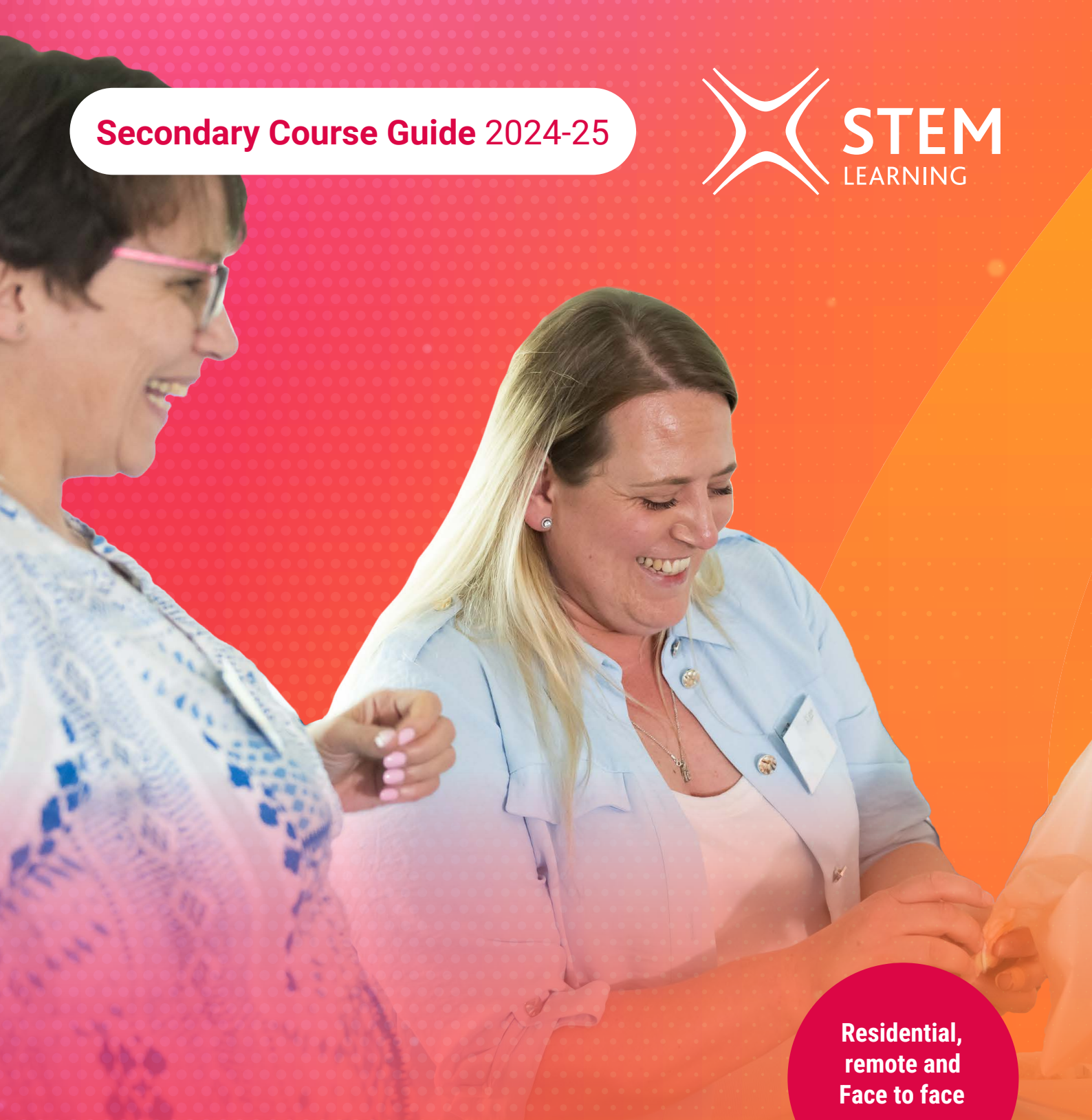


Secondary Course Guide 2024-25



**Residential,
remote and
Face to face
courses**

High-quality professional development for all STEM educators

Discover support and plan for the
next stage of your teaching career

Professional development to improve your teaching of STEM subjects

We've listened to the challenges you face accessing professional development – workload, lack of time, geographical restrictions, covering your classes and more. That is why we have developed evidence-based CPD that gives you greater choice than ever before.

