

**Ref.No.:- NIELIT/KMA/04/38/2023-24-Proj-EELTP**

**Dated: 18-Jan-2024**

**Expression of Interest**

*for*

**On imparting**

**Employability Enhancement and Livelihood Training Program  
[EELTP] of SC/ST& EWS (Women) youth through Capacity Building  
and Skill Development in IECT in Mon, Nagaland**

*Sponsored by*

**Ministry of Electronics & Information Technology (MeitY)**

**Govt. Of India**

**(Last Date of submission: 25-01-2024 up to 03:30 PM)**

***Implementing Agency-***



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## 1. About NIELIT

National Institute of Electronics & Information Technology (NIELIT), (erstwhile DOEACC Society), an Autonomous Scientific Society under the administrative control of Department of Electronics & Information Technology (DeitY), Ministry of Electronics and Information Technology (MeitY), Government of India, was set up to carry out Human Resource Development and related activities in the area of Information, Electronics & Communications Technology (IECT). NIELIT is engaged both in Formal & Non-Formal Education in the area of IECT besides development of industry-oriented quality education and training programmes in the state-of-the-art areas. NIELIT has endeavored to establish standards to be the country's premier institution for Examination and Certification in the field of IECT. It is also one of the National Examination Body, which accredits institutes/organizations for conducting courses in IT in the non-formal sector.

NIELIT has forty seven (47) centers located at Agartala, Aizawl, Ajmer, Alawalpur (Saksharta Kendra), Aurangabad, Bhubaneswar, Calicut, Chandigarh, Chennai, Chuchuyimlang, Churachandpur, Daman, Delhi, Dibrugarh, Dimapur, Gangtok, Gorakhpur, Guwahati, Haridwar, Imphal, Itanagar, Jammu, Jorhat, Kargil, Kohima, Kolkata, Kokrajhar, Kurukshetra, Lakhanpur (Saksharta Kendra), Leh, Lucknow, Lunglei, Majuli, Mandi, Pasighat, Patna, Pali, Kohima, Ropar, Senapati, Shillong, Shimla, Silchar, Srinagar, Tezpur, Tura and Tezu with its Headquarters at New Delhi. It is also well networked throughout India with the presence of about 700 + institutes.

Over the last two decades, NIELIT has acquired very good expertise in IT training, through its wide repertoire of courses, ranging from 'O' Level (Foundation), 'A' Level (Advance Diploma), 'B' Level (MCA equivalent), 'C' Level (M-Tech level), IT literacy courses such as CCC (Course on Computer Concept), BCC (Basic Computer Course) and other such long term and short term course in the non-formal sector like courses on Information Security, ITES-BPO (Customer Care/Banking), Computer Hardware Maintenance (CHM-O/A level), Bio-Informatics (BI-O/A/B level), ESDM etc, besides, high end courses offered by NIELIT Centres at Post-Graduate level (M.Tech) in Electronics Design & Technology, Embedded Systems etc. which are not normally offered by Universities/Institutions in the formal sector, in association with the respective state Universities. (For further information our website [www.nielit.gov.in](http://www.nielit.gov.in) may be visited)

NIELIT, Kohima Centre has started functioning from Meriema, New High Court Road, Kohima-797001, Nagaland. As a well-equipped and dedicated institute, NIELIT Kohima offers various training programs aimed at skill-upgradation and capacity building in the emerging area of Electronics and Information Technology. Since inception, NIELIT Kohima has been playing an important role in offering many courses in the area of digital literacy like CCC (Course on Computer Concept), BCC (Basic Computer Course) and ACC (Awareness in Computer Concepts). Furthermore, NIELIT, Kohima also offer numerous courses in the area of formal course such as Bachelor of Computer Application and non-formal sector like NIELIT 'O' level, A Level and CHM 'O' level.

The Directorate General of Employment (DGE), Ministry of Labour, Govt. of India sponsored NIELIT's O-Level and CHM-O Level courses for SC/ST jobseekers is also running successfully.

