

**SKILLS FRAMEWORK FOR ENERGY AND CHEMICALS
SKILLS MAP - SENIOR APPLICATION CHEMIST**

Sector	Energy and Chemicals			
Track	Technical Services, Application and Product Development			
Occupation	Chemist			
Job Role	Senior Application Chemist			
Job Role Description	The Senior Application Chemist leads technical work and projects for product development and innovation, and validates the development of application-specific solutions and new analytical methods, based on technological know-how. He/She studies market trends and customer needs to assess the feasibility of expanding existing product lines, in accordance with the organisation's business needs.			
	The Senior Application Chemist supports the technical service team by managing the execution of technical service, application and product development-related projects with customers. He also provides technical expertise in troubleshooting technical issues reported by customers. In addition, he coaches and mentors junior staff in the application team, and is responsible for managing the team's performance to achieve organisational goals.			
	The Senior Application Chemist leads a team in the laboratory, and collaborates closely with the technical service, Research and Development (R&D), and sales and marketing teams. He is creative and enjoys solving complex problems. He can manage multiple projects effectively, and possesses excellent technical writing and presentation skills.			
Critical Work Functions and Key Tasks	Critical Work Functions		Key Tasks	
	Administer Workplace Safety and Health (WSH) and Environmental Management Systems (EMS)	Comply with WSH and EMS systems		
		Ensure risk assessments are conducted and control measures are implemented		
		Implement the Management of Hazardous Chemicals Programme (MHCP)		
	Manage application and product development	Assess the feasibility of expanding existing product lines, based on assessments of customer and market needs		
		Lead technical work and projects for product development and innovation		
		Maintain customer-relevant protocols for claim validation and non-standard methodologies		
		Maintain up-to-date knowledge of market requirements and technical developments within the industry		
		Review specific industry, regulatory and Intellectual Property (IP) standards for compliance		
		Review standard and customer-specific laboratory testing		
		Review the documentation of product development, formulation and application notes for both internal and external customers		
	Manage technical services	Validate the development of innovative application-specific solutions and new analytical methods, based on technological know-how		
		Lead product application-related training to internal customers		
Manage the execution of technical service, application and product development-related projects with customers				
Administer staff and organisational development	Support the technical service team in troubleshooting technical issues reported by customers			
	Adopt technologies to support virtual collaboration in remote locations			
	Coach and mentor staff			
	Manage team performance to achieve organisational goals			
		Validate continuous improvement initiatives and activities		
Skills & Competencies	Technical Skills and Competencies		Generic Skills and Competencies (Top 5)	
	Change Management	Level 4	Problem Solving	Advanced
	Continuing Professional Development Management	Level 4	Sense Making	Advanced
	Continuous Improvement Management	Level 4	Creative Thinking	Advanced
	Data and Statistical Analytics	Level 4	Computational Thinking	Advanced
	Environmental Management System Framework Development and Implementation	Level 3	Service Orientation	Intermediate
	Innovation Management	Level 4		
	Laboratory Data Reporting and Analysis Management	Level 5		
	Laboratory Operations Management	Level 5		
	Materials Qualification	Level 4		
	Product Design and Development	Level 4		
	Product Testing Management	Level 5		
	Project Management	Level 5		
	Quality Control Management	Level 3		
	Sample Management	Level 5		
Strategic Service Excellence Management	Level 4			
Technical Presentation	Level 5			

Skills & Competencies	Technical Report Writing	Level 4	
	Technical Services Management	Level 5	
	Training, Coaching and Assessment Management	Level 3	
	Workplace Safety and Health Framework Development and Implementation	Level 3	
	Workplace Safety and Health Hazard Identification and Risk Control Management	Level 4	
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.