

Placement Student – Materials (Chemical Engineering) - Job Description

Role Purpose:

The purpose of this role is to support the process engineering function within CPI's Materials Technology Team. The role will provide assistance with day-to-day process engineering activities while also supporting laboratory and plant operations. Responsibilities will include delivering both engineering and operational support for projects, contributing to the development of new designs and plant modifications, and working collaboratively with colleagues across multiple disciplines.

Key Responsibilities

- Actively embody and promote CPI's values and desired behaviours promoting an ethical, positive workplace culture.
- Maintain consistent, fully documented compliance with all relevant Safety, Health and Environmental (SHE), Data Integrity (DI), Quality and best practice requirements.
- Provide engineering support within the process engineering team across a range of activities, including desk-based studies such as Techno-Economic Analyses (TEAs), laboratory design of experiments, development of new laboratory, pilot, and demonstration-scale plant designs, and support to CPI facilities. Activities may include generating engineering calculations, flowsheets, process flow diagrams (PFDs), and other front-end design packages for emerging processes.
- Deliver plant and laboratory operational based support by working closely with colleagues to the operations and technical team. This is an essential feature of this role, and key to the development of a well-rounded process engineer.
- Provide engineering support to internal and external customers ensuring their needs are understood and delivered through effective work programmes.
- Produce high quality reports and presentations for external clients and perform engineering calculations and design tasks using variety of software tools. Ensure all results, conclusions and recommendations are appropriately documented within IT/quality-based document control and archiving systems to enable the storage, retrieval and use of the data.
- Apply fundamental chemical engineering principles to add value to the projects, contributing to the delivery of projects, ensuring all deliverables are met in a timely manner.
- Maintain clearly documented records of technical data, decisions, methodologies, calculations and software use in an agreed format.
- Work collaboratively with business development and project delivery teams to understand, interpret and communicate customer needs to laboratory and plant operations teams.

Direct reports: No direct reports

Person specification

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Education / Qualifications:

Essential:	Desirable:
<p>Educated to A-Level (or equivalent) in Chemistry, Physics, Engineering, Biology, or a related subject.</p> <p>Currently undertaking education at Degree level (or equivalent) in a Chemical Engineering or related subject</p>	

Competencies and behaviours	
Leadership (Core)	Decision Making (Core)
<ul style="list-style-type: none"> Respects and values our diverse people and the differing talents, skills, and backgrounds that they bring to projects and day-to-day work. Has a positive influence on those they are in contact with. Gains the respect and confidence of colleagues and supports them in achieving their goals and targets. Aligns their behaviours and actions to our PRIDE values, vision, and goals. 	<ul style="list-style-type: none"> Within area of expertise recognises, identifies, and defines problems. Generates and evaluates alternatives, draws conclusion, and analyses risk. Takes timely and correct action using established methods to ensure effective solutions are implemented by working as a team and with and focused outcomes to be delivered.
Communication (Core)	Developing self and others (Core)
<ul style="list-style-type: none"> Communicates in a clear and concise manner, covering all relevant points in a timely manner. Uses the appropriate route and format to communicate. Confirms understanding of others communication. Asks questions to understand other people's viewpoints, keeping an open mind and embracing new ideas. 	<ul style="list-style-type: none"> Knows own career aspirations and clearly communicates them to relevant colleagues whilst actively working to achieve goals. Sets personal development goals and deploys strengths to achieve them. Takes responsibility for one's own performance and actions and invites and incorporates feedback from a variety of sources. Regularly reflects on own capabilities to identify development priorities.
Collaboration (Core)	Delivery (Core)
<ul style="list-style-type: none"> Establishes effective working relationships with other colleagues. 	<ul style="list-style-type: none"> Plans, prioritises, and leads own area of work to deliver specified and agreed outcomes (time and standard).

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| <ul style="list-style-type: none"> Builds and maintains a network of internal and external contacts. Actively seeks, values, and incorporates different views and ideas to broaden their prospective, embracing differing perspectives and unconventional ideas. | <ul style="list-style-type: none"> Accurately scopes out length and difficulty of tasks, and repeatedly estimates correct amount of time needed for tasks. Refers to lessons learnt from other projects/ tasks with related scope. Acts with minimal supervision or direction by being purposely empowered to make decisions when needed. Pays attention to detail and delivers accurate and high-quality outputs. |
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Knowledge and Experience:

Essential:	Desirable:
<p>Good understanding of chemical engineering fundamentals, with some experience of application through university design projects or similar.</p> <p>Experience of IT packages, such as Excel, Word, PowerPoint and Outlook.</p>	<p>Understanding of process manufacturing facilities, engineering design or pilot scale operation.</p> <p>Direct industrial experience through placements or similar.</p> <p>Experience of process modelling & simulation, and specifically Computational Fluid Dynamics (CFD) modelling.</p>