



**Type of course:** On-Job Training (Elective)

**Prerequisite:** NA

**Teaching and Examination Scheme:**

Teaching Scheme			Credits C	Examination Marks				Total Marks
L	T	P		Theory		Practical		
				University exams (ESE)	Internal evaluation (PA)	External Practical /viva Exam(ESE)	Internal Practical /viva Exam(PA)	
-	-	15	15	-	-	100	100	200

L- Lectures; T- Tutorial/Teacher Guided Student Activity; P- Practical; C- Credit; ESE- End Semester Examination; PA- Progressive Assessment

**OJT Hands on Exercise/Training:**

Sr. No.	Training / Hands on Exercise	Hrs.
1	<p><b>Contribute to the design of embedded software modules</b></p> <p>PC1. establish your role and responsibilities in contributing to the design of embedded software modules</p> <p>PC2. establish clearly module requirements and constraints</p> <p>PC3. identify any issues with module requirements or constraints and clarify these with appropriate people</p> <p>PC4. access reusable components, relevant best practices and design standards from your organization's knowledge base</p> <p>PC5. create design options that comply with module requirements and constraints</p> <p>PC6. review design options with appropriate people and incorporate their inputs</p> <p>PC7. document designs using standard templates and tools</p> <p>PC8. update your organization's knowledge base with new designs</p> <p>PC9. obtain advice and guidance on designing embedded software modules from appropriate people, where required</p> <p>PC10. comply with your organization's policies, procedures and guidelines when contributing to the design of embedded software modules</p>	50
2	<p><b>Develop software code and to specification</b></p> <p>PC1. check your understanding of the Business Requirements Specification (BRS), Software Requirements Specification (SRS), High Level Design (HLD) and Low Level Design (LLD) with appropriate people</p> <p>PC2. access reusable components, code generation tools and unit testing tools from your organization's knowledge base</p> <p>PC3. convert technical specifications into code to meet the requirements, leveraging reusable components, where available</p> <p>PC4. create appropriate unit test cases (UTCs)</p> <p>PC5. review codes and UTCs with appropriate people</p> <p>PC6. execute UTCs and document results</p> <p>PC7. rework the code and UTCs to fix identified defects</p> <p>PC8. analyze inputs from appropriate people to inform future designs</p> <p>PC9. record corrective actions for identified defects to inform future designs</p>	50



	PC10. submit tested code for approval by appropriate people PC11. update your organization's knowledge base with your experiences of the code developed PC12. comply with your organization's policies, procedures and guidelines when developing software code to specification	
3	<b>Create documents for knowledge sharing</b> PC1. establish with appropriate people the purpose, scope, formats and target audience for the documents PC2. access existing documents, language standards, templates and documentation tools from your organization's knowledge base PC3. liaise with appropriate people to obtain and verify the information required for the documents PC4. confirm the content and structure of the documents with appropriate people PC5. create documents using standard templates and agreed language standards PC6. review documents with appropriate people and incorporate their inputs PC7. submit documents for approval by appropriate people PC8. publish documents in agreed formats PC9. update your organization's knowledge base with the documents PC10. comply with your organization's policies, procedures and guidelines when creating documents for knowledge sharing	50
4	<b>Manage your work to meet requirements</b> PC1. establish and agree your work requirements with appropriate people PC2. keep your immediate work area clean and tidy PC3. utilize your time effectively PC4. use resources correctly and efficiently PC5. treat confidential information correctly PC6. work in line with your organization's policies and procedures PC7. work within the limits of your job role PC8. obtain guidance from appropriate people, where necessary PC9. ensure your work meets the agreed requirements	10
5	<b>Work effectively with colleagues</b> PC1. Communicate with colleagues clearly, concisely and accurately PC2. Work with colleagues to integrate your work effectively with them PC3. Pass on essential information to colleagues in line with organizational requirements PC4. work in ways that show respect for colleagues PC5. carry out commitments you have made to colleagues PC6. let colleagues know in good time if you cannot carry out your commitments, explaining the reasons PC7. identify any problems you have working with colleagues and take the initiative to solve these problems PC8. follow the organization's policies and procedures for working with colleagues PC9. provide complete, accurate and up-to-date data/information to the appropriate people in the required formats on time	10
6	<b>Maintain a healthy, safe and secure working environment</b> PC1. comply with your organization's current health, safety and security policies and procedures PC2. report any identified breaches in health, safety, and security policies and procedures to the designated person PC3. identify and correct any hazards that you can deal with safely, competently and	10



GUJARAT TECHNOLOGICAL UNIVERSITY

Syllabus for Bachelor of Vocation (B.Voc), 4<sup>th</sup> Semester

Branch: Software Development

On-Job Training (Elective): Software Engineer

Subject Code: 1140207

With effective  
from academic  
year 2018-19

	<p>within the limits of your authority</p> <p>PC4. report any hazards that you are not competent to deal with to the relevant person in line with organizational procedures and warn other people who may be affected</p> <p>PC5. follow your organization's emergency procedures promptly, calmly, and efficiently</p> <p>PC6. identify and recommend opportunities for improving health, safety, and security to the designated person</p> <p>PC7. complete any health and safety records legibly and accurately</p>	
7	<p><b>Provide data/information in standard formats</b></p> <p>PC1. Establish and agree with appropriate people the data/information you need to provide, the formats in which you need to provide it, and when you need to provide it</p> <p>PC2. obtain the data/information from reliable sources</p> <p>PC3. check that the data/information is accurate, complete and up-to-date</p> <p>PC4. obtain advice or guidance from appropriate people where there are problems with the data/information</p> <p>PC5. carry out rule-based analysis of the data/information, if required</p> <p>PC6. insert the data/information into the agreed formats</p> <p>PC7. check the accuracy of your work, involving colleagues where required</p> <p>PC8. report any unresolved anomalies in the data/information to appropriate people</p> <p>PC9. provide complete, accurate and up-to-date data/information to the appropriate people in the required formats on time</p>	10
8	<p><b>Develop your knowledge, skills and competence</b></p> <p>PC1. obtain advice and guidance from appropriate people to develop your knowledge, skills and competence</p> <p>PC2. identify accurately the knowledge and skills you need for your job role</p> <p>PC3. identify accurately your current level of knowledge, skills and competence and any learning and development needs</p> <p>PC4. agree with appropriate people a plan of learning and development activities to address your learning needs</p> <p>PC5. undertake learning and development activities in line with your plan</p> <p>PC6. apply your new knowledge and skills in the workplace, under supervision</p> <p>PC7. obtain feedback from appropriate people on your knowledge and skills and how effectively you apply them</p> <p>PC8. review your knowledge, skills and competence regularly and take appropriate action</p>	10
	<b>Total</b>	<b>200</b>

**Reference:**

[https://nsdcindia.org/sites/default/files/QP\\_SSC-Q4601\\_Software-Engineer.pdf](https://nsdcindia.org/sites/default/files/QP_SSC-Q4601_Software-Engineer.pdf)