

**QUALIFICATION FILE: Advanced Diploma in Java Enterprise  
Edition(JEE)  
(Level 6)**

**NSDA REFERENCE**

*To be added by NSDA*

**QUALIFICATION FILE – CONTACT DETAILS OF SUBMITTING BODY**

**Name and address of submitting body:**

NATIONAL INSTITUTE OF ELECTRONICS AND INFORMATION TECHNOLOGY (NIELIT),  
NIT CAMPUS POST,  
CALICUT, KERALA.  
PIN – 673601.

**Name and contact details of individual dealing with the submission**

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**List of documents submitted in support of the Qualifications File**

- a) Annexure I – Course Curriculum
- b) Annexure II – Candidates Trained
- c) Annexure III – Placement Details
- d) Annexure IV – Industry Validation
- e) Annexure V – Evidence of job market / Industry requirement
1. Annexure VI – Occupational Map as identified by SSC mapped to Jobroles.

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**SUMMARY**

<b>Qualification Title:</b>	Advanced Diploma in Java Enterprise Edition
<b>Qualification Code</b>	NIELIT/IT/L6/022
<b>Nature and purpose of the qualification:</b>	<ul style="list-style-type: none"> <li>➤ This Qualification is aligned to Level 6 (Advanced Diploma course).</li> <li>➤ The purpose of this qualification is to train the students to be ready for Software Developer/Trainee Job.</li> </ul>
<b>Body /bodies which will award the qualification:</b>	National Institute of Electronics and Information Technology
<b>Body which will accredit providers to offer courses leading to the qualification:</b>	National Institute of Electronics and Information Technology
<b>Body /bodies which will Be responsible for assessment:</b>	Examination Cell, National Institute of Electronics and Information Technology
<b>Occupation(s) to which the qualification gives access:</b>	Software Developer/Trainee, Software Engineer, System Analysts.
<b>Licensing Requirements</b>	N/A
<b>Proposed level of the qualification in the NSQF</b>	Level 6
<b>Anticipated volume of training/learning required to complete the qualification</b>	420 Hours
<b>Entry requirements/ Recommendations</b>	Diploma in Engineering, Bachelor's Degree in Science/Technology/Computers or any graduate course equivalent to these.
<b>Progression from the Qualification</b>	Academic Progression: PG Diploma Courses → Master Level Courses related to Software

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	Trainee → Software Developer → Project Leader → Project Manager → Senior manager(Project Planning)
<b>Planned arrangements for RPL.</b>	<ul style="list-style-type: none"> <li>➤ Presently only candidates who undergo training shall be assessed.</li> <li>➤ It will be incorporated once RPL strategy is finalized</li> </ul>
<b>International Compatibility where Known.</b>	NA
<b>Date of Planned review of the Qualification</b>	After Every 2 Years

<b>Formal Structure of the Qualification</b>			
<b>Title of Component and Identification Code</b>	<b>Mandatory/Optional</b>	<b>Estimated Size (Learning hours)</b>	<b>Level</b>
Advanced Diploma in Java Enterprise Edition (Core Java, Advanced Java, JEE and Project)	M	420	6

Detailed Curriculum attached as – **Annexure I**

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**SECTION -1**

**ASSESSMENT**

**Name of Assessment body:**

**Examination Cell,**  
National Institute of Electronics and Information Technology  
6–CGO Complex, Electronics Niketan  
Lodhi Road, New Delhi. 110003.

**Name of body checking or verifying Assessments:**

**Examination Cell,**  
National Institute of Electronics and Information Technology  
6–CGO Complex, Electronics Niketan  
Lodhi Road, New Delhi. 110003.

**Name of Qualification Awarding body:**

National Institute of Electronics and Information Technology.

**Will the assessment body be responsible for the RPL assessment?**

RPL Policy will be described as and when available

**Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, consistent and fair and show that these are in line with the requirements of NSQF:**

This course would lay more emphasis on developing the practical skills of the student. His overall knowledge shall be tested based on a comprehensive written assessment, his practical skills shall be equally measured with a detailed practical assessment. The communication/technical skills of the student and his ability to express himself shall be tested in Viva Voce Assessment. Each assessment shall define an OUTCOME and marked separately. Student shall be required to pass in all OUTCOMES individually and marks shall be allotted for each OUTCOME along with final aggregate marks in course.

Following assessment methodologies may be used:

A. Written Assessment

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- B. Practical Assessment
- C. Viva Voce Assessment

**Supporting evidences for Assessment**

The assessment results are backed by following evidences.

1. The assessor collects a copy of the attendance for the training done under the scheme. The attendance sheets are signed and stamped by the In charge / Head of the Training Centre.
2. The assessor verifies the authenticity of the candidate by checking the photo ID card issued by the institute as well as any one Photo ID card issued by the Central/Government. The same is mentioned in the attendance sheet

**ASSESSMENT EVIDENCE**

**Job Role:** Software Developer/Trainee, Software Engineer, System Analysts.

**Title of Unit/Component: (Detailed Curriculum attached as Annexure-I)**

Module	Assessment (Marks)				Job Role
	Theory	Practical	Project	Total	
Core Java & Advanced Java Programming	25	25	0	50	Java Developer
Java Enterprise Edition & Project	0	25	75	100	JEE Developer
<b>Total</b>	25	50	75	150	

