

# In the company of **CREATORS**



## Business area: Nuclear & Power

### Requirements:

- **Mechanical Engineering:** On track to achieve a minimum of 2.2 Bachelor's/BEng degree and/or Master's degree in Mechanical Engineering, Integrated Mechanical and Electrical Engineering, Building Information Modelling (BIM), Mechatronics or other degree titles with a similar focus on mechanical engineering.
- **Materials, Manufacturing, Chemistry & Corrosion Engineering:** On track to achieve a minimum of 2.2 Bachelor's/BEng degree and/or Master's degree in Materials Engineering, Chemical Engineering, Metallurgy, or other degree titles with a similar focus.

### Our teams and what they do

Our Nuclear & Power team works collaboratively across the industry, building trust and delivering exceptional engineering solutions to our key clients. It's a really exciting time to be a part of our team, with decades of nationally and internationally critical projects in the pipeline. For you, this means unrivalled opportunities to develop your career by joining a growing team operating in a fast-paced environment and delivering solutions to our clients' most challenging engineering requirements.

In joining our Nuclear & Power business, you'll be part of one of four key teams in the UK:

- Reactor Operations & Decommissioning
- Decommissioning & Waste Services
- Power New Build
- Net Zero Energy

### Team Details

#### Reactor Operations and Decommissioning

*Locations within this team: Bristol, Derby (Industrial placement only), Epsom, Glasgow, Manchester, Sheffield.*

#### Available roles within this team: Mechanical Engineering or Materials, Manufacturing, Chemistry & Corrosion Engineering

Our mission is to solve complex nuclear engineering problems to keep the lights on, keep everyone safe and ensure the clean evolution of the UK nuclear estate. Our purpose is to build lasting relationships where we are valued and can develop our people across the widest variety of challenges. Our vision is to be the 'go to' community for creative solutions, known for empowering and trusting our people, and where our nuclear expertise is sought after to secure the future.

- **As a Mechanical Engineering placement student** within Reactor Operations and Decommissioning, you will join a growing and vibrant team and find yourself immersed in a diverse portfolio of work covering the entire nuclear lifecycle in both the civil nuclear sector and UK defence industry. With the knowledge and skills that you've gained throughout your studies, you'll be ready to start this exciting next chapter within a diverse team of highly skilled engineers. As part of our team, you will be empowered to gain broad experience across our portfolio of work with key clients such as EDF, Nuclear Restoration Services, and Rolls-Royce.

You can expect to gain experience in a variety of working environments, including being based in our AtkinsRéalis offices around the UK, as well as gaining valuable site-based experience supporting our clients on their operating sites at the forefront of carbon neutral electricity generation. Day-to-day, you should expect to work on tasks such as the design and substantiation of equipment using a mixture of hand calculations and FEA,

authoring of technical reports, development of safety cases, and designing safety critical software. You'll also identify customer requirements, produce specifications, hazard assessments, support project management activities, and collaborate with clients as well as your AtkinsRéalis colleagues and our supply chain partners. All of this adds up to an outstanding environment to gain varied experience that will aid you with your professional development and progress towards professional registration.

- **As a Materials, Manufacturing, Chemistry & Corrosion Engineering placement student** within Reactor Operations and Decommissioning, you will join a growing and vibrant team and find yourself immersed in a diverse portfolio of work covering the entire nuclear lifecycle in both the civil nuclear sector and UK defence industry. With the knowledge and skills that you've gained throughout your studies, you'll be ready to start this exciting next chapter within a diverse team of highly skilled engineers. As part of our team, you will be empowered to gain broad experience across our portfolio of work with key clients such as EDF, Nuclear Restoration Services, and Rolls-Royce.

We're looking for placement candidates with a good understanding of mechanical engineering and engineering design, who love the idea of applying their engineering skills to help keep the lights on, keep everyone safe, and ensure the clean evolution of the UK nuclear estate. You should also be keen to develop your knowledge, skills and understanding of the field and have an interest in the nuclear energy sector.

## **Decommissioning and Waste Services**

*Locations within this team: Whitehaven, Manchester.*

### **Available role within this team: Mechanical Engineering only**

Decommissioning and Waste Services are looking for highly motivated mechanical engineering placement candidates who are keen problem solvers and out-of-the-box thinkers with a safety-first mindset. You'll be part of a forward thinking, highly innovative Mechanical team working at the cutting edge of digital design and pushing the standard norms of how engineering projects are delivered in the 21st Century.

Working on some of the most complex and challenging decommissioning projects within the Nuclear industry, our portfolio of work is diverse, immersive and ultimately very rewarding. Crucial to our success is the integration of digital tools into engineering delivery, such as 3D point cloud scan data, Virtual and Augmented Reality systems, and utilising cutting-edge technology within our design solutions. The DWS Mechanical team service full-lifecycle projects, from initial concept through to detailed design, manufacturing, testing and on-site plant installation. You will have the opportunity to work across multi-disciplinary projects with Civil, EC&I, Process and Radiological Protection teams.

