

**NSQF QUALIFICATION FILE**

Approved in 16th NSQC meeting – NCVET- Dated: 24th February, 2022

**QUALIFICATION FILE - CONTACT DETAILS OF THE SUBMITTING BODY****Name and address of submitting body:**

NATIONAL INSTITUTE OF ELECTRONICS AND INFORMATION TECHNOLOGY

NIELIT Bhawan, Plot No. 3, PSP Pocket, Sector-8,

Dwarka, New Delhi-110077

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

<b>Name</b>	:	Alok Tripathi
<b>Position in the organization</b>	:	Additional Director
<b>Address if different from above</b>	:	NA
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**List of documents submitted in support of the Qualifications File**

Annexure 1: Detailed Syllabus of the course

Annexure 2: Evidence of Course requirement in the industry

Annexure 3: Evidence of Job requirement from the industry

Annexure 4: Evidence of validation from industries

**Model Curriculum to be added which will include the following:**

- Indicative list of tools/equipment to conduct the training

Attached in Annexure 5

- Trainers qualification

Attached in Annexure 6

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**SUMMARY**

<b>1</b>	<b>Qualification Title</b>	Foundation course in Information Security
<b>2</b>	<b>Qualification Code, if any</b>	Will be given by NCVET post-approval Sector: ITES
<b>3</b>	<b>NCO code and occupation</b>	2523.9900(Computer Network Professionals, Other)
<b>4</b>	<b>Nature and purpose of the qualification (Please specify whether qualification is short term or long term)</b>	<b>Nature:</b> <ul style="list-style-type: none"><li>❖ This Certificate Course is targeted for creating qualified professional in the field of Information Security and for upskilling</li><li>❖ This Qualification is aligned to Level 4</li></ul> <b>Purpose:</b> <ul style="list-style-type: none"><li>❖ This course is framed to facilitate skill development in Information Security sector focusing on students/unemployed youth at Diploma, Engineering graduates, etc. to increase their employability to work in information and cyber security fields.</li><li>❖ To upgrade the skills of people already in work in Information Security and other allied areas of this technology</li><li>❖ Entrepreneurship development.</li></ul>
<b>5</b>	<b>Body/bodies which will award the qualification</b>	National Institute of Electronics and Information Technology NIELIT Bhawan, Plot No. 3, PSP Pocket, Sector-8, Dwarka, New Delhi-110077
<b>6</b>	<b>Body which will accredit providers to offer courses leading to the qualification</b>	NIELIT

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7	Whether accreditation/affiliation norms are already in place or not, if applicable (if yes, attach a copy)	The Handbook for TP accreditation norm is available at: <a href="https://www.nielit.gov.in/content/nsqf">https://www.nielit.gov.in/content/nsqf</a>
8	Occupation(s) to which the qualification gives access	Information Security Associate, Information Security System Administrator
9	Job description of the occupation	<ul style="list-style-type: none"> <li>• <b>Information Security Associate:</b> Development and implementation of Information security program for an organization</li> <li>• <b>Information Security System Administrator:</b> Implementing security related protocols and managing tools related to information security infrastructure</li> </ul>
10	Licensing requirements	NA
11	Statutory and Regulatory requirement of the relevant sector (documentary evidence to be provided)	NA
12	Level of the qualification in the NSQF	Level 4
13	Anticipated volume of training/learning required to complete the qualification	90 Hours
14	Indicative list of training tools required to deliver this qualification	Attached in Annexure 5
15	Entry requirements and/or recommendations and minimum age	2nd Year Polytechnic Diploma in Computer Science/ IT/ Electronics /Electrical/ Instrumentation/ or Final year BCA/B.Sc.(Electronics/CS/IT) or Pursuing MCA/MSC(CS/IT) /PGDCA