**1. Invitation for EOI.**

- 1.1 NIELIT Kohima Centre invites Expression of Interest (EOI) from democratic, secular and independent service organization/ Society registered under the Societies Registration Act and imparting education and development works for reserved category of candidates in Mon to provide training infrastructure and mobilize candidates to conduct different NSQF courses to be monitored by NIELIT Kohima. This project is sponsored by Ministry of Electronics & Information Technology (MeitY), Govt. of India for SC/ ST and EWS (Women). The detailed infrastructure requirement for conducting the training of NSQF courses is given in Annexure – I.
- 1.2 Interested applicants are advised to study the EOI document carefully. Submission of EOI shall be deemed to have been done after careful study and examination of the EOI document with full understanding of its implications.
- 1.3 Interested applicants may download the format and other documents related to EOI from the website **[www.nielit.gov.in/kohima/index.php](http://www.nielit.gov.in/kohima/index.php)**
- 1.4 The Expression of Interest must be delivered to the below address on or before 25-01-2024 by 15:30 Hrs.

The Director-in-Charge NIELIT  
Kohima, Meriema,  
New High Court Road,  
Kohima – 797001.

**3. Scope of Work**

- 3.1 The applicant would be required to study the objective of the proposed training program and its deliverables. The broad areas of scope of work includes, mobilization of trainees, registration, providing infrastructure and qualified faculty for imparting training. The areas of training, curriculum, duration and related information are given in **Annexure-I**
- 3.2 The training is proposed to be conducted in Mon districts of Nagaland.
- 3.3 The beneficiary candidates under the scheme are youths of Mon District belonging to any of the following category-
  - ✓ SC (Scheduled Caste).
  - ✓ ST (Scheduled Tribe).
  - ✓ EWS (Economically Weaker Section) Women Candidates.

The candidates will have to produce a valid certificate for each of the above category in order to be eligible for admission to the training courses under the scheme.

- 3.5 The list of NSQF courses under the scheme for imparting training to the candidates in the five districts is mentioned at Annexure-I. Other NSQF courses may also be added at a later stage depending on the demand of the industry and upon approval of NIELIT HQs/MeitY. The batch size will be 30 for each course. The distribution of candidates for a batch of 30 is SC-12, ST-12, EWS(Women)-6.
- 3.6 Depending upon the geographical area of coverage and for the transport convenience of the trainees identified, more than one training institute may be identified and training target shall be split and awarded as per NIELIT decision.
- 3.7 The applicant institution will be paid remuneration for the conduct of training as per details at Annexure-IV. The remuneration will include everything including the cost of Infrastructure, manpower, study material to candidates etc.
- 3.8 The institute will raise the tax invoice to NIELIT Kohima after successful certification of the candidates. The training fee amount in the tax invoice will be based on the actual number of certified candidates in the batch (as per details at Annexure-IV). The candidates who fail to qualify the NSQF examination in the first attempt will appear in the examination for certification at their own cost in all subsequent attempts.
- 3.9 After completion of training and certification of a batch, invoice will be generated from online portal by the TP. TP will verify the invoice online, upload attendance of students and other necessary documents in that batch after due attestation and forward it to Nodal Officer of

NIELIT Kohima. Nodal Officer will further verify these details, take approval of Director and payment will be done to TP by Center.

- 3.10 Attendance of candidates will be maintained through Aadhaar Enabled Biometric Attendance System (AEBAS) wherever possible.
- 3.11 Selected training partner under LTP/O&LTP mode may apply for the course accreditation under NSQF Training Partner scheme of NIELIT.