We know you have limited time so you want to spend it wisely. We have years of experience and data that show the hugely positive impact our CPD courses have on teachers, technicians and students.



Why choose STEM Learning for your professional development?

CAREER PROSPECTS

Teachers who engage in STEM Learning CPD are 155% more likely to remain within the profession

EDUCATION EXPERTS

All courses are written and delivered by education experts who have qualified through our professional development leadership programme

DEVELOPMENT FRAMEWORKS

All courses are aligned to teachers' wider professional development frameworks, including the Early Careers Framework and National Professional Qualification in Leading Teaching

SUPPORT & COMMUNITY

All of our CPD includes wraparound support before, during and after the course, including peer-to-peer support via our STEM Community

What our learners say

"All staff and session leaders were excellent and really helpful. It was great to be able to get involved and act as the student to learn about the practicals."

"It was a great experience and the whole course ran very smoothly, everyone was very friendly and knowledgeable. A big thank you to everybody involved - I hope to return for more training in the future."

"It was really useful, gave me lots to think about and process. Looking forward to implementing what I can."



Find out more

For more information visit stem.org.uk/secondary/cpd

How you can learn with us



Residential CPD

Courses at the National STEM Learning Centre in York recreate the classroom environment. On-site accommodation and catering allow you to focus on your learning.



Face to face near you

One- or two-day Face to face courses take place at venues across England, including Birmingham, Bristol and the south-west, London, Manchester, south-east and York.



Consultancy

If your challenge is something more specific, we can support you in a wide range of areas, from audits and secondary STEM curriculum development to incorporating practical work in the primary classroom. This is more in-depth support and may come in the form of advisory, mentoring, coaching or signposting; whatever works best for you.

Email enquiries@stem.org.uk for more details



Subscriptions

CPD subscriptions can provide a cost-effective way for schools and trusts to engage with STEM Learning. Helping your school or group of schools access multiple courses across multiple STEM subjects.

Email enquiries@stem.org.uk for more details



Remotely delivered

Led by education experts, these shorter sessions allow you to focus on specific areas of STEM teaching from wherever you are.



Online courses

Learn wherever and whenever suits you. Build subject knowledge, access real classroom footage and reflect to improve your teaching practice and maximise your students' learning.



Science

From ECT to head of science, from key stage 3 to core science, our fantastic range of CPD for science teachers has you covered.

To develop our science teaching CPD, we have matched the needs against the Science Leadership Benchmarks which allow you to improve your teaching once you have measured your impact so you can plan effective improvement in your department.

In addition, we are also proud to continue to offer our range of Face to face professional development opportunities to support teachers of science with the mathematics content within their subject, designed to develop shared approaches and improve mathematics subject knowledge and pedagogy across your setting.

Science Leadership Benchmarks



The Science Leadership Benchmarks were developed by STEM Learning and were based on an independent review of research and evidence led by the Centre for the Use of Research and Evidence in Education (CUREE).

Piloted by 10 primary and secondary schools, the seven benchmarks are a framework for good science leadership developed to support primary and secondary schools in providing students with the best possible science education.

The benchmarks identify what ‘good’ looks like and outline a framework of benchmarks that you can use to improve science provision in your school.

Subject Knowledge for Physics Teaching



Blended learning CPD for key stage 3 and key stage 4 teachers teaching physics without a physics specialism.

Further support

TEACHING RESOURCES

Including the Best Evidence in Science Teaching resources, resources to support the Good practical Science benchmarks and our space resources in our ESERO collection.

STEM CLUBS

A chance for young people to explore science in less formal settings.

CAREER

From career profiles, posters, videos and information packs, our science careers support contains a wealth of resources and information to help you bring careers learning to life.

STEM AMBASSADORS

Can help to bring your subject alive and provide real-life examples of industry careers, facilitating an invaluable link between schools and industry.

