\*

Discussion: afternoon tea

3.00 – 3.05pm

### Tactics for achieving the highest grades

3.05 – 3.30pm

- Develop an action plan for success for students aiming for top grades
- The shorter questions: what are the potential pitfalls?
- Focus on the extended questions: what does a grade A/A\* candidate need to do?
- Varying response practice to stretch the most able
- Revision ideas to help students produce high grade answers

LOCATION/DATE

**London**

**Thursday 14 March 2024**

## COURSE LEADER

**Alessio Bernardelli** has over 18 years of teaching experience and has worked as Head of KS3 Science and Head of Physics. He also worked as Science Subject Lead at TSL Education (TES) and as National Support Programme Partner in Wales with CfBT. He has recently completed an MSc in Teacher Education at the University of Oxford, he is a Chartered Science Teacher (CSciTeach) and a Chartered Physicist (CPhys), as well as a Senior Facilitator with STEM Learning.

## WHO SHOULD ATTEND?

- Teachers of AQA A-Level Physics
- Heads of Physics/Science
- Aspiring Heads of Physics/Science
- Teachers with responsibility for A-Level Physics

## BENEFITS OF ATTENDING

- Increase awareness of what teacher should aim to achieve with the most able Physicists
- Gain the latest evidence-based practice that challenges A/A\* students
- Develop greater understanding of what examiners are looking for in Grade A/A\* responses
- Take away a range of innovative teaching ideas and electronic resources for your most able students
- Learn how to develop resilience so that talented Physics students achieve their A/A\* potential
- Focused on identifying the demands of Grades A & A\* and providing materials to help teachers prepare students effectively
- A detailed look at the different demands of questions

# AIMING FOR A/A\* IN OCR A-LEVEL PHYSICS

CODE 9316

## ABOUT THIS COURSE

This new course will demonstrate how to guide your best students to achieve Grades A & A\* in future OCR A-level Physics examinations. The course will explore the characteristics of A/A\* students identified in research and why and how we must challenge our most able Physics students.

Focused extensively on evidence-based teaching, learning and assessment practice as well as feedback from the most recent exams, you will leave with a vast range of resources and practical strategies that will enable you to meet the needs of your most able students and ultimately increase A and A\* grade attainment.

Finally, we will look beyond the course to focus on preparing these students to continue studying Physics at university.

## PROGRAMME

### Challenging our most able students

10.00 – 10.45am

- Who are our most able students?
- Why do we have to challenge our most able students?
- How are A/A\* Grades achieved?

Discussion: coffee break

10.45 – 11.00am

### Focus on assessment demands for A/A\* students

11.00 – 12.00pm

- Examine the assessment demands of all components including the use of assessment objectives as a framework for assessment
- Consider the most effective models for delivery of the course to ensure effective assessment
- Feedback and grading analysis from the most recent exam. What is required for A/A\*?
- Analysis of mark schemes – which sections/questions differentiated candidates?
- Grades A & A\*: what are the differences between these?
- Key attributes of Grade A/A\* students in the classroom
- Avoiding potential hazards: what can cost a top student their A/A\* grade?

### The key challenges for A/A\* students in the Papers

12.00 – 1.00pm

- Developing a deep understanding of core Physics concepts
- Supporting students to write top band essays
- Developing a personalised approach to note taking to support recall
- Applying Physics concepts to consistently write top band evaluation
- Activating prior knowledge to improve retention of key topic areas

Lunch and informal discussion

1.00 – 2.00pm

### Stretching and Challenging the most able students

2.00 – 3.00pm

- Moving on from GCSE approaches – encouraging students to become sensitive readers
- Using wider reading to prepare for exams
- What makes a strong A-Level response? How can we build up to this?
- Working up to full essay questions, and using them to stretch students
- Planning with and designing support for students aiming for top grades
- Extra-curricular ideas that help get A and A\* grades

