

In the company of

CHALLENGERS



Business area: Nuclear & Power

Requirements: On track to achieve a minimum of a 2.2 Master's/MEng degree in Chemical or Process Engineering

Our teams and what they do

Our Nuclear & Power business 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.

Our process engineering capability is focussed on supporting our clients to operate safely and efficiently, in the nuclear, power and net zero technology domains. We cover all phases of design, from feasibility and concept to operations support and into decommissioning. We use the latest technology solutions to deliver efficient nuclear power today and safeguard our energy future.

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

- Power New Build
- Net Zero Energy
- Reactor Operations & Decommissioning.

Team Details

Power New Build

Locations within this team: Bristol, Epsom.

As part of the Power New Build process engineering team, you will be involved in technically demanding projects, helping to deliver the nuclear technologies of the future. Through a combination of in-house projects and secondments we apply core chemical engineering principles to support clients towards the nuclear transition. Our portfolio of clients encompasses the design of novel modular reactors, delivery of major new build projects such as Hinkley Point and technical support to ground-breaking fusion projects. During your time as a placement student in our team you can expect to gain experience in areas such as:

- Delivery of process design across the full project life cycle from concept through to preliminary and detailed design.
- The use of process engineering to solve complex client problems through targeted studies.
- Working with complex multi-disciplinary teams to deliver novel technologies.
- Project engineering to help deliver the UK's largest infrastructure project.

The Power New Build process team supports a broad range of clients within the nuclear industry and beyond. As a member of our team, you will have the opportunity to be involved a broad range of technically demanding projects. Projects our team are currently involved with include:

- Design of nuclear new build technologies such as Rolls-Royce's Small Modular Reactor programme and Hinkley Point C working on concept and detailed design of systems ranging from primary circuits to nuclear waste processing.
- Opportunities to get hands on experience by providing onsite support to both new build sites and

decommissioning sites, with clients such as HPC, Magnox and Sellafield.

- Working with leading fusion technology with secondment opportunities at the UKAEA's fusion centre in Oxford, Culham, and in house design of cutting-edge fusion research test rigs investigating the fusion fuel cycle.
- Design of high precision distribution networks of toxic and flammable gases for the Semiconductor industry.
- Opportunities to work for the UK's defence sector across nuclear safety case and detailed design alongside other key partners such as Rolls Royce Submarines, Mott MacDonald, and Babcock.

Our team offers tailored training opportunities and chartership mentoring. The team is committed to developing early careers and using your unique skills to push a low-carbon energy future.

Net Zero Energy

Locations within this team: Glasgow, Bristol, Stockton.

As a Process Engineer placement student in any of the offices, you will find yourself working primarily on projects within the NZEB process engineering team. Our team provides consultancy advice and engineering design work for new build projects, alongside advise, improvement and maintenance services for clients' existing assets. Our portfolio of clients encompasses a variety of energy sectors, from conventional power to new low carbon technologies, with a particular focus on decarbonisation projects in both large scale and decentralised energy assets.

The broad nature of the NZEB client portfolio means you will be working on a variety of projects ranging from large interdisciplinary design projects to concept studies to supporting clients with discipline specific technical advice.

Projects our team are currently involved with include:

- Pre-FEED (Front End Engineering Design) study for a blue/green hydrogen production plant.
- Concept development multi-disciplinary study for hydrogen purification in subsurface hydrogen storage (i.e., in caverns).
- Concept development modelling study of carbon capture and storage (CCS) technologies.
- Detailed process modelling to optimise an existing asset's performance (i.e., creation of a process digital twin).
- Development of a decarbonisation roadmap for a hard-to-abate industrial site.
- Development of in-house tools to optimise project delivery.
- Safety studies for a variety of plants including power generation, hydrogen generation, hydrogen storage.
- Ad-hoc support to existing high hazard industrial assets, including process integrity studies, process simulation and safety studies.

The above will provide you with a diverse experience of process engineering work and training opportunities. Key accountabilities will include performing engineering calculations, carrying out process modelling using various engineering software packages, producing technical reports, carrying out site surveys and working closely with clients. Along with the technical focus, you will also be developing a variety of soft skills through vendor engagement, proposal development, STEM outreach, internal process improvement, etc. All of these will develop you into a well-rounded engineering professional.

We're looking for candidates who have a keen interest in delivering engineering projects for clients in the net zero energy systems market. A desire to learn and develop your technical understanding, to apply process engineering concepts and solve complex problems for our clients is key. Being a committed and trustworthy team player with integrity as well as exhibiting a desire to ensure quality and do the right thing are both essential to maintaining our client relationships and strong company reputation.

Reactor Operations and Decommissioning

Locations within this team: Sheffield (Summer placement only)

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 Chemical and Process Engineer 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 support optioneering, design, analysis and assessment of novel and existing technologies and systems, whether that be stand-alone technical tasks or as part of large multi-year consultancy support contracts. 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.

Locations for this business will include:

Industrial placement locations: Bristol, Epsom, Glasgow, Stockton

Summer placement locations: Sheffield, Bristol

To apply, please return to the main job specification