Science



SEARCH – All of our secondary CPD courses

| Course title | Code | Start date | Delivery |
|---|-------|------------|--------------|
| Science | | | |
| Reaching for grade 9 in science | SL270 | 06/11/2024 | Residential |
| Secondary science for non-scientists | SL203 | 20/11/2024 | Residential |
| Developing shared approaches to maths in science and science in maths | SL456 | 09/12/2024 | Residential |
| Secondary science for non-scientists | SL203 | 14/01/2025 | Residential |
| Improving your science leadership | SL208 | 21/01/2025 | Residential |
| Developing effective leadership in secondary science | SL329 | 27/01/2025 | Residential |
| Reaching for grade 9 in science | SL270 | 29/01/2025 | Residential |
| Supporting students with SEND in secondary science | SL207 | 24/02/2025 | Residential |
| Developing effective leadership in secondary science | SL329 | 31/03/2025 | Residential |
| Reaching for grade 9 in science | SL270 | 04/02/2025 | Residential |
| Secondary science for non-scientists | SL203 | 28/04/2025 | Residential |
| Improving your science leadership | SL208 | 04/06/2025 | Residential |
| Supporting students with SEND in secondary science | SL207 | 09/06/2025 | Residential |
| Developing effective leadership in secondary science | SL329 | 11/06/2025 | Residential |
| Developing shared approaches to maths in science and science in maths | SL456 | 01/07/2025 | Residential |
| National secondary science conference | SL337 | 04/07/2025 | Conference |
| Summer School for ECTs teaching 11-16 science | SL255 | 21/07/2025 | Residential |
| Effective health and safety for early career teachers | SL210 | Various | Remote |
| Reaching for grade 9 in science | SL271 | Various | Remote |
| KS3 science for non-scientists | SL275 | Various | Remote |
| Designing your science curriculum for success | SL211 | Various | Remote |
| Health and safety for science departments | SL253 | Various | Face to face |
| Managing the practical classroom | SL214 | Various | Face to face |
| Developing your leadership through the Science Leadership Benchmarks | SL219 | Various | Face to face |
| New and aspiring heads of science | SL200 | Various | Face to face |
| Practical work in challenging settings | SL218 | Various | Face to face |
| Summer school for ECTs teaching science | SL256 | Various | Face to face |
| Managing the practical classroom: secondary science | NE208 | Join today | Online |
| Curriculum design for secondary school science | NE209 | Join today | Online |
| Effective ways to identify pre- and misconceptions in science | NE250 | Join today | Online |
| Assessment for learning through practical work | NE251 | Join today | Online |

| Course title | Code | Start date | Delivery |
|--|-------|------------|--------------|
| Improving teaching through observation | NE253 | Join today | Online |
| Leading practical work | NE260 | Join today | Online |
| Leading collaboration in curriculum planning | NE261 | Join today | Online |
| SEND: Supporting learners with ADHD in science | NE267 | Join today | Online |
| SEND: Supporting learners with dyslexia in science | NE268 | Join today | Online |
| SEND: Supporting sight impaired learners in science | NE269 | Join today | Online |
| Using exam analysis to improve student performance | NE270 | Join today | Online |
| Revising effectively for science GCSE exams | NE271 | Join today | Online |
| Preparing students for 6-mark exam questions in science | NE272 | Join today | Online |
| Supporting students to answer GCSE exam questions in science | NE273 | Join today | Online |
| The science of learning | NE709 | Join today | Online |
| Planning to maximise learning | NE710 | Join today | Online |
| Assessment for learning | NE711 | Join today | Online |
| GCSE science exam preparation online course package | NE902 | Join today | Online |
| Biology | | | |
| New to A level biology | SL550 | 14/01/2025 | Residential |
| Teaching to succeed at GCSE biology | SL204 | 22/01/2025 | Residential |
| Established teachers of A level biology | SL501 | 11/03/2025 | Residential |
| New to A level biology | SL550 | 24/04/2025 | Residential |
| New to A level biology | SL550 | 01/05/2025 | Residential |
| Teaching to succeed at GCSE biology | SL204 | 21/05/2025 | Residential |
| Established teachers of A level biology | SL501 | 10/07/2025 | Residential |
| Maths for A level biology | SL284 | Various | Face to face |
| New to teaching GCSE biology | SL215 | Various | Face to face |
| Summer school for ECTs teaching A level biology | SL257 | Various | Face to face |
| Teaching biology: inspiring students with plant science | NE206 | Join today | Online |
| Teaching practical science: biology | NE707 | Join today | Online |
| Chemistry | | | |
| Chemistry for non-specialists | SL322 | 04/12/2024 | Residential |
| Teaching to succeed at GCSE chemistry | SL205 | 06/01/2025 | Residential |
| New to A level chemistry | SL551 | 24/02/2025 | Residential |



