



Engineering Apprenticeships

Where bright careers begin

IET The Institution of
Engineering and Technology

Approved Scheme

Version 3
November 2020

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Introduction

What is Diamond Light Source?

Diamond is the UK's national synchrotron science facility. It's shaped like a huge ring, and is a bit like a giant microscope. Diamond speeds up electrons to near light speeds, producing a light 10 billion times brighter than the sun. These bright beams are then directed off into laboratories known as 'beamlines'; here scientists use the light to study everything from viruses and vaccines to fossils and jet engines. Click on this link to [learn more about Diamond](#).

Diamond's Engineering Apprenticeship Programmes

In 2017, Diamond developed its own independent Engineering Apprenticeship Programme having successfully partnered with the Science and Technology Facilities Council (STFC) for many years prior to this.

Our technicians and engineers are crucial in enabling the cutting edge science that takes place on site. Diamond's uniqueness means that most equipment designed and built here is bespoke so we are able to provide our apprentices with varied, interesting experiences and opportunities they won't find elsewhere.

Diamond's Apprenticeship Strategy

In 2019 Diamond launched its apprenticeship strategy which was to ensure the delivery and optimisation of apprenticeships aligned to its business strategy and objectives and to facilitate the recruitment, retention and development of Diamond's talent through their utilisation.

Arising from the strategy, there are four key areas where apprenticeships are prioritised within Diamond (below) and Diamond's engineering apprenticeship programme supports all of these except leadership and Management Development.



Diamond's Engineering Apprenticeship Programmes

Engineering Technician (Multi-Skilled)

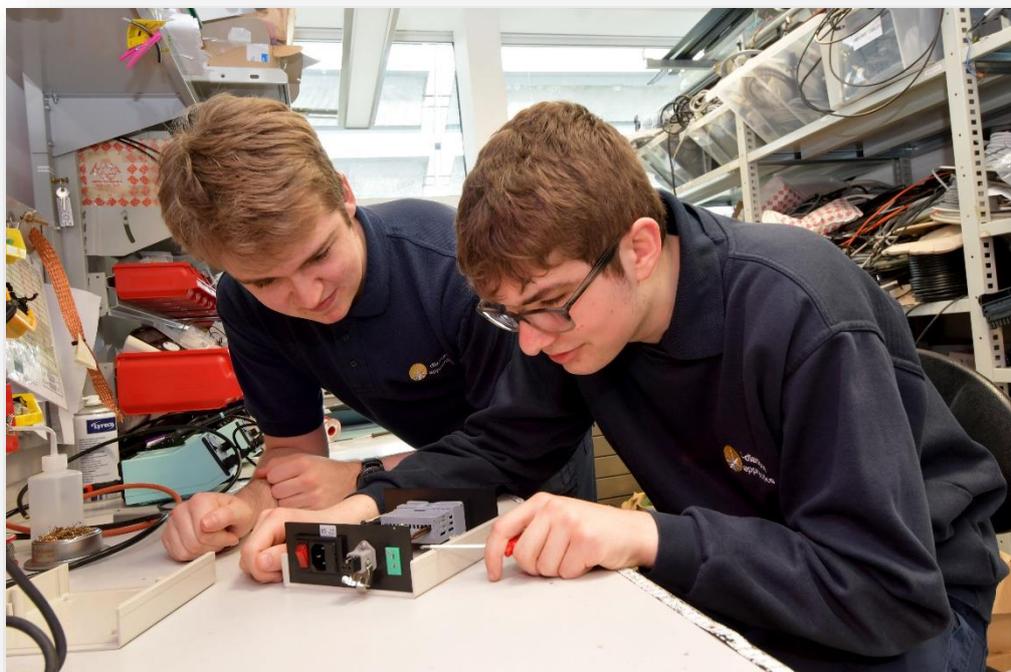
Our core programme is the Level 3 Engineering Technician - Product Design and Development pathway. The programme lasts four years and is accredited by the Institute of Engineering and Technology (IET). The apprenticeship will ensure that you'll develop into a multi-skilled electrical, mechanical and electronics technician – perfect if you're undecided on a specialism or would like to be trained in a variety of disciplines.

