

**SKILLS FRAMEWORK FOR ELECTRONICS
TECHNICAL SKILLS & COMPETENCIES (TSC) REFERENCE DOCUMENT**

TSC Category	Systems Integration					
TSC	Embedded Systems Integration					
TSC Description	Implement control systems to perform pre-defined tasks and also real-time monitoring for the real world					
TSC Proficiency Description	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
				ELE-SYS-4001-1.1	ELE-SYS-5001-1.1	
				Design and develop embedded system processes for the interfacing of embedded systems to the real world	Lead the evaluation of the performance of embedded systems against specified requirements and user expectations	
Knowledge				<ul style="list-style-type: none"> • Definition of embedded systems • Requirements, specifications and challenges involved in designing embedded systems • Product design, development cycle and management • Building blocks of an embedded system • Real-world interfacing • Considerations and constraints of systems development process 	<ul style="list-style-type: none"> • Embedded systems requirements • Embedded systems user expectations and/or needs • Software metrics to be evaluated 	
Abilities				<ul style="list-style-type: none"> • Design and develop processes of embedded systems • Interface and implement embedded systems to the real world • Implement exception and interrupt handling • Implement User Acceptance Testing (UAT) environment for product testing 	<ul style="list-style-type: none"> • Analyse the main characteristic roles of a processor in the embedded systems design • Appraise the qualifying factors of processors performance and key features of High Level Language (HLL) in embedded system development • Examine the architecture and operating principles of data structures in embedded systems programming • Evaluate Real-Time Operating System (RTOS) functions and task scheduling models in embedded systems against user expectations and/or needs • Propose improvements to 	

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