#### 4. Selection criteria of candidates.

- 4.1 A three-member committee comprising of Nodal officer from NIELIT center, head/authorized signatory of training partner and one members from Dept. of Social Welfare / Dept. of SC/ST development/ Dept. of Women and Child Development of the concerned State Government / Local employment exchange may select the candidates fulfilling minimum eligibility criteria for admission as per qualification file of the course and on merit basis. Candidates with higher qualifications may be preferred.
- 4.2 A candidate can take benefit under this project only once, i.e. one candidate can enroll for only one course only during the entire project. This will be the responsibility of TP to ensure that no student is enrolled multiple times in one course or in multiple courses under the project. TP will thoroughly check and upload caste certificate, education qualification certificate, ID Proof and other documents on online portal of every student in a batch while admitting a candidate. In case it is found at a later stage after admission of a candidate that the candidate document uploaded on the portal is fake, then TP will not get any reimbursement for training and certification of such beneficiary will not be done by NIELIT Kohima.

#### 5. Method of Program Implementation.

- 5.1 The Training Partner will be finalized by NIELIT Kohima based on the following criteria-

S.No	Criteria	Max. Marks
1.	No. of students admitted in any NIELIT NSQF course in last 2 years.	20
2.	Distance from Municipal body (Nagar Palika/Parishad etc.)	20
3.	Date of Operations in Education field (particularly in IT & Electronics courses)	20
4.	Tie-up with industry and previous placement records.	20
5.	Training Facility availability.	20
<b>Total</b>		<b>100</b>

- 5.2 Training institutes may also apply for the following category of Training Partners for conducting the courses in blended mode.

- ✓ Lab Training Partner (LTP)
- ✓ Lab and Online Training Partner (L&OTP)

The details of the eligibility and other conditions for above types of Training Partners is mentioned in Annexure-I. The LTP and L&OTP will be finalized by NIELIT Kohima after inspection of the institute premises and fulfilling of other eligibility norms of NIELIT by the institute.

- 5.3 The selected / empaneled organisation shall be considered for providing infrastructure for conducting the training for the duration of the project period or completion of the training.

## 6. Criteria for Empanelment.

- 6.1 Interested institutes should submit a letter of expression of interest along with their infrastructure details in the specified format as given in **Annexure II and III** for providing training of NSQF courses.
- 6.2 The information provided should be sufficient such that the infrastructure and other requirements are fulfilled as per the requirement of the selected NSQF course to carry out the training.
- 6.3 The selection/ empanelment of Training Partner will be in accordance with the criteria set by NIELIT and based on the evaluation by the committee constituted for the purpose.
- 6.4 The short-listed/ empanelled institution will be communicated and on agreeing the terms shall be invited to enter into an agreement with NIELIT Kohima Centre as given in **Annexure V**.
- 6.5 Provisionally selected LTP and O&LTP will be assigned work order only after successful inspection of their premises. The inspection fees will be Rs 10000/- per venue.
- 6.6 NIELIT Kohima Centre will have the right to reject any or all EoIs, received in response to this invitation without assigning any reason thereof, and its decision in this regard shall be final and binding.
- 6.7 Previous experience of carrying out similar work involving Government/Non-Government programme would be given due weightage.
- 6.8 Preference would be given to institutions which have well connected & easy access to public transport, flexible working hours, and adequate infrastructure including competent faculties in their rolls or associated with experience in similar activities.
- 6.9 The selected institutes are required to enter into an agreement with NIELIT Kohima Centre. The selected training institute shall claim the agreed training/ examination fee on successful completion of training and certification of candidates. An invoice will be raised by the training partner (in the format provided by NIELIT Kohima) along with all necessary enclosures like Student monthly attendance records, batch approval note (by the three member committee), conduction of OJT certificate, examination results and list of all the candidates of the batch whose reimbursement claim is being applied for.
- 6.10 If more than one training institutes are identified as a L1, target may be based on candidate availability/preference to that location.