Discussion: afternoon tea

3.00 – 3.10pm

### Tactics for achieving the highest grades

3.10 – 3.40pm

- Develop an action plan for success for students aiming for top grades
- The shorter questions: what are the potential pitfalls?
- Focus on the extended questions and essays: what does a grade A/A\* candidate need to do?
- Varying response practice to stretch the most able
- Revision ideas to help students produce high grade essays

LOCATION/DATE

London

Wednesday 13 March 2024

Tuesday 02 July 2024

## COURSE LEADER

**Alessio Bernardelli** has over 18 years of teaching experience and has worked as Head of KS3 Science and Head of Physics. He also worked as Science Subject Lead at TSL Education (TES) and as National Support Programme Partner in Wales with CfBT. He has recently completed an MSc in Teacher Education at the University of Oxford, he is a Chartered Science Teacher (CSciTeach) and a Chartered Physicist (CPhys), as well as a Senior Facilitator with STEM Learning.

## WHO SHOULD ATTEND?

- Teachers of OCR A-Level Physics
- Heads of Physics/Science
- Aspiring Heads of Physics/Science
- Teachers with responsibility for A-Level Physics

## BENEFITS OF ATTENDING

- Increase awareness of what teacher should aim to achieve with the most able Physicists
- Gain the latest evidence-based practice that challenges A/A\* students
- Develop greater understanding of what examiners are looking for in Grade A/A\* responses
- Take away a range of innovative teaching ideas and electronic resources for your most able students
- Learn how to develop resilience so that talented Physics students achieve their A/A\* potential
- Focused on identifying the demands of Grades A & A\* and providing materials to help teachers prepare students effectively
- A detailed look at the different demands of questions

# TEACHING GCSE PHYSICS FOR THE FIRST TIME

CODE 9551

## ABOUT THIS COURSE

This new course provides teachers new to teaching GCSE Physics, useful information based on examiner reports from the most recent exams, including numerous strategies to create excellent, creative and safe Physics teaching for students of all ability levels.

Offering an introduction and overview of GCSE Physics, providing essential skills and tips in how to effectively deliver content, ensuring maximum student engagement and maximum attainment. The course is suitable for anyone just starting to teach, in their first few years of teaching or lacking confidence in teaching GCSE Physics.

## PROGRAMME

### Understanding and Structuring GCSE Physics

TIME  
10.00 – 10.40am

- Key topics, concepts, and learning outcomes for teaching GCSE Physics
- Exploring the progression of topics and building connections between concepts
- Planning your course and establishing your teaching for student success
- Examine the different question types used in Physics exams
- Examiner findings from the 2023 exams and the significance for classroom practice

### Innovative Ways to Teach the Complex Elements of GCSE Physics

10.40 – 11.25am

- Strategies and teaching methods to ensure students understand the fundamentals underpinning GCSE Physics
- Sequencing and cascading topics successfully
- Innovative ways to teach the complex elements of GCSE Physics
- Analysis and problem-solving strategies, especially for less able students
- Addressing common misconceptions and challenging topics
- Encouraging student questions and fostering intellectual curiosity in Physics
- How to get students to think at GCSE level and above throughout the course

Discussion: coffee break

11.25 – 11.45am

### Outstanding Pedagogy: Absorbing and Interactive Learning to Enhance Student Engagement

11.45 – 12.30pm

- Principles of effective lesson planning: objectives, structure, and differentiation
- Designing engaging and interactive learning activities for different topics
- Integrating real-world applications of Physics to enhance student engagement
- Establishing a positive and inclusive classroom environment
- Strategies for managing behaviour, engaging reluctant learners, and promoting active participation
- Incorporating digital tools, simulations and online resources

Lunch and informal discussion

12.30 – 1.30pm

### Practical Work and Laboratory

1.30 – 2.15pm

- Identifying the essential practical experiments and integrating them into lessons effectively
- Adapting experiments to different classroom settings and available resources, ensuring laboratory safety: guidelines, risk assessments, and best practices

### Assessment, Marking and Feedback: Getting the Best out of your Students

2.15 – 2.55pm

- Exploring diverse assessment methods: formative, summative and self-assessment
- What are examiners looking for in student responses?
- Practical advice and guidance on making the exam accessible to all students
- Common questions and question types and how to construct your own that align with GCSE Physics specifications
- How to prepare students for answering longer response questions
- Providing constructive feedback to support student progress and development