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		or Pursuing B.E/B.Tech in any domain or NIELIT O Level(IT)		
<b>16</b>	<b>Progression from the qualification (Please show Professional and academic progression)</b>	<b>Professional:</b> Information Security Associate->Senior Information Security System Administrator->Tech Lead Information Security Administration <b>Academic:</b> <b>i) Horizontal Progression:</b> Courses in the area of Cyber Security, Information Security Tools, Networking <b>ii) Vertical Progression:</b> After completion of this course, students can go for higher studies in the area Cyber Security and Cyber Forensics		
<b>17</b>	<b>Arrangements for the Recognition of Prior learning (RPL)</b>	Candidates with 1 year of experience in the relevant field may apply directly for evaluation.		
<b>18</b>	<b>International comparability Where known (research evidence to be provided)</b>	NA		
<b>19</b>	<b>Date of planned review of the Qualification.</b>	After Every 5 years		
<b>20</b>	<b>Formal structure of qualification</b>			
Module Code	Module Name	Mandatory/ Optional	Estimated Size (Learning Hours)	Level
ISA501	INTRODUCTION TO CYBER WORLD	Mandatory	2	4
ISA502	Hacking Phases	Mandatory	8	4
ISA503	EMAIL AND COUNTERMEASURES	Mandatory	3	4
ISA504	SECURING SOCIAL MEDIA	Mandatory	5	4
ISA505	CRYPTOGRAPHY	Mandatory	12	4
	PRIVACY ON THE INTERNET	Mandatory	6	4

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ISA506				
ISA507	SECURING WIRELESS NETWORK	Mandatory	6	4
ISA508	SECURING AN OPERATING SYSTEM	Mandatory	5	4
ISA509	PROTECT FILES AND FOLDERS IN WINDOWS OS	Mandatory	3	4
ISA510	Using Antivirus in Windows Operating System	Mandatory	2	4
ISA511	UNDERSTANDING FIREWALL	Mandatory	4	4
ISA512	LOGS AND LOG ANALYSIS	Mandatory	5	4
ISA513	APPLICATION SECURITY	Mandatory	6	4
ISA514	Overview of IoT Security	Mandatory	5	4
ISA515	Overview of Cloud Security	Mandatory	5	4
ISA516	BACK UP AND RESTORE IN WINDOWS OS	Mandatory	4	4
ISA517	DIGITAL PAYMENT AND SECURITY	Mandatory	5	4
ISA518	OVERVIEW OF CYBER FORENSICS	Mandatory	4	4

### SECTION 1 ASSESSMENT

<b>21</b>	<b>Body/Bodies which will carry out assessment:</b> The Examination Wing National Institute of Electronics and Information Technology NIELIT Bhawan, Plot No. 3, PSP Pocket, Sector-8, Dwarka, New Delhi-110077
<b>22</b>	<b>How will RPL assessment be managed and who will carry it out?</b> RPL assessment will be done by Examination Wing, NIELIT. Candidates can register as direct candidate with NIELIT and apply for evaluation.

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

The emphasis is on practical demonstration of skills & knowledge based on the performance criteria. Student is required to pass in all OUTCOMES individually and marks are allotted.

The Following assessment methodologies are used.

1. Written Assessment (Multiple Choice Questions)
2. Practical Assessment & Assignments
3. Project

The assessment results are backed by following evidences.

4. The theory assessment is carried in online remote proctored mode.
5. Proctors authenticate the candidate based on registration details, pre-test image captures and I-card in possession of the candidate.
6. Proctors can chat with candidates or give warnings to candidates. Proctors can also take screenshots, terminate a specific user's test session, or re-authenticate candidates based on video feeds.
7. Practical examination/Internal Assessment/ Project/Presentation/Assignment would be evaluated internally.

## 24. ASSESSMENT EVIDENCE

**Title of Unit/Component:**

Outcomes to be assessed	Assessment Criteria for the outcome	Means of Assessment		
		Total Marks	Written	Practical

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Fundamentals of Cyber Security and Hacking	Information Security Basics, Cyber Threats, Securing Social Media	20	20	0
	Information Gathering, Hacking	25	10	15
	<b>Total</b>	<b>45</b>	<b>30</b>	<b>15</b>
Securing from Cyber Attacks	Cryptography, Securing Wireless Network and OS	25	20	5
	Securing OS, File and Folders	20	10	10
	<b>Total</b>	<b>45</b>	<b>30</b>	<b>15</b>
Advanced Cyber Security Application and tools	Application Security, IoT and Cloud Security	25	20	5
	Log and Log Analysis	20	5	15
	<b>Total</b>	<b>45</b>	<b>25</b>	<b>20</b>
Digital Payment and Cyber Forensics	Digital Payment , Backup and Restore in Windows OS	10	5	5
	Cyber Forensics	15	10	5
	<b>Total</b>	<b>25</b>	<b>15</b>	<b>10</b>
Internal Assessment		20	0	20
Assignment		20	0	20
<b>Total Marks</b>		<b>200</b>	<b>100</b>	<b>100</b>