## 7. Guidelines for Sending EoI

- 7.1 Download the detailed information along with application format available in our site [nielit.gov.in/kohima/](http://nielit.gov.in/kohima/).
- 7.2 Agency must enclose a covering letter with information of contact person as per the format provided in **Annexure-II** on Agency's Letter Head while sending the application. The EoIs must be sent in sealed cover within the stipulated time. The EoIs will be evaluated strictly as per laid down criteria. Therefore, before sending the EoIs, the participating agency must satisfy that they fulfil all the eligibility criteria. The related proof of experience, details of office set-up etc., as asked for, must be enclosed/ detailed out for evaluating the EoIs.
- 7.3 The details must be furnished as per formats enclosed in this document and strictly as per serial order. The agency should provide infrastructure details and other relevant information as per the format in **Annexure- III**. Information submitted in other formats and incomplete applications will be summarily rejected.
- 7.4 If the desired documents/proof is not enclosed/not in proper order, the EoI shall be rejected and no clarification/enquiry will be sought/ made.
- 7.5 The last date of receiving the EoIs shall be adhered strictly. EoIs received after the last date will not be considered and no further action will be taken on such EoIs. However, if the last date is declared as holiday, the next working day on which office is opened will be treated as the last date of receiving the EoIs. The EoIs should be physically received in this office at NIELIT Kohima Centre for its consideration.
- 7.6 The details must be furnished as per formats enclosed in this document and strictly as per serial order. Attach necessary documentary proof in support of your claim in Annexure – I, II and III.
- 7.7 The envelopes should be super scribed is **"EoI for Selection of TP under project EELTP in Mon District of Nagaland"**.
- 7.8 The applicant submitting their EoI would be responsible for all of its expenses, costs and risks incurred towards preparation and submission of their EoI, NIELIT shall, in no case, be responsible or liable for any such costs whatsoever, regardless of the outcome of the process.

## 8. DISCLAIMER

- 8.1 The information submitted in response to this EoI may be subject to public release (as per RTI norms).
- 8.2 NIELIT reserves the right to accept or reject any or all EoI without incurring any obligation to inform the affected applicant(s) of the reasons. Also reserves the right to cancel the EOI without assigning any reason thereof.
- 8.3 NIELIT empanelment as Training Institute does not create any obligation on the part of NIELIT in terms of providing business or in any other area in future.
- 8.4 At any time prior to deadline for submission of EoIs, NIELIT may, for any reason, modify the EoI document. The amendment document shall be notified through NIELIT Kohima website and such amendments shall be binding on them.

## Annexure-I

### Details of Training Programs and Infrastructure Requirement

#### A. Objective & Training Programs Details

The objective of this program is to impart training of NSQF courses to SC/ST and EWS(Women) candidates in the 5 nos. of Districts of Jharkhand.

The lists of courses tabulated below are the NSQF aligned courses of NIELIT in the area of IECT. Duration of these courses varies from more than 200 Hrs to 540 Hrs. Moreover, there will be flexibility to add / de-list the courses meeting the demand of industry and subject to approval of competent authority. The Practical & Theory component of the courses is mentioned in the Qualification Files for the courses from Annexure-VI to XVI).

Sr No	QualificationName	Job Role	Eligibility	NSQF Level	Duration (in Hrs)	Batch Size
1	Certificate Course in IT-ITeS BPO, Soft Skills & Communicative English	Call Centre Executive, Manager, Lodging and Catering Services/Resident Manager, Fast Food Service, Data Entry Operator	ITI/ 12th with English as one of the subjects studied.  10+2 in any stream with min 50% marks or ITI Certificate (One Year) after class 10th with min. 50% marks in ITI	3	250	30
2	Certified Computer Application Accounting and Publishing Assistant	Office Assistant, Desktop Publisher, Account Assistant, Technical Assistant	10th Pass Or  8th Class Pass and pursuing continuous regular schooling.  Or  8th Class Pass +2 Years ITI in relevant field.	3	360	30



