

SKILLS FRAMEWORK FOR ENERGY AND CHEMICALS SKILLS MAP - OPERATION SPECIALIST

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| Sector | Energy and Chemicals | | | |
| Track | Production and Process Engineering | | | |
| Occupation | Technical Professional | | | |
| Job Role | Operation Specialist | | | |
| Job Role Description | The Operation Specialist supports plant operations by coordinating day-to-day production activities, as well as maintenance and turnaround schedules and activities, for production shift teams, so as to meet production plans and schedules. He/She supports the Site Incident Controller (SIC) during emergency response situations. | | | |
| | The Operation Specialist contributes to plant operation improvements by working closely with the production, process engineering and discipline engineering teams to define and execute plant improvement projects, and by reviewing Standard Operating Procedures (SOPs) for the process area under his charge. He also supports the implementation of the Process Safety Management (PSM) framework for production activities, and ensures compliance with Workplace Safety and Health (WSH) and Environmental Management System (EMS) requirements across production teams. | | | |
| | The Operation Specialist may work on either a rotating or day shift in the field. He works closely with other departments, is able to work independently, and possesses good problem-solving, organisational, communication and interpersonal skills. | | | |
| Critical Work Functions and Key Tasks | Critical Work Functions | Key Tasks | | |
| | Administer Workplace Safety and Health (WSH) and Environmental Management Systems (EMS) | Coordinate Safe System of Work (SSoW) processes across production teams | | |
| | | Coordinate the conduct of activity-based risk assessments at the department level | | |
| | | Ensure compliance with WSH and EMS systems across production teams | | |
| | | Participate in WSH and EMS incident investigations | | |
| | Administer Process Safety Management (PSM) systems | Participate in routine site PSM compliance reviews | | |
| | | Support the implementation of PSM systems relating to production | | |
| | Manage emergency responses and crises | Assist the organisation's crisis management team to continually improve crisis management plans | | |
| | | Support the Site Incident Controller (SIC) during emergency responses | | |
| | Perform process units and utilities operations | Apply emerging technologies for the monitoring of plant performance and process troubleshooting | | |
| | | Coordinate maintenance and turnaround activities | | |
| | | Support plant operations and performance, in accordance with production planning and scheduling objectives | | |
| | | Support process monitoring and optimisation | | |
| | | Support product quality conformance and advise on corrective actions during non-conformance | | |
| | | Support the development and implementation of Standard Operating Procedures (SOPs) for process operations | | |
| Support troubleshooting during all modes of operation, including process upset conditions | | | | |
| Administer staff and organisational development | Use new data technologies to support operations and equipment performance | | | |
| | Identify opportunities for continuous improvement | | | |
| | Support the implementation of continuous improvement initiatives and activities | | | |
| Skills & Competencies | Technical Skills and Competencies | | Generic Skills and Competencies (Top 5) | |
| | Change Management | Level 4 | Problem Solving | Intermediate |
| | Continuous Improvement Management | Level 3 | Decision Making | Intermediate |
| | Crisis Management | Level 3 | Teamwork | Intermediate |
| | Data and Statistical Analytics | Level 3 | Communication | Intermediate |
| | Emergency Response Management | Level 4 | Interpersonal Skills | Intermediate |
| | Engineering Drawing Interpretation and Management | Level 4 | | |
| | Engineering Management of Change | Level 3 | | |
| | Engineering Project Management | Level 3 | | |
| | Environmental Management System Framework Development and Implementation | Level 4 | | |
| | Feedstock and Product Transfer Operations Management | Level 4 | | |
| | Incident Investigation Management | Level 3 | | |
| | Internet of Things Management | Level 2 | | |
| | Non-Conformance Management | Level 3 | | |
| | Plant Turnaround Management | Level 3 | | |
| Process Control | Level 3 | | | |

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| Skills & Competencies | Process Operations Troubleshooting | Level 4 | |
| | Process Optimisation | Level 4 | |
| | Process Plant and Equipment Integrity Management | Level 3 | |
| | Process Safety Management Framework Development and Implementation | Level 3 | |
| | Process Unit and Utilities Operations Management | Level 4 | |
| | Project Management | Level 4 | |
| | Quality Assurance Management | Level 3 | |
| | Robotic and Automation Technology Application | Level 3 | |
| | Safe System of Work Development and Implementation | Level 4 | |
| | Standard Operating Procedure Development and Implementation | Level 4 | |
| | Technical Report Writing | Level 3 | |
| | Workplace Safety and Health Framework Development and Implementation | Level 4 | |
| | Workplace Safety and Health Hazard Identification and Risk Control Management | Level 3 | |
| | Yield Analysis | Level 3 | |
| 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.