

**SKILLS FRAMEWORK FOR AEROSPACE
TECHNICAL SKILLS AND COMPETENCIES (TSC) REFERENCE DOCUMENT**

TSC Category	Manufacturing and Operations					
TSC	Production Planning					
TSC Description	Establish and implement strategic production planning and scheduling to meet production targets and cycle time indices					
TSC Proficiency Description	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
			AER-OPR-3054-1.1	AER-OPR-4054-1.1	AER-OPR-5054-1.1	
			Interpret production plans and schedules to coordinate production activities	Establish production plans and schedules to meet production objectives and targets	Align and integrate production plans within department, across departments, and with organisational business priorities	
Knowledge			<ul style="list-style-type: none"> Principles of production cycle times Principles of production planning Methods of interpreting production schedules Concept of equipment capacity and methods to verify feasibility of achieving production quantities and for timelines Methods for monitoring actual to planned production Recording requirements and practices Methods and techniques for dealing with production difficulties Methods of maximising resource utilisation and minimising waste, including alternate resource allocation in response to unplanned events Principles of production planning and scheduling management Methods of preparing and analysing forecast 	<ul style="list-style-type: none"> Strategies and methods for production planning and scheduling Types of production processes, methods, products and their interdependencies Characteristics of raw materials and ingredients, packaging components and consumables Methods for managing the flow of information between processes to be scheduled, and related purchasing and despatch departments Methods of determining time and resource requirements for production activities and processes Potential disruptions resulting from the implementation of new production schedules Risk factors and risk mitigation techniques in production planning Unusual and unplanned conditions that can affect 	<ul style="list-style-type: none"> Organisational business priorities and impact on plant production output Principles and techniques in resource management Inter-dependencies among various production activities Inter-dependencies among operations of the production department and other departments Concept of production planning software, systems and models Practical implementation of heuristics-based planning and scheduling systems Principles of basic simulation modelling and simulation-based scheduling Modelling approaches for complex systems 	

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			<p>projections and building into production planning schedules</p> <ul style="list-style-type: none"> • Methods of building production risk into schedules 	<p>the achievement of schedules</p> <ul style="list-style-type: none"> • Principles and techniques of contingency planning • Consequences of failing to meet delivery timelines, including stock-out fines 		
Abilities			<ul style="list-style-type: none"> • Analyse past production rates and articulate impact on new production plans • Present data and analyses to support and maximise accuracy of forecasts • Plan production activities and timelines according to organisational requirements and resource availability • Communicate production plans to relevant personnel • Manage resources and manpower required to meet schedule • Monitor actual production rates against plan and adjust as necessary • Review planning process specifications in accordance with quality procedures • Use production planning software to scope and plan production tasks 	<ul style="list-style-type: none"> • Identify production priorities to meet customer and market expectations and set targets • Forecast production demand against internal capacity and resources • Identify and confirm resource requirements • Formulate production plans, highlighting key timelines, deliverables and accountabilities • Define production targets required to meet cycle time indices • Develop schedules to match production priorities • Schedule planned shutdowns at suitable times • Adjust production schedules in response to typical and atypical variables • Respond to unplanned events to minimise disruptions and optimise efficiency • Track and investigate variances to production plans • Follow review procedures to identify opportunities to improve scheduling processes 	<ul style="list-style-type: none"> • Define production priorities to meet business strategies • Resolve conflicting demands among different production teams and activities • Evaluate production and cycle time performance against production plans • Drive production planning and scheduling improvement projects • Identify potential planning and scheduling problems and produce appropriate contingency plans • Liaise with production departments to maintain current and future planning objectives • Evaluate production systems and their physical and mathematical models • Evaluate heuristics-based and simulation-based planning and scheduling approaches and the hands-on modelling of planning and scheduling models • Apply concepts of modelling complex systems, review of basic probability and statistics and build valid and credible simulation models 	