### Means of assessment

S. No	Examination Pattern	Modules Covered	Duration in Minutes	Maximum Marks
1	Theory	1-18	90	

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				100
3	Practical	1-18	180	60
4	Internal Assessment	1-18	-	20
5	Assignment	1-18	-	20
<b>Total</b>				<b>200</b>

### Note:

1. Pass percentage would be 50% marks in each component, with aggregate pass percentage of 50% and above.
2. Grading will be as under:

Grade	S	A	B	C	D
Marks Range (in %)	>=85%	>=75% and <85%	>=65% and <75%	>=55% and <65%	>=50% and <55%

3. Theory examination would be conducted online and the paper comprise of MCQ and each question will carry 1 mark.
4. Practical examination/Internal Assessment/Assignment would be evaluated internally.
5. Candidate may apply for re-examination within the validity of registration.
6. The examinations would be conducted in English Language only.

## SECTION 2

### 25. EVIDENCE OF LEVEL

Title : Foundation course in Information Security			Level : 4
NSQF Domain	Outcomes of the Qualification/Component	How the job role relates to the NSQF Level Descriptors	NSQF Level
Process required	Implementation of Information Security in an organization using various tools and technologies available.	The job holder is expected to perform his/her work with well-developed skill in implementing Information Security in an organization using various tools and technologies available	4



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<b>Professional knowledge</b>	The participant will be able to acquire knowledge about various tools and technologies available to implement Information Security in an organization.	The job holder is expected to know the different tools and technologies available to protect an organization, Individual against hack attacks which are launched now a days.	4
<b>Professional skill</b>	Selection of Appropriate tools and technologies available now a days for Implementing Information Security in an organization to make it fool proof against Cyber-attacks.	The job holder is expected to have cognitive and practical skill in various tools, technologies and techniques available now a days for implementing Information Security in an organization and for Individual.	4
<b>Core skill</b>	Implementing Information Security in an organization using various tools and technologies available presently.	The job holder is expected to have full knowledge of operation of tools and technologies which are available presently to safeguard an organization and Individuals against Cyber Attacks which are prevalent now a days.	4
<b>Responsibility</b>	Apply various tools technologies and techniques to safe guard an organization against Cyber Attacks.	The job holder is expected to complete assigned tasks and IPR of organization & customers. He/she is expected to undertake on-the-job learning and participate in training and	4

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		development, interventions and assessments Hence the individual working in this job role has complete responsibility for delivering quality of his own work & some responsibility for others works too and can be placed at level 5 And contribute in achieving the industry's reputation by safe guarding against Cyber Attacks	
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### SECTION 3

#### EVIDENCE OF NEED

<b>26</b>	<b>What evidence is there that the qualification is needed?</b>  Attached in Annexure 2
<b>27</b>	<b>What is the estimated uptake of this qualification and what is the basis of this estimate?</b> Estimated uptake is 30 students per Batch with 4 Batches per Year and on the basis of Facilities and Infrastructure in respective NIELIT Centre.
<b>28</b>	<b>What steps were taken to ensure that the qualification(s) does (do) not duplicate already existing or planned qualifications in the NSQF? Give justification for presenting a duplicate qualification</b>  The qualification is originally designed by curriculum head, industrial expert, and academic professional experts. The work group under the guidance of curriculum development committee already conducted desk search as well as refers the qualification packs for as a supporting document for the mapping of curriculum. As per the search it is found that, there are Qualification on NQR portal in Information Security, however essential qualification and purpose of the qualification is different from any other qualification.
<b>29</b>	<b>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? Specify the review process here</b>  Based on feedback by participants, employers and based on market survey the qualification will be reviewed in every 5 years.

### SECTION 4

#### EVIDENCE OF PROGRESSION

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30	<p><b>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?</b></p> <p>This qualification has been designed in consultation with industry and domain expert keeping in mind today's need. Qualification file is finalized after discussion and modification through internal committees of NIELIT. Evaluation criteria have been added to ensure progression to related path ways identified as per career path.</p>
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