

**SKILLS FRAMEWORK FOR ENERGY AND CHEMICALS
SKILLS MAP - CHIEF CHEMIST/FELLOW**

Sector	Energy and Chemicals			
Track	Quality Assurance and Quality Control (QA&QC)/Technical Service, Application and Product Development/Research and Development (R&D)			
Occupation	Chemist			
Job Role	Chief Chemist/Fellow			
Job Role Description	<p>The Chief Chemist/Fellow is responsible for the strategic planning and design of complex laboratory solutions for the industry, professional and technical societies, government and other organisations. He/She is the organisation's technical expert on chemistry and scientific matters, who advises senior management and business partners on advanced technologies and methodologies for applied research, in accordance with applicable government regulations and manufacturing processes.</p> <p>The Chief Chemist/Fellow formulates the direction and strategy in applied research to exploit market potential and industry trends, so as to maintain and improve the organisation's competitive position in the market. He represents the organisation in Research and Development (R&D) consortiums for open innovation within the industry, and profiles the organisation's scientific and technical leadership at scientific and industry events and conferences. At the organisational level, he designs the organisation's technology roadmap and drives continuous improvement strategies. In addition, he leverages on deep technical expertise and industry experience to develop technical capabilities for the laboratory teams and domain expertise for the organisation.</p> <p>The Chief Chemist/Fellow maintains and builds strong links with the external scientific community, research institutions and business partners to explore business or collaborative research opportunities. He is a strategic and creative thinker, demonstrates exceptional problem-solving and communication skills, and networks effectively.</p>			
Critical Work Functions and Key Tasks	Critical Work Functions		Key Tasks	
	Administer Workplace Safety and Health (WSH) and Environmental Management Systems (EMS)	Drive compliance with WSH and EMS systems at the organisational level		
	Provide technical support to laboratory operations	Advise senior management and business partners on advanced technologies and methodologies in applied research		
		Endorse the design and conduct of complex experiments and analyses in the laboratory, based on industry, customer or field of specialisation requirements		
		Lead the identification, development and deployment of new analytical technologies to support product and process development		
		Manage the planning and design of complex laboratory solutions for the industry, professional and technical societies, government and other organisations		
	Manage applied research	Endorse scientific techniques and procedures for product design and innovation		
		Explore technical collaboration opportunities with industry partners and research institutions for product development and innovation		
		Formulate direction and strategies in applied research to exploit market potential and industry trends		
		Represent the organisation at scientific forums and present applied research papers		
Represent the organisation in Research and Development (R&D) consortiums across the value chain for open innovation within the industry				
Administer staff and organisational development	Build in-house technical capabilities for laboratory teams			
	Contribute to the development of business continuity plans			
	Design the organisation's technology roadmap through analyses of market trends and external drivers			
	Drive continuous improvement strategies at the organisational level			
	Drive the adoption of technologies to support virtual collaboration in remote locations			
	Provide leadership to uphold and shape the organisation's culture, values and behaviour			
Skills & Competencies	Technical Skills and Competencies		Generic Skills and Competencies (Top 5)	
	Applied Research and Development Management	Level 6	Leadership	Advanced
	Business Networking Management	Level 6	Communication	Advanced
	Change Management	Level 6	Transdisciplinary Thinking	Advanced
	Continuing Professional Development Management	Level 5	Decision Making	Advanced
	Continuous Improvement Management	Level 6	Global Mindset	Advanced
	Data and Statistical Analytics	Level 6		
	Environmental Management System Framework Development and Implementation	Level 5		
	Innovation Management	Level 6		
	Laboratory Data Reporting and Analysis Management	Level 6		
Laboratory Operations Management	Level 6			

Skills & Competencies	Materials Qualification	Level 5	
	Product Design and Development	Level 6	
	Project Management	Level 6	
	Technical Presentation	Level 6	
	Technical Report Writing	Level 4	
	Workplace Safety and Health Framework Development and Implementation	Level 5	
	Yield Analysis	Level 5	
Programme Listing	For a list of Training Programmes available for the Energy and Chemicals sector, please visit: www.skillsfuture.sg/skills-framework/energyandchemicals		

The information contained in this document serves as a guide.