SEARCH – All of our secondary CPD courses

| Course title | Code | Start date | Delivery |
|---|-------|------------|--------------|
| Established teachers of A level chemistry | SL500 | 03/03/2025 | Residential |
| Chemistry for non-specialists | SL322 | 05/03/2025 | Residential |
| New to A level chemistry | SL551 | 20/03/2025 | Residential |
| SKE for teaching A level chemistry immersive course | SL504 | 07/04/2025 | Residential |
| Chemistry for non-specialists | SL322 | 06/05/2025 | Residential |
| New to A level chemistry | SL551 | 02/06/2025 | Residential |
| Established teachers of A level chemistry | SL500 | 10/07/2025 | Residential |
| Teaching to succeed at GCSE chemistry | SL205 | 14/07/2025 | Residential |
| Chemistry for non-specialists | SL322 | 23/07/2025 | Residential |
| Maths for A level chemistry | SL297 | Various | Face to face |
| New to teaching GCSE Chemistry | SL216 | Various | Face to face |
| Summer school for ECTs teaching A level chemistry | SL258 | Various | Face to face |
| Teaching practical science: chemistry | NE705 | Join today | Online |
| Physics | | | |
| New to A level physics | SL552 | 07/11/2024 | Residential |
| New to A level physics | SL552 | 07/01/2025 | Residential |
| Established teachers of A level physics | SL502 | 03/02/2025 | Residential |
| New to A level physics | SL552 | 20/03/2025 | Residential |
| Teaching to succeed at GCSE physics | SL206 | 25/03/2025 | Residential |
| Physics for non-specialists | SL201 | 02/04/2025 | Residential |
| SKE for teaching A level physics immersive week | SL503 | 07/04/2025 | Residential |
| Intensive physics for non-specialists week | SL209 | 07/04/2025 | Residential |
| Established teachers of A level physics | SL502 | 06/05/2025 | Residential |
| Physics for non-specialists | SL201 | 19/05/2025 | Residential |
| New to A level physics | SL552 | 02/06/2025 | Residential |
| Physics for non-specialists | SL201 | 14/07/2025 | Residential |
| Teaching to succeed at GCSE physics | SL206 | 15/07/2025 | Residential |
| Maths for A level physics | SL294 | Various | Face to face |
| New to teaching GCSE physics | SL217 | Various | Face to face |
| Summer school for ECTs teaching A level physics | SL259 | Various | Face to face |
| Teaching practical science: physics | NE706 | Join today | Online |

Science technicians

Science technicians play an essential role in supporting the implementation of the science curriculum. Our support will help you at various career stages and will help to develop networks, share practice and improve science provision.

Our support for technicians aims to:

- › develop confidence through building a secure subject knowledge
- › develop the skills required to support high-performing science departments
- › provide network opportunities for technicians to share practice and work collaboratively with peers