A key requirement for the position is the desire and ability to build on mechanical engineering technical knowledge by applying it to complex problems to find solutions for our clients. The candidate can expect to work on 3D design models, substantiation reports and design calculations, risk assessments for design and on-site operations, technical notes and a suite of other key deliverables. The ideal candidate will have an interest in structural and mechanical design, static and dynamic mechanical loading and have a real passion for 3D digital innovation and 3D modelling with a vision for how this can shape the future of engineering.

## **Power New Build**

*Locations within this team: Bristol.*

### **Available role within this team: Mechanical Engineering only**

#### **Integrated Engineering Solutions**

As a Mechanical Engineering placement student within our Integrated Engineering Solutions team, you will work within a multi-disciplinary team of Mechanical, Electrical, Building Services and Project Engineers who work across all stages of the project lifecycle from new build to decommissioning to deliver multi-disciplinary packages of work on key facilities, systems and components across the full spectrum of Nuclear Power. As a Mechanical Engineer Placement student working out of the Bristol office, you would be working in roles related to the design, analysis and assessment of Heating, Ventilation and Air Conditioning (HVAC) systems and Mechanical Process systems. These can be stand-alone technical tasks or part of large multi-disciplinary projects. Work is varied and can involve working both in a specialised mechanical capacity as well as across and alongside other engineering disciplines.

## **Fusion and Advanced Reactors**

Our Fusion and Advanced Reactor team is looking to the future. We're searching for passionate placement candidates to join our growing team to work across our fusion energy portfolio, SMR/AMR projects, and other advanced reactor technologies. You will also have the opportunity to develop your capability across other markets including large-scale fission e.g. Hinkley Point C or Sizewell C EDF projects. We deliver solutions to complex problems across the full lifecycle of nuclear, which ranges from design through to site-based engineering support.

You can work within our fusion project portfolio, a key client being UK Atomic Energy Authority (UKAEA) working on their Spherical Tokamak for Energy Production (STEP) and Hydrogen 3 Advanced Technology (H3AT), or the International Thermonuclear Experimental Reactor (ITER) based in the south of France as we aim to deliver different pathways for commercially viable fusion energy.

Across our portfolio, you'll be involved in the optioneering, design, analysis, and assessment of fusion relevant technologies and systems, whether that be on stand-alone technical tasks or as part large multi-year consultancy support contracts. By working closely with our UK and international clients, you'll be building strong relationships, developing a comprehensive understanding of their requirements, and delivering cost-effective and innovative solutions. You'll also take a proactive role within projects, co-ordinating within teams and providing technical assistance and shadowing senior engineers.

As part of the team, you'll be delivering projects from your home office / location, as well as visiting client sites / offices. As part of our Nuclear & Power Business, you'll be focused on expanding our fusion project portfolio in addition to the advanced reactor technologies (e.g. Moltex or Rolls-Royce SMR) but can work across our other markets including Next Generation Nuclear New Build, Reactor Operations and Decommissioning and Net Zero Technologies.

## **Net Zero Energy**

*Locations within this team: Bristol, Stockton, Glasgow.*

### **Available role within this team: Mechanical Engineering only**

Within this team you'll find yourself working primarily on projects in our power and energy storage markets. Our portfolio of projects encompasses asset integrity, design, and assurance for a variety of clients across a broad spectrum of facilities ranging from large scale biomass and gas generating plant, to gas and oil storage, hydrogen production and storage, and decentralised energy assets. The broad nature of our project portfolio means you will be working on a variety of projects ranging from large interdisciplinary design and construction projects to supporting clients with discipline specific technical advice. The teams and projects you will be working with are at the core of the company's long terms focus on diverse, clean power generation and have an emphasis on achieving net zero, your work will be an important part of this.

As a Mechanical Engineer Placement Student within Net Zero Energy, your accountabilities will include performing engineering calculations to support design and assess systems, performing stress analysis of plant equipment, carrying out site surveys, and producing technical reports. There is the potential for significant time spent on site engaging with clients, inspecting plants, and deploying a range of cutting-edge digital tools to capture site information.

We're looking for placement candidates who have a keen interest in structural & mechanical design and analysis, pressure and pipework systems or rotating equipment working across all of the various energy sectors. A desire to learn and develop your technical understanding to apply mechanical engineering concepts to provide solutions to our client's complex problems is key. Being a committed and trustworthy team player with integrity, exhibiting a desire to ensure quality and do the right thing, is essential to maintaining our client relationships and strong company reputation. In return you will have the opportunity to be involved in projects at the forefront of the Net Zero energy transition, deploying cutting edge digital tools and technology solutions that will keep you developing skills that ensure you will have a fulfilled and relevant career.

### **Locations for this business will include:**

**Industrial placement locations:** Bristol, Sheffield, Derby, Glasgow, Epsom, Manchester, Whitehaven, Stockton

**Summer placement locations:** Bristol, Sheffield, Glasgow, Epsom, Manchester

**To apply, please return to the main job specification**