



Ministry
of Defence

de&s



Defence Nuclear Degree Apprenticeship Scheme

This is a unique opportunity to be involved in the UK Ministry of Defence Nuclear Submarine and Strategic Weapons Programmes

Defence Equipment and Support (DE&S) is a bespoke trading entity, and arm's length body of the Ministry of Defence.

We manage a vast range of complex projects to buy and support all of the equipment and services that the Royal Navy, Royal Air Force and British Army need to operate effectively.

Cutting edge engineering is a critical component in supporting this effort, with modern battle winning forces being necessary to defend the UK's interests and to contribute to strengthening international peace and security.

As a DE&S Nuclear Degree Engineering Apprentice you will be part of the team responsible for supporting the Royal Navy with their fleet of submarines.

One major DE&S submarine programme is 'Dreadnought'. This is the replacement programme for the Royal Navy's Trident missile Vanguard Class submarines, which form the UK's nuclear deterrent.

Since 1992 the 4 boats of the Vanguard Class have maintained this deterrent, ensuring at all times 1 submarine is deployed. As the Vanguard submarines progress to the end of their lifespan, the UK is building the next generation of submarines to carry forward this vital role.

Successful applicants to the DE&S Nuclear Degree Apprenticeship Scheme will undertake a comprehensive framework of practical and academic training, including a full degree for individuals with the greatest potential. Apprentices will also complete a number of work based training placements and defence specific nuclear training at various locations within the UK while completing relevant vocational qualifications in preparation for engineering roles within the MOD's current and future nuclear programmes.

Entry requirements

5 GCES at grade C to A* or Grades 4 – 9 including English, Mathematics and Science / Engineering subject.

Plus

3 A Levels including Mathematics, science or other related engineering subject, plus one other.

Grades typically expected are B B C

or a National Diploma in engineering typically at Distinction * Distinction * Level (minimum 112 UCAS Points under the new system)

Because of the classification of much of the work you will carry out during and after your apprenticeship these are reserved posts open to UK Nationals only.

Selection process

Following an initial sift candidates will be called for:

Functional Skills numeracy, literacy, electrical, mechanical engineering and general logic aptitude tests.

The top performers from these tests will be taken forward to an assessment process involving leadership, team working and practical problem solving challenges. The assessment day will be followed by a formal interview.

Successful candidates will be offered a place on the apprenticeship subject to obtaining satisfactory grades, references, security and health checks.

Additional guidance will be given before each stage of the process.

Following Freshers' Week and induction to both the college, workshops, and DE&S, you will spend a few days getting to know your fellow apprentices, while enjoying a range of challenging team building activities.



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Phase 1 – Year 1

Attendance at Weston College in Somerset to complete: National Vocational Qualification NVQ Level 2 Performing Engineering Operations (practical workshop experience including hand and machining skills, mechanical and electrical) and commence Foundation Degree FD Science with either an electrical or mechanical bias)

Note: the completion of FDSc prior to the Bachelor's Degree allows us to have greater flexibility with the subjects you will study.

Also, note many of our apprentices enjoy the use of the college hall of residence during the year of fulltime study.

Phase 2 – Years 2 and 3

Complete your foundation degree part time at the University of the West of England UWE while undertaking work based placements. Your placements will be selected to provide you with much of the experience that you will need to, eventually, take on a role within the business. Your placements will also provide you with the evidence that you will require to complete the NVQ Level 4 in Engineering Manufacture. The placements are based in a variety of UK MOD and industry teams, with occasional visits overseas. You will be working alongside experienced project managers and engineers working on real projects. You can expect to spend time working alongside our partners at Barrow in Furness on the design of Dreadnought, the production of the Astute Attack Submarines or, perhaps, with Rolls Royce in Derby on the design of the next generation of pressure water reactors. You will certainly spend time at our headquarters in Bristol learning about, and dealing with, the day to day challenges of maintaining the current fleet of submarines.

End of Phase 2 Assessment

Congratulations. At this point you should be qualified and experienced to a level that allows you to be registered with a Professional Engineering Institution as an Engineering Technician (EngTech). For some this will be the end of the apprenticeship and you will potentially start work within the business.

However, some and hopefully all you, will have shown yourself to have the aptitude, attitude and desire to continue into phase 3.

Phase 3 - Years 4 and 5

A further 2 years of study will see you complete a part time degree in engineering BEng through the University of West of England (UWE). At the same time, you will continue to move around the business gaining further knowledge and experience to prepare yourself for registration as an Incorporated Engineer (I Eng)

Bespoke Training

Years 2 to 5 will also include a range of nuclear specific courses that are expected to provide credits towards your degree and knowledge of technologies that, in many cases, are unique to UK Defence requirements.

Subjects covered may include:

Nuclear Reactor Principles, Radiological Protection, Reactor Engineering, Chemistry and Materials, Reactor Systems (Mechanical and Electrical), Reactor Systems Maintenance, Reactor Instrumentation and Protection, Reactor Safety and Reactor Accident Response. You will also look at the technology, design and build of strategic weapons.

After Qualifying

Few apprenticeships come with a guarantee of permanent employment at the end. However, DE&S has an exceptional record of finding challenging and rewarding jobs for successful apprentices and the good news is this is only the start of your career. Many of our ex-apprentices continue with their studies with more specialised training and even a master degree MSc in Nuclear Technology and Safety Management while at the same time gaining promotion.

Help and Support

Make no mistake, this apprenticeship will challenge you and you will need to apply yourself diligently in order to succeed. However, you will be supported all the way by a dedicated manager who will support you throughout your apprenticeship. You will also have assistance from an independent training assessor and a whole host of experienced and knowledgeable placement supervisors. As well as end point assessments you will be assessed and reviewed every 10 or 12 weeks to ensure you are making the progress we expect in both your academic and vocational studies.