Installation and Facilities Management (IFM) Technician

Periodically IFM recruit apprentices onto the Level 3 Engineering Technician - Mechatronics pathway apprenticeship which is focused on maintenance operations within Diamond. In IFM, our apprentices learn the skills and knowledge in order to maintain, repair and install electrical, mechanical services (e.g. Pumps, motors, air handling units, compressed air, lighting, electrical control systems, fire systems). In addition to the Engineering Technician programme IFM also recruit into the Installation and Maintenance Electrician apprenticeship which is a 4 year programme installing, maintaining and repairing electrical systems at Diamond. Our IFM apprentices undergo the same internal development training as the apprentices on the Engineering Technician programme however whilst they undertake some of the placements that form the basis of the engineering technician scheme, much of their on-the-job development is, understandably, undertaken within IFM.

Entry requirements

Entry requirements for the Engineering Apprenticeship Programmes are a minimum of five GCSEs grade 4 / C or above (or equivalent qualifications), to include Maths, English and at least one Science.



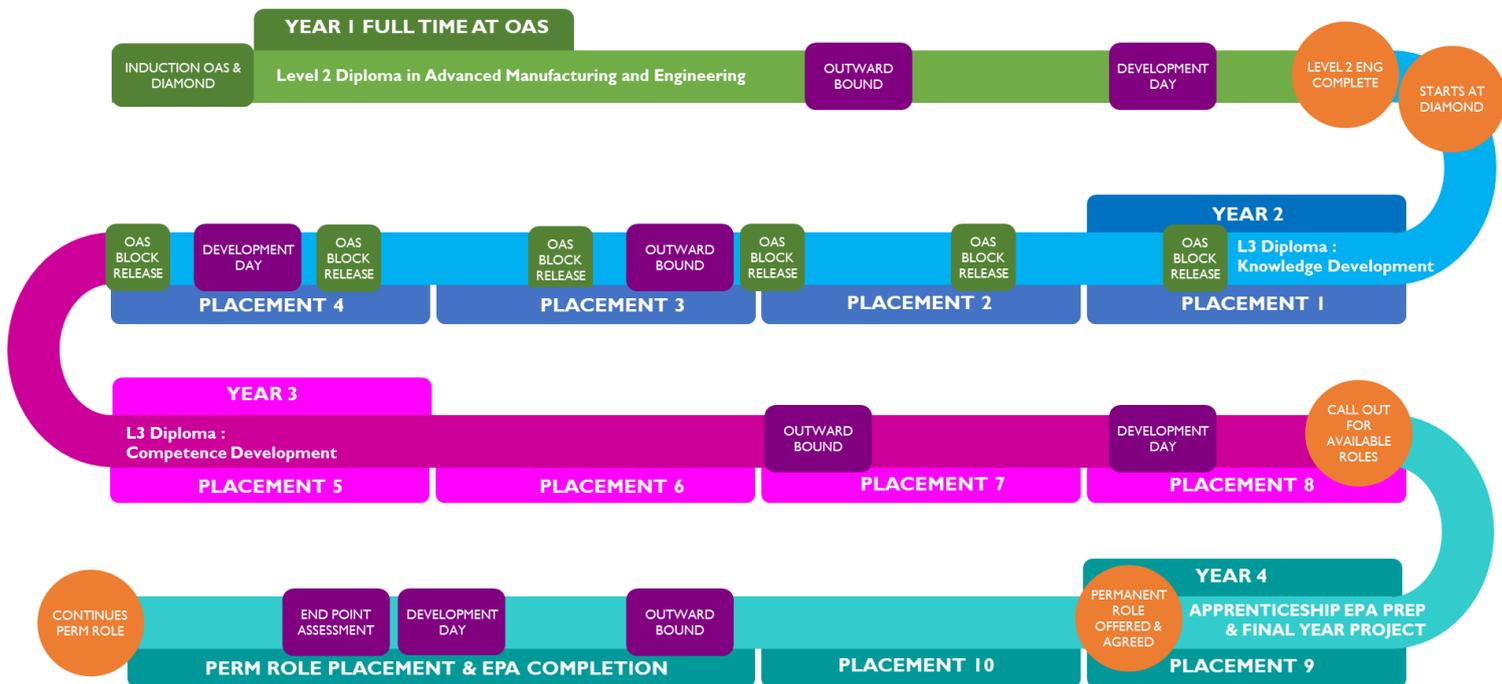
Engineering Apprenticeship Programme Overview

Our apprentices spend the first academic year studying full time at Oxfordshire Advanced Skills (OAS) and spend their remaining three years at Diamond completing several work-based placements across the organisation such as mechanical and electrical assembly, motion and controls, vacuum engineering and CNC machining. They also attend periodic week long block release at OAS during year 2 with the focus then being on competence development during years 3 and 4.