Science technicians



SEARCH – All of our secondary CPD courses

| Course title | Code | Start date | Delivery |
|---|-------|------------|--------------|
| Skills for new technicians – zero to hero in 5 days | SL602 | 21/10/2024 | Residential |
| Experienced technicians supporting: chemistry 11-16 | SL605 | 11/11/2024 | Residential |
| Experienced technicians supporting: physics 11-16 | SL606 | 25/11/2024 | Residential |
| Skills for new technicians – zero to hero in 5 days | SL602 | 27/01/2025 | Residential |
| Experienced technicians supporting: physics 11-16 | SL606 | 03/02/2025 | Residential |
| Experienced technicians supporting: chemistry 11-16 | SL605 | 24/03/2025 | Residential |
| Experienced technicians supporting: biology 11-16 | SL604 | 22/04/2025 | Residential |
| Technicians supporting post-16 physics | SL642 | 08/05/2025 | Residential |
| Skills for new technicians – zero to hero in 5 days | SL602 | 12/05/2025 | Residential |
| Experienced technicians supporting: biology 11-16 | SL604 | 02/06/2025 | Residential |
| Experienced technicians supporting: physics 11-16 | SL606 | 23/06/2025 | Residential |
| Technicians supporting post-16 biology | SL641 | 26/06/2025 | Residential |
| Experienced technicians supporting: chemistry 11-16 | SL605 | 01/07/2025 | Residential |
| Technicians supporting post-16 physics | SL643 | 08/07/2025 | Residential |
| Technicians supporting: biology 11-16 | SL614 | Various | Face to face |
| Technicians supporting: chemistry 11-16 | SL615 | Various | Face to face |
| Technicians supporting post-16 physics | SL610 | Various | Face to face |
| Technicians supporting post-16 biology | SL611 | Various | Face to face |
| Technicians supporting post-16 chemistry | SL609 | Various | Face to face |
| Technicians supporting: physics 11-16 | SL616 | Various | Face to face |

Further support we offer

Good Practical Science benchmarks – launched in September 2017 by Sir John Holman which provide a framework with a series of 10 benchmarks for you to use when planning your own approach to delivering practical science.

STEM CLUBS

A chance for young people to explore science in less formal settings. We can support you in planning and deliver STEM Club sessions to help to ignite new interest and to raise attainment in science subjects.

CAREERS

From career profiles, posters, videos and information packs, our science careers support contains a wealth of resources and information to help you bring careers learning to life.

STEM AMBASSADORS

A fantastic volunteer programme for science technicians and other STEM professionals. Sign up to deliver talks, create STEM Clubs or gain inspiration for your own work to support students further.

Mathematics

Professional development for teachers of mathematics, from ECT to head of mathematics, from key stage 3 to core maths, our fantastic range of CPD for mathematics teachers has you covered.

In addition, we are also proud to continue to offer our range of Face to face professional development opportunities to support teachers of science with the mathematics content within their subject, designed to develop shared approaches and improve mathematics subject knowledge and pedagogy across your setting.

Further support we offer

TEACHING RESOURCES

We host over 14,000 freely available, quality-assured classroom resources to help you inspire young people about mathematics, including the SMILE Cards, the Standards Units, GAIM, Graphing Stories and many more.

STEM CLUBS

These include a range of resources to excite and inspire, as well as handbooks, webinars and videos to support you at every stage and help inspire students to fully engage with your mathematics lessons and beyond.

CAREERS

Our mathematics careers support contains a wealth of resources and information to help you bring career learning to life. Destination STEM also provides students with direct support, advice and opportunities to help explore pathways into STEM careers.

STEM AMBASSADOR PROGRAMME

Can help to bring your subject alive and provide real-life examples of industry careers, facilitating an invaluable link between schools and industry.



SEARCH – All of our secondary CPD courses

| Course title | Code | Start date | Delivery |
|---|-------|------------|--------------|
| New and aspiring leaders of mathematics | SL450 | 25/11/2024 | Residential |
| Developing shared approaches to maths in science and science in maths | SL456 | 09/12/2024 | Residential |
| New and aspiring leaders of mathematics | SL450 | 29/01/2025 | Residential |
| Core Maths for teachers of science | SL464 | 02/06/2025 | Remote |
| New and aspiring leaders of mathematics | SL450 | 30/06/2025 | Residential |
| Developing shared approaches to maths in science and science in maths | SL456 | 01/07/2025 | Residential |
| Core Maths for teachers of psychology | SL462 | 01/07/2025 | Remote |
| Core Maths for teachers of geography | SL463 | 02/07/2025 | Remote |
| New to Core Maths Summer School | SL457 | 04/08/2025 | Residential |
| Improving mathematics in key stage 3 | SL451 | Various | Face to face |
| Teaching post 16 GCSE mathematics resit | SL452 | Various | Face to face |
| Teaching mathematics GCSE content with understanding | SL453 | Various | Face to face |
| Building confidence as an ECT mathematics teacher | SL454 | Various | Face to face |
| New to teaching Core Maths | SL455 | Various | Face to face |
| Teaching mathematics as a non-specialist | SL458 | Various | Face to face |
| Using manipulatives to enhance understanding in secondary mathematics | SL459 | Various | Face to face |
| Teaching Core Maths as a non-specialist | SL460 | Various | Face to face |