Discussion: afternoon tea

2.55 – 3.00pm

### Preparing for the Exams

3.00 – 3.15pm

- Adaptive teaching methods to stretch and support all students in the run up to the exams
- Revision strategies and methods that really work
- Teaching resilience and grit
- Bullet point an action plan to implement upon returning to school

LOCATION/DATE

London

Monday 08 July 2024

## COURSE LEADER

**Alessio Bernardelli** has over 18 years of teaching experience and has worked as Head of KS3 Science and Head of Physics. He also worked as Science Subject Lead at TSL Education (TES) and as National Support Programme Partner in Wales with CfBT. He has recently completed an MSc in Teacher Education at the University of Oxford, he is a Chartered Science Teacher (CSciTeach) and a Chartered Physicist (CPhys), as well as a Senior Facilitator with STEM Learning.

## WHO SHOULD ATTEND?

- Newly qualified GCSE Physics Teachers
- Physics teachers teaching outside their specialism

## BENEFITS OF ATTENDING

- Develop excellent practices to use with all of your classes especially during practical lessons
- Gain an insight into methods that allows pupils across the ability range to access Physics at GCSE level
- Learn how to differentiate material quickly and easily for excellent teaching
- Explore how to increase the attainment of all your pupils and involve them in the target setting process
- Deepened understanding of GCSE Physics and its key concepts
- Enhanced pedagogical skills for explaining complex Physics topics
- Practical strategies to engage students, manage classrooms, and assess progress effectively

# GCSE PHYSICS: AIMING FOR GRADES 7-9

CODE 9318

## ABOUT THIS COURSE

This course, designed for all teachers of GCSE Physics is focused on meeting the demands of the higher-level marking bands. It will focus on exploring the characteristics of work produced by students working at the highest levels and examine a range of teaching materials designed to secure the best possible outcomes.

The course will cover what is expected of high ability students and outline ways in order to successfully build on your own teaching practice and embed new methods of working.

Using examples of pupils' work and model answers throughout, the course will look at the common features of top-level work. The course will also demonstrate teaching approaches for the toughest topics, leading up to preparing pupils for the examinations.

## PROGRAMME

TIME

### Focus on assessment demands for Grades 7-9, including feedback

10.00 – 11.00am

- Examine the assessment demands of all components including the use of assessment objectives as a framework for assessment
- Consider the most effective models for delivery of the course to ensure effective assessment practice across 2 years and in both components
- Review characteristics of Grade 7-9 GCSE Physics students in the GCSE
- Lessons learnt from the 2022 examination series – what students need to do to ensure that they achieve the highest grades in 2023

Discussion: coffee break

11.00 – 11.15am

### Achieving top grades in Paper 1

11.15 – 12.30pm

- Review example Paper 1 responses at Grades 7-9: what top level students do
- Exploring the content of this paper that will particularly fire the imagination of very able students
- Differentiated teaching approaches for Energy; Electricity; Particle model of matter; and atomic structure which stretch and challenge the very able students
- Characteristics of the most successful candidates in this component
- Approaches to the open response questions – ways to develop the skills required
- What examiners are looking for in questions on Paper 1
- Examples of outstanding answers
- What moves a student on from a grade 7 – to grades 8 and 9 on the exam

Lunch and informal discussion

12.30 – 1.30pm

### Aiming for grades 7-9 in Paper 2

1.30 – 2.30pm

- Teaching to the key characteristics demonstrated by able students which examiners look for
- Identifying and understanding question types on Forces; Waves; Magnetism and Electromagnetism; and Space Physics
- Examining strong exemplar responses to the focussed extract questions for this section
- What examiners are looking for in questions on Paper 2
- What moves a student from Grade 7 to Grades 8 and 9 on the exam
- How to support students in developing a top grade response