In addition to the above core work, our apprentices are provided with supplementary development opportunities which include:

- Annual “Outward Bound” residential course
- Annual Development Days
- Access to wider and more general employee development opportunities
- Early identification of a permanent role (ideally at the end of Year 3)

The illustration below gives you a flavour of what the four year programme looks like.



Qualifications and Milestones

The qualifications and milestone assessments achieved as part of the L3 Engineering Technician Apprenticeship at Diamond include:

- Level 2 Diploma in 'Advanced Manufacturing and Engineering (Foundation Competence)'
- Successful completion of the 'Foundation Phase Gateway Assessment'
- Level 3 Diploma in 'Advanced Manufacturing Engineering (Development Knowledge)'
- Level 3 Diploma in 'Advanced Manufacturing and Engineering – Product Design and Development Technician (Development Competence)' OR
- Level 3 Diploma in 'Advanced Manufacturing and Engineering – Mechatronics Maintenance Technician (Development Competence)
- Successful completion of an 'End Point Assessment', leading to professional recognition by the IET

Institution of Engineering & Technology (IET) Approved programme



Diamond's apprenticeship programme is approved by the IET, the benefits that this provides to our apprentices are listed on the IET website however in summary here are:

- An approved route to gaining international recognition as a competent professional Engineering or Information and Communications Technology Technician.
- At a higher level, Approved Apprenticeships will prepare you to work towards Incorporated or Chartered Engineer.
- An Approved apprenticeship has been quality checked by the IET to deliver the range of experiences that are needed for professional registration with the Engineering Council.
- The Approved apprenticeship provides you with professional engineering and business competencies, which are valued throughout the engineering sectors.
- If you're in your second year or above of an approved scheme and making a substantial contribution towards their operational area, you can be nominated for the [IET Apprentice of the Year Award](#), which comes with a trophy, £1,000 and two years free IET membership.
- UK apprentices, who have overcome obstacles or personal challenges, need financial assistance and are currently undertaking an approved scheme, can apply for the [IET Engineering Horizons Bursary](#).

For further information about the IET and apprenticeships please click [here](#)

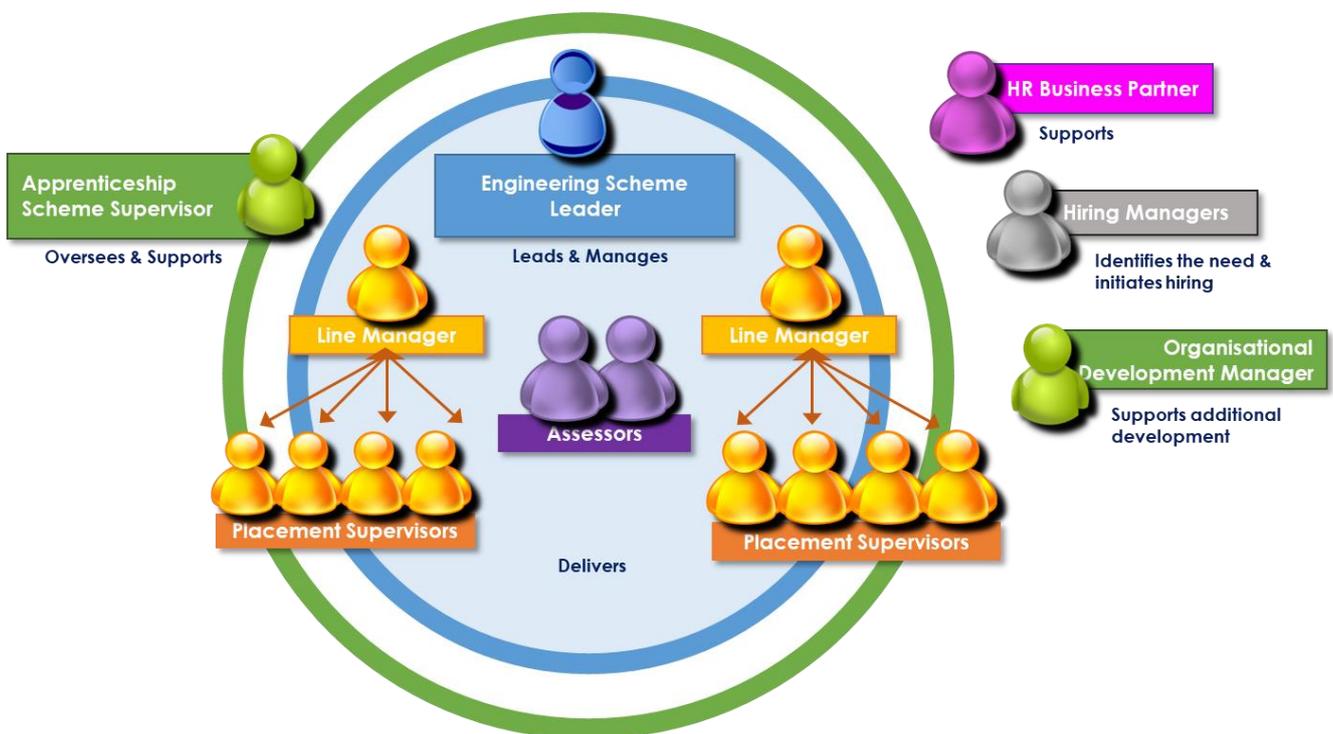
What jobs might these apprenticeships lead to?