Find out more
For more information visit
stem.org.uk/secondary/cpd/engineering-dt

Engineering

We have a brand new suite of engineering courses, developed by subject experts. Whether you're a technician, new to teaching the subject or you're the lead for engineering in your school, we have the perfect professional development course for you.

TEACHING RESOURCES

STEM Learning hosts over 14,000 freely available, quality-assured classroom resources to help you inspire young people in the classroom. Check out our favourite engineering resources from the collection to help bring the subject to life into your secondary school.

CAREERS

Bring engineering careers to life for your students with a range of resources, from career profiles and posters to videos and information packs. Our careers homepage also includes helpful toolkits and careers information to support you contextualise learning.

STEM AMBASSADOR PROGRAMME

STEM Ambassadors can help to bring your subject alive and provide real-life examples of industry careers, facilitating an invaluable link between schools and industry.

Engineering

| Course title | Start date | Delivery |
|---|------------|--------------|
| Engineering for technicians | Various | Remote |
| Health & safety for teaching engineering | Various | Face to face |
| Leading engineering in your school | Various | Remote |
| Manufacturing – subject knowledge and practice for teaching engineering | Various | Face to face |
| New to teaching engineering | Various | Remote |
| Solving problems: Teaching engineering design | Various | Remote |
| Teaching mechanical, electrical and electronic engineering systems | Various | Face to face |

Digital skills

It's vital that students are taught digital skills, especially given their importance in helping young people prepare for the transition from school to employment and the wider world. Our CPD courses for teachers equip them with the skills and confidence to teach digital skills.

With the UK Government's Digital Strategy now firmly embedded, the need for digital skills is growing, and so is our support for schools.



SEARCH – All of our secondary CPD courses

| Course title | Code | Start date | Delivery |
|---|-------|------------|-------------|
| Digital skills: cyber security | SL950 | 02/10/2024 | Residential |
| How to use AI to reduce teacher workload | SL902 | 02/10/2024 | Remote |
| 3D modelling and animation using Blender | SL952 | 04/11/2024 | Remote |
| Developing augmented reality (AR) products | SL951 | 05/11/2024 | Remote |
| Creating media with free and open source software | SL953 | 07/11/2024 | Remote |
| 3D modelling and animation using Blender | SL952 | 04/12/2024 | Remote |
| Digital skills: cyber security | SL950 | 08/01/2025 | Residential |
| Digital skills: cyber security | SL950 | 15/05/2025 | Residential |

Further support we offer

TEACHING RESOURCES

We host over 14,000 freely available, quality-assured classroom resources to help you inspire young people about digital skills, including The Grand Challenges, Digital Innovation and Robotics.

STEM CLUBS

These include a range of resources to excite and inspire, as well as handbooks, webinars and videos to support you at every stage and help inspire students to develop their digital skills.

CAREERS

Careers support contains a wealth of resources and information to help you bring career learning to life. Destination STEM also provides students with direct support, advice and opportunities to help explore pathways into STEM careers.

STEM AMBASSADOR PROGRAMME

Can help to bring your subject alive and provide real-life examples of industry careers, facilitating an invaluable link between schools and industry.





After attending our 'Physics for non-specialists' course, a participant said:

"Thank you for an excellent first CPD experience. Our course leader was fab, and provided us with brilliant resources. I not only learned subject-specific knowledge, but as a new teacher, I also learned many engagement, assessment and pedagogical tools."



Access our full range of support at
www.stem.org.uk/secondary/CPD

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