

PROFESSIONAL ENGINEER

Summary Statement

Competency Element	A brief summary of how you have applied the element	Paragraph in the career episode(s) where the element is addressed
PE1 KNOWLEDGE BASE		
PE1.1 Knowledge of science and engineering fundamentals	<p>The knowledge and the engineering fundamentals acquired by me were effectively applied during my academic projects and workshops. For coming up with the review of Analog and Digital Energy meter I had to know the basics of science and engineering (C.E.1.3.1)</p> <p>Similarly for Digital TV (C.E.2.3.1)</p>	<p>C.E.1.3.1 C.E.2.3.1</p>
PE1.2 In-depth technical competence in at least one engineering discipline	<p>My expertise of Electronics was acquired during my academics (C.E.1.3.2.1, C.E.1.3.2.2, and C.E.1.3.2.3).</p> <p>I was involved in using all my Electronics skill set in design, testing and validation of the Digital Energy meter and TV. (C.E.2.3.2.1, C.E.2.3.2.2, and C.E.2.3.2.3)</p>	<p>C.E.1.3.2.1, C.E.1.3.2.2, C.E.1.3.2.3</p> <p>C.E.2.3.2.1, C.E.2.3.2.2, C.E.2.3.2.3</p>
PE1.3 Techniques and resources	<p>Techniques used were from the engineering Practices and Departments. Also I had to use my own techniques and strategies in arriving at the technical and general solutions (C.E.1.3.4).</p> <p>I had to adjust to the environment and that itself needed changes in my techniques and approach (C.E.3.3.4)</p> <p>Resources were faculty members (C.E.1.3.4) scientist and mentors at large (C.E.3.3.4)</p>	<p>C.E.1.3.4 C.E.3.3.4</p>
PE1.4 General Knowledge	<p>General knowledge and skills which I acquired were effectively used in my professional development and career prospects. Based on my experience basic general knowledge helped me in understanding the environment I was involved in to great extent that helped me to com up with the Objectives of the project and identifying the Gaps</p>	<p>C.E.1.2.1, C.E. 2.2.1, C.E.3.2.1, C.E.3.3.1</p>
PE2 ENGINEERING ABILITY		
PE2.1 Ability to undertake problem identification, formulation, and solution	<p>During my involvement in project for ETS at HAL, I had to identify the Gaps and identify the tasks at hand which was basically identifying the issue and coming up with a solution to accomplish the necessary testing and validation tasks at hand.</p>	<p>C.E.3.3.2</p>

	(C.E.3.3.2)	
PE2.2 Understanding of social, cultural, global, and environmental responsibilities and the need to employ principles of sustainable development	<p>Social responsibilities were first developed during my academic project where I had to interact with the society. (C.E.1.3.4)</p> <p>Culture and global responsibility I had to oblige with when working with Scientist and overseas Defense personnel at HAL. (C.E.3.3.4)</p> <p>I was environment aware during my first project activity where we need had to use optimum resources of electronic gadgets and not waste and create electronic junk. (C.E.1.3.4)</p>	<p>C.E.1.3.4</p> <p>C.E.3.3.4</p> <p>C.E.1.3.4</p>
PE2.3 Ability to utilise a systems approach to complex problems and to design and operational performance	<p>I had to use systematic approach in working on a multi year, complex project and I used SSAD and other techniques to arrive at the SRS and Test cases. (C.E.3.3.2)</p> <p>Also I had to modularize my academic project so that the vision statement could be transformed to reality. (C.E.1.3.2, C.E.1.3.3)</p>	<p>C.E.3.3.2</p> <p>C.E.1.3.2, C.E.1.3.3</p>
PE2.4 Proficiency in engineering design	Design of Digital energy meter was indeed a great design of the electronic world, I had to use PCB design software to come up with the Blue print. (C.E.1.3.2)	C.E.1.3.2
PE2.5 Ability to conduct an engineering project	Worked on the ETS project that was a true project in real world (C.E.3.3)	C.E.3.3
PE2.6 Understanding of the business environment	During ETS I had to interact with Business world with various contractors and had to understand the nature of business they were involved with HAL and had to collaborate with their operations and modes of working trends (C.E.3.3.4)	C.E.3.3.4
PE3 PROFESSIONAL ATTRIBUTES		
PE3.1 Ability to communicate effectively, with the engineering team and with the community at large	Communication with various departments and team was done effectively during ETS test and validation that needed a big team working in shifts and needed KT at times during shift changes. (C.E.3.3.4)	C.E.3.3.4
PE3.2 Ability to manage information and documentation	<p>We had to manage millions of data parameters in ETS and these needed to be archived safely for later analysis.</p> <p>We had to document the test cases for the ETS (C.E.3.3.3) and had to generate reports on the critical issues during testing</p>	C.E.3.3.3
PE3.3 Capacity for creativity and innovation	I had to be very innovative and had to come up with good design for the Digital Energy meter project (C.E.1.3.2).	C.E.1.3.2, C.E.3.3.3

	Also had to be innovative during design of interfaces for the ETS (C.E.3.3.3)	
PE3.4 Understanding of professional and ethical responsibilities, and commitment to them	<p>Professional I was responsible to undertake Digital TV workshop all by myself and make it a success bringing up the methodology and the manner it should be presented. (C.E.2.2.2).</p> <p>I had ethical responsibility as not to disclose any ETS related details as this was of National importance. I had to undergo a Non disclosure agreement. I was however allowed to disclose few content for information purpose only. (C.E.3.3.4)</p>	<p>C.E.2.2.2 C.E.3.3.4</p>
PE3.5 Ability to function effectively as an individual and in multidisciplinary and multicultural teams, as a team leader or manager as well as an effective team member	<p>I had to work independently for Digital TV workshop. (C.E.2.1.4)</p> <p>I had to lead a team of 5 for Digital Energy meter. (C.E.1.1.4)</p> <p>I had to get involved with multicultural team of scientist and overseas engineers at ETS. (C.E.3.1.4)</p>	<p>C.E.2.1.4 C.E.1.1.4 C.E.3.1.4</p>
PE3.6 Capacity for lifelong learning and professional development	My capacity and hunger to learn for life duration is clearly indicated by the professional I have shown in all the projects I have been involved. I had always stressed on better solutions and ideas and urged for betterment of the projects. I welcomed all suggestions and observed the same to my projects.	<p>C.E.1.3.4 C.E.2.3.4 C.E.3.3.4</p>
PE3.7 Professional Attitudes	Professional attitudes mainly constitute in understanding the overall work domain. This enabled me to co-ordinate with team members and seniors, their nature and work culture. The experience I gained would help me in my future endeavors professionally.	<p>C.E.1.3.4 C.E.2.3.4 C.E.3.3.4</p>