The engineering apprenticeship has two pathways as described, if successful offers can be made for the following roles within Diamond:

- Multi-skilled Engineering Technician
- Maintenance Technician
- Electrical Installation Technician

Support at Diamond

All engineering apprentices at Diamond receive an extensive support programme from several roles within the organisation, to ensure they achieve and succeed. This includes:



Other Apprenticeships at Diamond

Diamond operates an employee apprenticeship programme to provide opportunities for employees to utilise apprenticeships to further their career development. On an annual basis any



Diamond employee can submit an expression of interest in undertaking an apprenticeship which, wherever possible, are progressed to enrolment onto an apprenticeship.

In addition to the engineering programme and internal employee development, Diamond is committed to identifying other opportunities to recruit into apprenticeships and these will be advertised with the relevant information on our [website](#).

Working at Diamond

Benefits that you can access at Diamond

Here at Diamond we passionately believe that by joining one of our apprenticeship programmes you will have the opportunity to work and learn within an exciting environment. Benefits that you can access at Diamond include:

- Flexible working opportunities (including flexi time scheme)
- A competitive salary
- A generous holiday allowance
- Access to a wide range of development opportunities during the apprenticeship (and beyond!)
- Fully funded membership of a professional institution such as the IET
- Excellent support from experienced placement supervisors, scheme management and Diamond colleagues
- A cycle to work scheme
- Access to discounts & other benefits
- Sports and lifestyle activities on the Harwell Campus

Our Values

Diamond's aspiration is to be a fulfilling and enjoyable place to work; where all staff regardless of grade, role, location, race, religion, age and other personal attributes feel valued and recognised for their individual contribution in helping us to achieve our objectives and priorities; and become an employer of choice and a great place to work.



Our Values and Behaviours: How they work

Values are the guiding principles that dictate behaviour and action. Values can help people to know what is right from wrong; they can help Companies to determine if they are on the right path and fulfilling their objectives and priorities; and they create an unwavering and unchanging guide for all to follow. Values can have a major influence on staff behaviour and attitude.

There are five Diamond values Respect, Excellence, Collaboration, Integrity and Innovation and a set of behaviours for each so that every employee knows how they are expected to behave.

We believe that the way we behave in Diamond, through adherence to our values and behaviours, will have the greatest impact in achieving our objectives. Employees will feel more engaged, valued and motivated and this will make Diamond more productive and a great place to work. Everyone at Diamond has a shared responsibility to adhere to the values and behaviours and ensure others do too.