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Outcomes to be assessed	Assessment Criteria for the outcome	Means of Assessment			
		Total Marks	Written	Practical	Project & Viva
Core Java & Advanced Java Programming	<ul style="list-style-type: none"> <li>• Demonstrate through example concepts of Object Oriented Programming.</li> <li>• Solve real world problems based on object-oriented principles.</li> <li>• Develop stand-alone /web based applications in Java to handle the requirements from clients</li> </ul>	50	25	25	
Project development in Java Enterprise Edition.	<ul style="list-style-type: none"> <li>• Developing Enterprise applications using Java/JSP/Servlets.</li> <li>• Design frameworks to establish module requirements and constraints</li> <li>• Develop applications with the support of UI,</li> </ul>	100	0	25	75

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	<p>ORM framework.</p> <ul style="list-style-type: none"> <li>• Create design that comply with requirements and constraints</li> <li>• Review design options with appropriate people and incorporate their inputs</li> <li>• Convert technical specifications into code to meet the requirements, leveraging reusable components, where available.</li> <li>• Create appropriate test cases for testing the product and modify accordingly.</li> <li>• Analyse the feedback and use it to improve the coding &amp; entire software quality</li> </ul>				
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**Pass/Fail**

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Following Grading Scheme (on the basis of total marks) will be followed:

<b>Grade</b>	<b>S</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>Fail</b>
<b>Marks Range (in %)</b>	≥90%	80%-89%	70%-79%	60%-69%	50%-59%	40-49%	<40%

**SECTION 2**

**EVIDENCE OF LEVEL**

**Level of Qualification: 6**

<b>Title : Advanced Diploma in .Net Technologies</b>			<b>Level : 6</b>
<b>NSQF Domain</b>	<b>Outcomes of the Qualification/Component</b>	<b>How the job role relates to the NSQF Level Descriptors</b>	<b>NSQF Level</b>
<b>Process required</b>	<p>Individuals in this job role are responsible for using specialized knowledge of software programming languages, framework in software architecture and delivery platforms to develop software for enterprise web environment. They require a command of wide ranging specialized theoretical and practical skills, for application enhancement, debugging, maintenance and documentation.</p> <p>The individual should be able to work in accordance with applicable coding standards, software development methodologies &amp; frameworks and release processes.</p>	<p>Demands a wide range of specialised technical skill, clarity of knowledge and practice in broad range of activity involving standard and non-standard practices.</p>	<b>6</b>



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<p><b>Professional knowledge</b></p>	<p>Learning to develop applications using Java, Java Enterprise Application</p> <p>Also, learn to apply the languages to develop server-side applications which make use of JSP, Servlets , Web Services , Frameworks like Struts, Hibernate, Spring, JSF etc.</p> <p>In addition 4 weeks project work at the end of each module enables students to get an exposure to industrial standards.</p>	<p>Factual and theoretical knowledge in broad contexts within a field of work or study.</p>	<p><b>6</b></p>
<p><b>Professional skill</b></p>	<p>Individuals need to have a wide range of cognitive and practical knowledge required for development of software applications and interfaces as well as enhancements to existing packaged applications or pre-engineered templates.</p> <p>He/she needs to know &amp; understand:</p> <ul style="list-style-type: none"> <li>• organization's policies, procedures and guidelines for designing software products and applications</li> <li>• the scope of work to be carried out and the importance of keeping within these boundaries.</li> <li>• Analyse the feedback and use it to improve the coding &amp; entire software quality</li> </ul>	<p>A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study.</p>	<p><b>6</b></p>
<p><b>Core skill</b></p>	<p>Individuals should have good logical and mathematical skills to plan and organize work to achieve targets and deadlines.</p> <p>He/she needs to apply problem solving approaches in different situations and make decisions on suitable course of action.</p>	<p>Reasonable good in mathematical calculation, understanding of social, political and reasonably good in data collecting organising</p>	<p><b>6</b></p>

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		information, and logical communication.	
<b>Responsibility</b>	<p>Individuals are responsible for development of software applications and interfaces as well as enhancements to existing packaged applications or pre-engineered templates.</p> <p>The job also involves providing support to custom applications, debugging, maintenance and documentation.</p> <p>These tasks will require the individual to take responsibility of his/her own work and learning and full responsibility other's work &amp; learning.</p> <p>Individual does not work under supervision and is responsible for his/her own learning as well as others works.</p>	Responsibility for own work and learning and full responsibility of other's works and learning.	<b>6</b>

**SECTION 3**

**EVIDENCE OF NEED**

**What evidence is there that the qualification is needed?**

This course has been designed to meet the growing demand for skilled professionals in web and mobile application development.

- a) "Java skills demand hits all-time high" Computer weekly.com  
<http://www.computerweekly.com/feature/Java-skills-demand-hits-all-time-high>

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**What is the estimated uptake of this qualification and what is the basis of this estimate?**

Estimated uptake is 15 students / Batch with 2 Batches / Year and on the basis of Facilities and Infrastructure in NIELIT Calicut.

**What steps were taken to ensure that the qualification(s) does/do not duplicate already existing or planned qualifications in the NSQF?**

The Qualification does not exist as per the information available in public domain.

**What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated?**

Based on feedback by participants, employers and based on market survey the qualification will be reviewed in every 2 years.

## **SECTION 4**

### **EVIDENCE OF PROGRESSION**

**What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector?**

This course structure is designed in such a way that, the qualification acquired will meet the prerequisites of higher level courses in Software and IT Field. It comprises both technical and analytic skills and can be linked to any existing qualification or higher qualification.

## **SECTION 5**

### **EVIDENCE OF INTERNATIONAL COMPARABILITY**

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List any Comparisons which have been established – NIL