Discussion: afternoon tea

2.30 – 2.40pm

### Exams: Tactics for achieving the highest grades

2.40 – 3.15pm

- What are the most common errors made by higher ability pupils?
- Revision ideas to help pupils achieve the highest grades.
- How to maximise the available time in the examination
- Reviewing, marking and feeding back on specimen scripts
- Giving good quality, specific feedback to students

### Beyond the classroom: ideas for the most able GCSE Physicists

3.15 – 3.30pm

- Different ideas to keep the pupils interested
- Stretch and challenge without intimidation
- Beyond the classroom and the curriculum: educational visits and trips
- Looking ahead to Physics A-Level

LOCATION/DATE

London

Wednesday 20 March 2024

Wednesday 26 June 2024

## COURSE LEADER

**Alessio Bernardelli** has over 18 years of teaching experience and has worked as Head of KS3 Science and Head of Physics. He also worked as Science Subject Lead at TSL Education (TES) and as National Support Programme Partner in Wales with CfBT. He has recently completed an MSc in Teacher Education at the University of Oxford, he is a Chartered Science Teacher (CSciTeach) and a Chartered Physicist (CPhys), as well as a Senior Facilitator with STEM Learning.

## WHO SHOULD ATTEND?

- Heads of Science/Physics
- Teachers of AQA GCSE Physics
- Teachers aiming to boost the higher achievers

## BENEFITS OF ATTENDING

- Develop an understanding of the level descriptors and how pupils should apply them
- Discuss sample answers at grade 7 – 9 to identify key characteristics, and the approach of the examiner
- Increase awareness of why top students underachieve
- Provide and discuss different ways of teaching a content-heavy course
- Develop an understanding of the potential hazards students face when studying GCSE Physics

## BIOGRAPHIES

**Dr Stephen Belding** is an accomplished teacher and Head of Chemistry at Rugby School. He attended St John's College, Oxford University, where he earned a degree in Chemistry (MChem) and a DPhil in Computational Electrochemistry. With a teaching career that commenced in 2012, Stephen has successfully instructed across five distinct exam specifications at three highly regarded schools in the UK. In 2022, he concluded his MEd research focusing on inspection reports and strategies for school improvement.

**Alessio Bernardelli** has over 18 years of teaching experience and has worked as Head of KS3 Science and Head of Physics. He also worked as Field Development Officer for NGfL Cymru, as Science Subject Lead at TSL Education (TES) and as National Support Programme Partner in Wales with CfBT. Alessio won a number of national and international education awards for the innovative and creative way he integrates emerging technologies in STEM education. One of these awards is the Microsoft Worldwide Innovative Education Forum, 2007.

Alessio is an accredited Microsoft Peer Coaching Facilitator, one of few Partners In Learning Top Tiered Teachers worldwide, a TASC Framework Specialist, an Official iMindMap Leader and an Institute of Physics Coach member of their Professional Practice Group. He has recently completed an MSc in Teacher Education at the University of Oxford, he is a Chartered Science Teacher (CSciTeach) and a Chartered Physicist (CPhys), as well as a Senior Facilitator with STEM Learning.

Alessio worked as Examiner for a number of years with WJEC and Cambridge International Education. He is also a published author, with his GCSE Physics revision guide for Scholastic and his A-level exam practice book for Hodder Education.

Alessio is the founder of CollaboratED and a PGCE physics Tutor at Cardiff Metropolitan University.

**Michael Brown** was an examiner for 18 years and has worked in post 16 education for 23 years, initially as an A-level Biology Tutor before progressing to Head of Department and finally STEM and Quality Initiatives Manager. He has had a positive effect on student's aspirations and achievement; his Learner Voice results are always very positive and examination results have been consistently above benchmark for all KPI's with excellent value added. As a Head of Department he completed an 'Exceeding Expectations' management training course and is a strong and effective leader. His Science provision was chosen as part of OFSTED's Good practice survey: Improving Sciences in Colleges. Michael was then seconded to another campus to improve science results and turned around the department within 12 months. During this time his college also reached the finals of the National STEMNET Awards for three consecutive years.