Additional Development Opportunities

In addition to the training provided by OAS, Diamond has invested in the provision of supplementary development activities that deliver measurable outcomes for our apprentices enabling them to reach their full potential and become excellent employees and highly employable once they have completed their Apprenticeship. The Development Programme is designed to cover the following areas of development and deliver measurable outcomes which are:



Personal Development

- Your strengths and identifying areas for development
- Self awareness and emotional intelligence
- Communication and interpersonal skills
- Setting and achieving goals and objectives
- Resilience development



Team Focus

- Taking personal responsibility
- Dealing with challenges and difficult situations
- Effective workplace behaviours
- Being a team player and appreciating differences
- Providing and receiving feedback



Knowledge & Skills Training

- Complying with health and safety
- Ethical compliance (organisational policy)
- Improving quality, speed and efficiency
- Problem solving
- End point assessment preparation



Optional Development

- Assertiveness training
- Handling difficult situations
- Building self esteem and confidence
- Stress awareness and working under pressure
- Time management and organisation skills

How these personal qualities will be delivered and obtained:

Outward Bound Residential Courses

Diamond has partnered with PGL who offer a residential training course specifically designed to provide measurable results and outcomes around the development needs of apprentices. The courses includes activities such as raft building, team initiative and challenge exercises, climbing and canoeing for example. Please note, you don't need to be an athlete or super fit to enjoy and get a lot out of these activities!

The physical activities are designed to teach and underpin key areas of development such as teamwork, communication, resilience, self-awareness, problem solving, leadership skills and enable our apprentices to identify and build confidence in their own skills, strengths and abilities.

PGL have centred their apprentice programme around the MTQ48 (mental toughness) Framework. Prior to the course each participant will be asked to complete the MTQ48 questionnaire and again at the end of the course to provide an insight into the areas in which the individual has developed and improved.

MTQ48

The 8 factors of the MTQ framework

Understanding how these factors impact on behaviours is important in improving individual performance, wellbeing, positive behaviour and aspirations.

CONTROL

Life Control
I really believe in myself, I can do it

Emotional Control
I can manage my emotions and the emotions of others

CONFIDENCE

In Abilities
I believe I have the ability to do it, or can acquire the ability

Interpersonal Confidence
I can influence others



COMMITMENT

Goal Orientation
I set goals and like the idea of working toward goals

Achievement Orientation
I do what it takes to keep promises and achieve goals

CHALLENGE

Risk Orientation
I stretch myself, welcoming new and different experiences

Learning Orientation
I learn from what happens, including setbacks

"Research shows that Mental Toughness is a key personality trait for all and has a significant impact on motivation, wellbeing and performance. Experiential learning is the most effective way of developing this key quality - an area in which PGL are expert. PGL has developed a leading-edge approach to enabling its learners to "be the best that they can be" which is capable of being evidenced."

Doug Strycharczyk, CEO AQR International"

Sample Itinerary

Monday	Tuesday	Wednesday	Thursday	Friday
Introduction and goal setting	Gaining confidence	Beyond the comfort zone	Working together	Outcomes and actions
Morning	Morning	Morning	Morning	Morning
Arrive approx. 9.30	Breakfast	Breakfast	Breakfast	Breakfast
Review of MTQ48 results	Climbing	High ropes	Jacob's ladder	Team challenge
Induction: Aims & Culture	Customer focus and support	Trapeze	Orienteering	
Lunch	Lunch	Lunch	Lunch	Lunch
				
Afternoon	Afternoon	Afternoon	Afternoon	Afternoon
Team initiative exercises	Zip wire	Canoeing	Raft build team challenge: sourcing, design and implementation	MTQ48 session final assessment
	Giant swing	Mid-course review	Evening	Future action plans
Evening	Evening	Evening	Dinner	Depart approx. 4pm
Dinner	Dinner	Dinner	Closing ceremony and presentations	
Personal & team goals and target setting	Teamwork skills development	Effective communication practices		

The benefits of undertaking the course each year, throughout their apprenticeship, will be so that the apprentices can:

- develop a sense of community and network with each other
- work with other Diamond apprentices that they may otherwise not have met or worked with
- evidence a longer-term growth of personal development via the MTQ48 results over the four year programme.
- focus on different areas of self-development each year

Development Days

Each year Diamond will deliver an interactive apprentice development day that will be focused on one of the core areas of development such as communication, achieving goals, developing self-awareness and emotional intelligence for example. The objective is not only to provide measurable outcomes around a specific area of development and to support the apprentices future personal development plans but also to provide them with another opportunity to come together as one cohort, to practice skills required for their end point assessments such as giving and receiving feedback, presentation skills and developing confidence.

