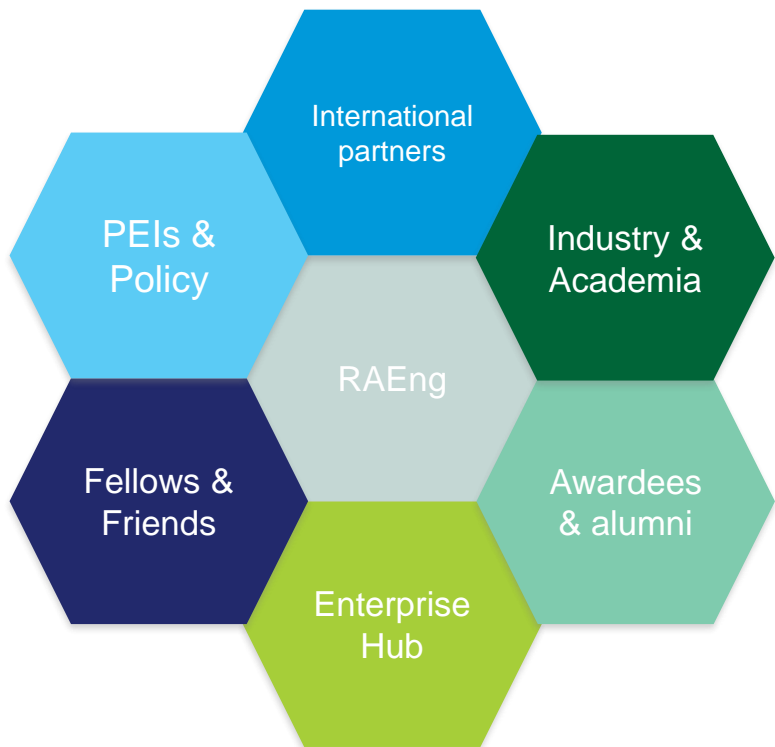




Royal Academy
of Engineering

T Level Support Programme

NFEC, April 2022



Collaboration First

- Prioritising collaboration and building partnerships to improve outcomes
- Resources **developed by practitioners for practitioners**



T Level Support

- Industry placement toolkit
- Resources
- CPD Training

Industry Placement Steering Group

T Level Stakeholders	Industry	Practitioners
 Department for Education  City & Guilds  eal ®  Part of the Enginuity Group  SDN STRATEGIC DEVELOPMENT NETWORK  GATSBY	 AEROFLEX  Thames Water  SAFRAN  North East Local Enterprise Partnership  AUTODESK  XTRAC TRANSMISSION TECHNOLOGY  John Francis MEP Limited  UK Electronics Skills Foundation	 SOUTH & CITY COLLEGE BIRMINGHAM  WARWICKSHIRE COLLEGE GROUP  south essex college  Sheffield Hallam University

Industry Placement Toolkit

- The objective of the industry placement toolkit is to simplify the process and reduce the time required to plan an industry placement for both employers and providers
- The toolkit will serve as a central resource **hub for engineering and manufacturing T level industry placement support**
- The toolkit will consist of **digital and downloadable resources and guidance** for engineering and manufacturing T level industry placements
- The Academy is leading on the development of a **suite of example placement projects** for employers to provide to students
- Hosted or linked to on the Academy website for students, colleges and employers



Toolkit Ideas

Passport to placement

Work placement charter

Case studies of successful placements

Suite of Projects

- Projects will cover a range of sectors: automotive, aerospace, rail, energy, manufacturing
- The framework will be flexible to enable businesses to put their own projects into the placement work
- The framework will also be designed to be flexible around different placement approaches (day release, week placements, end of course placements)

Example Placement Projects

Flexible Project Templates

- Sustainability project
- Business development project
- Digital transformation
- Failure/Root cause analysis
- Quality control project

Industry Specific Projects

- Performance testing
- Verifying if a technical design is compliant with relevant standards
- Review a technical design
- Creating a maintenance plan
- Design components using CAM/CAD
- Produce prototyping using additive manufacturing

New Engineering Resources

- The Academy is developing a new suite of Free-to-use resources to support students and practitioners with teaching and learning
- The resources will include short videos, interactive simulations, teaching materials, embedded careers information, etc.
- The content will be independent of specific qualifications – so can be used for existing technical quals and new T levels
- Current support areas will include:




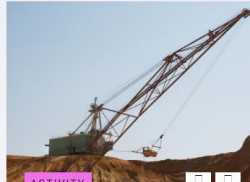




CNC Machining
Engineering Materials
Battery technologies
Microcontroller systems / PLCs
Advanced /emerging technologies
 AR / VR
 AI, Cybersecurity
 Cyber-Physical systems, IoT
Robotics
Electrical machines
Renewable energy
Sustainability – Net zero

Existing Resources

Series of contextualised, interactive engineering resources for L3 technical courses.

Range of topics around mechanical and electrical concepts

STEMResources.raeng.org.uk
/resources/post-16/

 <p>ACTIVITY</p> <p>RESOURCES</p> <p>Forces, centre of gravity, reactions and stability</p>	 <p>ACTIVITY</p> <p>RESOURCES</p> <p>Friction and sliding</p>	 <p>ACTIVITY</p> <p>RESOURCES</p> <p>Force on a dam wall</p>	 <p>ACTIVITY</p> <p>RESOURCES</p> <p>Co-planar forces on a crane</p>
 <p>ACTIVITY</p> <p>RESOURCES</p> <p>AC phasors and fault detection</p>	 <p>ACTIVITY</p> <p>RESOURCES</p> <p>AC power and power factor</p>	 <p>ACTIVITY</p> <p>RESOURCES</p> <p>Filtering AC signals</p>	 <p>ACTIVITY</p> <p>RESOURCES</p> <p>Kirchhoff's laws</p>

Further Education Steering Group

- The purpose of the group is to enable the Academy to focus its efforts on what is needed within the FE sector
- Opportunity to influence our work and feed into policy consultations on apprenticeships, T levels and other relevant topics
- The steering group will meet remotely 3 – 4 times a year

Regional Talent Engines

- New programme to support aspiring engineering and technology entrepreneurs in four different regions of the UK (Northern Ireland, North West, North East, and Yorkshire & Humber).
- Development and creation of **entrepreneurship resources**
- **Training of practitioners** in colleges in the four regions to deliver and use the resources
- Launch of an **annual enterprise competition** in the four regions combining entrepreneurship and sustainability
- Regional winners invited to the Academy for a master class event

Your Support

To maximise the use and effectiveness of these resources, we need your support.

Opportunities to support & influence our work along with training opportunities:

- Engineering and/or entrepreneurship resource testing
- T Level industry placement toolkit development
- Entrepreneurship guidance panel
- Further education steering group
- Informed about future training events – T Levels and/or entrepreneurship opportunities

To get involved, please contact:

FurtherEducation@raeng.org.uk



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Thank you.

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