**Howard Dodd** has worked for many years as a teacher, subject leader, university lecturer, A-level Physics Principal Examiner, ITT trainer, QTS assessor and as a consultant to schools and colleges on leadership, management, assessment and pedagogy. He has successfully presented in-service training courses for teachers for over 30 years.

**Dr Caroline Evans** is the Head of Chemistry at Wellington College which she joined in September 2015. Prior to this she taught Chemistry at Canford School, Dorset for three years after she had graduated from the University of Bath in 2012 with a PhD in organic chemistry. She has been examining for nearly 10 years and is currently an Examiner for AQA Chemistry Paper 2 and Assistant Principal Examiner for Pearson GCSE Chemistry.

**Ellena Gilson** is a former Head of Biology at a top grammar school with over 25 years of outstanding teaching experience. She has extensive experience as an A-Level Biology examiner and holds senior positions for two major examination boards. She is closely involved in the production of AS Biology assessment material for one of the boards and sets exam questions for A-Level papers. She also authors A-Level and GCSE resources for several publishers and runs her own tutoring business, improving the exam outcomes for A-Level Biology students.

**Dee Martin** is Head of Chemistry & STEM at Prince Henry's High School in Evesham, an Academy with a non-selective intake. She is an experienced AQA A-Level Chemistry examiner and currently delivers revision courses to many schools across the country guiding teachers in preparing for exams and helping to raise student grades.

**Nicola Manning** has 33 years' experience of teaching A-level Biology and has attained a Silver Pearson's National Teaching award to recognise her successes. She currently teaches 6 A-level Biology classes, with an average class size of 22. Her cohorts regularly attain above the national averages on all benchmarks, her advice is supported by real-life outcomes. She has attained ALPS grade 2 for 5 consecutive years and been mentioned in ALPS reports. She has completed a research project for the Ipswich Opportunity Fund on the positive impacts of Flipped Learning on developing students' independence and life-long learning skills and is committed to raising the attainment of all learners.

**Prish Narindar** is currently Deputy head of Faculty and Science lead at a school in Hampshire. With over 10 years' experience in KS3 and KS4 science curriculum delivery in mainstream education and private tuition, she has led the local Science GCSE collaboration development group that partners with 8 schools and colleges. Prish has also successfully led active learning, cognitive load association and assessment workshops whilst coaching PGCE and ITT students for local partnerships. She has also successfully piloted the able students programme in collaboration with local secondary schools, and has worked with Hampshire HIAS group to develop and strengthen science curriculum delivery.

**Dr Harjit K Singh** is an experienced teacher and senior examiner for A-Level Biology. She has taught and examined A-Level Biology for over 25 years, IB Biology for 8 years as well as BTEC Applied Science. She is a published author of the Key Skills and Knowledge Booster Biology and co-author of Key Skills and Knowledge Booster BTEC Science Applied and Vocational courses. She has presented many biology courses for teachers, student revision conferences and online web conferences. She is also involved in presenting international IB student revision courses.



# GCSE and A-Level In-School Student Revision Sessions

We know that every school is unique, and we can work with you to create a tailored student revision session that is bespoke to your needs.

We can offer a full range of subject specific, exam board specific GCSE and A-Level student revision sessions, all of which can be tailored and customised by your school's requirements.

## Benefits of bringing Keynote Educational into Your School

- Over 20 years of experience **providing student revision sessions**, regularly running multiple sessions throughout the year at individual schools
- **Dedicated team of specialist examiner experts**; these individuals are not only experts in their particular fields but also familiar with delivering to student groups, and understand the need to make the days enriching, stimulating, informative and worthwhile
- **Invaluable, reliable and enriching** source of extra boost for students, and teachers
- Receive **key messages and feedback** from the 2023 June examinations
- Students will take away **first hand guidance** and crucial insight along with great strategies for structuring their answers and techniques to **build strong answers for success in the 2024 examinations**

You may also be interested in bringing into your school our new student sessions that specifically focus on **successful study habits, good retrieval, recall and revision techniques**, how successful students learn differently and so on. These are generic sessions, and can be tailored for specific year groups, for half days or full days, tailored once again to suit.

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