			Or  8th Class Pass + 1 Year of Experience in  relevant field Or NSQF Level 2 with 1 Year of Experience in relevant field			
3	Certified Data Entry and Office Assistant (Upskilling)	Data Entry Operator, Technical Assistant, Computer Operator	10+2 with knowledge of Basic computer and Internet Concepts	3	210	30
4	O level (IT)	User Interface (UI) Designer Web Designer  Web Publication Assistant  Office Automation Assistant  IoT Application Integrator	10+2 or ITI  or  Certificate (One Year) afterclass  10 followed, in  each case, by a NIELIT accredited 'O' Level course.	4	540	28
5	NIELIT Certified Web Developer	Web Developer	Final-year Polytechnic Diploma in CS/IT after class 10th Or 2-Year ITI Certificate in IT/ITeS after class 10th Or 12th pass	3	210	30

6	NIELIT Certified  Multimedia Developer	Media Developer  Application Development	12th pass and  above OR 10th pass with pass in NSQF Level 3 IT/ITeS Course in IT/Multimedia discipline	3	200	25
7	NIELIT Certified Cloud Computing and Virtualization Expert	Cloud Engineer,  Data Centre Manager,  Data Centre Architect	2 nd Year B.Tech  /BE in Computer science/ Information technology/ Electronics/Electronics and Communication  Engg Or 2 nd Year MCA Or Final Year students of 3 Year Diploma in Computer science/ Information technology/ Electronics/Electronics and Communication Engg	4	210	25
8	Certified Artificial Intelligence (AI) Associate "Upskilling"	Programmer, Data Analyst	Pursuing final year BE/BTech/MCA in any discipline Or BCA/ B.Sc. IT/  B.Sc. Electronics Or 3 Years Diploma after class 10th in Electronics/ IT/ Electrical with 1 Years of Experience in IT Sector Or Level- 5 Qualified in IT Sector	4	240	25

9	Internet of Things (IoT) Assistant	IoT Data Analyst  ,Team Lead (IoT Analyst),IoT Developer,Project Manager (IoT Analyst)	Grade 10th Pass or Grade 8th Pass with two year of (NTC/ NAC) after 8th Grade 8 pass andpursuing continuous schooling in regular school with vocational subject or 8th grade pass with 2 year relevant experience	3	300	30
10	Internet of Things (IoT) Associate	IoT Data Analyst,TeamLead (IoT Analyst),IoT Developer,Project Manager (IoT Analyst)	12th grade pass or Completed 2nd year of 3-year diploma (after 10th) and pursuing regular Diploma 10th grade pass plus 2-year NTC or 10th grade pass plus 1-year NTC plus 1 year NAC or 10th - grade pass and pursuing continuous schooling or Internet of Things (IoT) Assistant NOS from 1-6 will be exempted from Previous NSQF Qualification of Level 3	4	450	25
11	Assembly & Maintenance of Personal Computer	Domestic IT Helpdesk Attendent	10th Pass	3	300	30

## B. Faculty Requirement:

Faculty should have minimum qualification as per NIELIT accreditation given below

NSQF COURSE	COMPETENT FACULTY		SUPPORTING FACULTY	
	QUALIFICATION	EXPERIENCE	QUALIFICATION	EXPERIENCE
Certificate Course in IT-ITeS BPO, Soft Skills & Communicative English	English : Graduate with English as Major subject with good communication skills  Soft skills: Mass communication/ MBA/ PG in English with good communication skills Computer Skills : IT O level of NIELIT or equivalent	Minimum one year teaching experience in the relevant course.	English : Graduate with English as Major subject with good communication skills  Soft skills: Mass communication/ MBA/ PG in English with good communication skills Computer Skills : IT O level of NIELIT or equivalent	Minimum one year teaching experience in the relevant course.
Certified Computer Application Accounting and Publishing Assistant	B.E/B.TECH (Computer Science)/MCA/ M.Sc(CS)/  NIELIT 'B' level/ A-Level or equivalent.	Minimum one year teaching experience in the relevant course.	Graduate with NSQF course qualification certificate.	Minimum one year teaching experience in the relevant course.
Certified Data Entry and Office Assistant (Upskilling)	1. MCA/DOEACC B Level/ B.E./B.Tech (Computer Science or Computer Engg. Or Information Technology)/M.Sc(CS/IT ) or Equivalent* or higher from a recognized University with min 1 + years of Experience	Minimum one year teaching experience in the relevant course.	Graduate with NSQF course qualification certificate or NIELIT O-Level.	Minimum one year teaching experience in the relevant course.
O level (IT)		Minimum one year teaching experience in the relevant course.	Graduate with NSQF course qualification certificate or NIELIT O-Level.	Minimum one year teaching experience in the relevant course.
NIELIT Certified Web Developer		Minimum Two year teaching experience in the relevant course.	Graduate with NSQF course qualification certificate or NIELIT O-Level.	Minimum one year teaching experience in the relevant course.
	2. BCA/DOEACC IT-A			