Internal Training

Diamond offers several internal training workshops that will be used where appropriate for personal development plans as they cover areas we have identified as optional development for those who identify a need; such as mentoring, assertiveness, time management and stress awareness workshops.

External Training

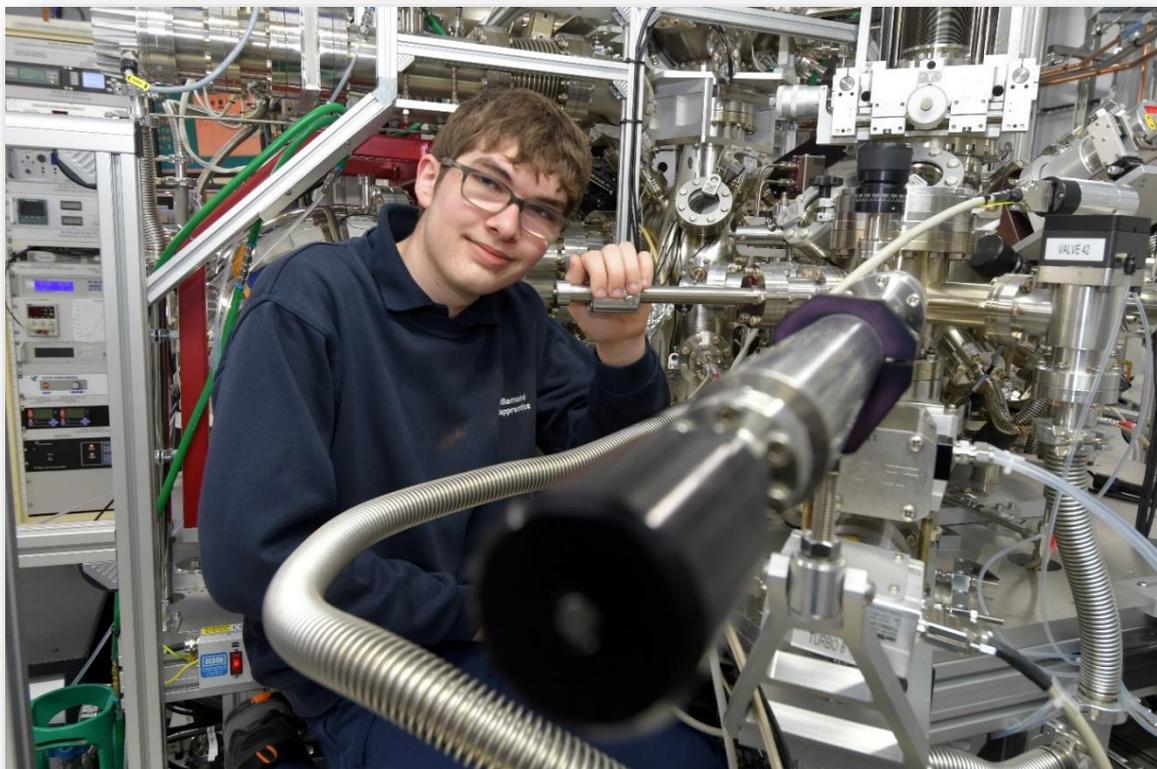
Apprentices can access external training where a need has been identified by the individual or line manager/Supervisor, this could include personal behavioural development or technical training that is required as part of their role.

GEM (Grow, Educate, Motivate)

GEM is Diamond's learning management system which is accessible by all employees and apprentices. It is used to create an individual's record of learning undertaken at Diamond and it provides access to a broad range of learning delivered in a variety of ways including workshops, e-learning and webinar recordings.

Coming soon ...

Professional coaching for Diamond's apprentices will be available from 2022.



We'd Like to Hear from You!

We are looking for people who:

- Are enthusiastic and keen to learn new things
- Think it's exciting to work at Diamond and know why
- Work well in a team
- Enjoy having a problem to solve and can come up with creative solutions
- Like a challenge
- Can align to Diamond's values

Get in touch

We are always happy to hear from anyone who might have a question or is interested in our apprenticeships at Diamond.

Please email us at diamondapprenticeships@diamond.ac.uk or visit our [website](#) for more information