NIELIT  Certified Multimedia Developer	Level  /PGDCA or Equivalent* or higher from a recognized University/Institute with min 2 + years of Experience.	Minimum Twoyear teaching experience inthe relevant course.	Graduate with NSQF course qualification certificate or NIELIT MAT O-  Level.	Minimum one year teaching experience in the relevant course.
NIELIT  Certified Cloud Computing and Virtualizatio nExpert	3. M.Tech/M.E. in (Computer Science or IT) orequivalent* from a recognized University/Institute	Minimum Twoyear teaching experience inthe relevant course.	B.E/B.TECH  (Computer Science/IT)/ MCA/ M.Sc(CS)/  NIELIT 'B' level/A- Level or equivalent.	Minimum one year teaching experience in the relevant course.
Certified Artificial Intelligence (AI) Associate "Upskilling"		Minimum Twoyear teaching experience inthe relevant course.	B.E/B.TECH (Computer Science/ IT)/ MCA/ M.Sc(CS)/ NIELIT 'B' level/ A- Level or equivalent.	Minimum one year teaching experience in the relevant course.
Internet of Things (IoT) Assistant	B.E/B.TECH (Electrical/ Electronics)/ M.Sc (Electronics) or equivalent.	Minimum Twoyear teaching experience in the relevant course.	B.E/B.TECH (Computer Science/ IT)/ MCA/ M.Sc(CS)/ NIELIT 'B' level/ A- Level orequivalent.	Minimum one year teaching experience in the relevant course.
Internet of Things (IoT) Associate	M.Tech/M.E. in (Electrical/ Electronics) or equivalent* from a recognized University/Institute	Minimum Twoyear teaching experience inthe relevant course.	B.E/B.TECH (Computer Science/ IT)/ MCA/ M.Sc(CS)/ NIELIT 'B' level/A- Level or equivalent.	Minimum one year teaching experience in the relevant course.
Assembly & Maintenance of Personal Computer	B.E/B.TECH  (Electrical/ Electronics)/ M.Sc(Electronics) or equivalent.	Minimum Twoyear teaching experience inthe relevant course.	Graduate with NSQF course qualification certificate or NIELIT CHM O Level & CHM ALevel	Minimum one year teaching experience in the relevant course.

**Note:**

1. Applying institute must have at least three permanent incumbents and must have been with the institution for not less than six months.
2. Support faculty to assist in Electronics/ Computer/ Laboratory work, use of application packages and demonstrations.
3. Faculty with the higher than the minimum qualification specified for each level with one year experience shall also be considered as an eligible competent faculty.

Internal assessment tests shall be conducted periodically on a monthly basis. The final examination shall be conducted by NIELIT. The details of the courses are also available at <http://nielit.gov.in/content/nsqf>

## **C. Lab Training Partner (LTP) and Lab & Online Training Partner (L&OTP)**

*In view of the unforeseen circumstances, institutes in the Mon districts of Nagaland may also register for the following category of Training Partners for conducting the courses in blended mode-*

### **i) Lab Training Partner (LTP).**

The course will be conducted in blended mode and the Training Partner will provide only lab facility to the candidates of the district where the training is conducted. The theory class will be conducted online by NIELIT Regional Centre.

### **ii) Lab & Online Training Partner (L&OTP)**

The course will be conducted in blended mode and the Training Partner will provide both classroom and lab facility to the candidates of the district where the training is conducted. In the classroom facility, there will be provision for TV/ Desktops/ Laptops having good Internet connection through which students will attend online training conducted by NIELIT RC. The theory class will be conducted online by NIELIT Regional Centre.

### **Eligibility Criteria of LTP and L&OTP :**

#### **i) For LTP :**

- Institute having requisite lab facility as per qualification file for respective course for which the institute is interested to collaborate with NIELIT.
- Must have qualified lab faculty for conducting lab sessions. Also, it must have IP based camera facility in labs through which NIELIT RC will be able to monitor the practical classes conducted by the training partner. Lab should be sufficiently spacious so that social distancing norms may be ensured.

#### **ii) For L&OTP :**

- In addition to requirement for LTP, the Training partner must have classroom with proper technical facility through which the students can attend online classes conducted by RC remotely. These must have IP based camera facility through which NIELIT RC will be able to monitor the attendance conducted by the trainingpartner. Classrooms and computer labs should be sufficiently spacious for easy movement among the students.

LTP and L&OTP will be selected by NIELIT RC after ensuring that the training institutes have qualified lab faculty and requisite lab facility and other infrastructure for conducting the practical training of the course for which it is applying for tie-up with RC. NIELIT RC will do an agreement with institute interested to affiliate as LTP/L&OTP under the project.

### **Roles of LTP:**

- i) LTP will nominate a Coordinator who will be contact person and in-charge for all activities that are to be performed by LTP under the project.
- ii) LTP will be responsible for selection and admission of student in its district as per candidate selection criteria and eligibility criteria mentioned earlier. LTP will provide full assistance to Nodal Officer of concerned RC. LTP will do the preliminary registration of interested students through online forms under the supervision of Nodal officer from NIELIT Center.

- iii) LTP will conduct practical for the courses in line with Qualification File of the corresponding course. LTP must have faculty & lab instructor who can conduct practical classes as per course requirement.
- iv) LTP will maintain requisite monitoring provisions in its labs like IP based camera etc. through which NIELIT Center/Nodal Officer can monitor the ongoing practical classes live and also students can ask queries if any from the NIELIT Faculty.
- v) LTP will maintain recording of all practical classes date-wise which can be asked by NIELIT/MeitY any time for verification.

#### **Roles of L&OTP:**

In addition to roles performed by LTP, the L&OTP must have classroom with proper technical facility through which the students can attend online classes conducted by NIELIT Centers remotely. These must have IP based camera facility through which respective NIELIT Center will be able to monitor the attendance conducted by the training partner. Classroom should be sufficiently spacious so that social distancing norms may be ensured.

#### **Activities to be performed by TP/ LTP/ L&OTP & Revenue Sharing Model:**

Sr. No.	Activity	Model		
		NSQF TP Model	LTP Model	L&OTP Model
1	Accreditation process	By RC	By RC	By RC
2	Candidate Enrolment	By TP	By LTP	By L&OTP
3	Theory Lecture Delivery	By TP	By NIELIT Kohima Centre in online mode, student will attend from his/her home through mobile/laptop/computer etc.	By NIELIT Kohima Centre but L&OTP will provide classroom facility along with TV/Computer from where student will attend the online class. Institute will also have to make provision for monitoring of class through IP based camera etc.
4	Lab Session Delivery	By TP	By LTP	By L&OTP
5	Assessment of students	By NIELIT HQ	By NIELIT HQ	By NIELIT HQ

#### **D. Course material / mode of training**

The concerned Training Partner will provide training course material to the candidates.

### **E. Infrastructure required to conduct to conduct NSQF Courses in Mon District of Nagaland for a batch of 30 Candidates.**

Minimum of 90 Sq. meters carpet areas with library, reading halls and toilets(separate for males and females), drinking water and all basics amenities. The institute should provide a class room with minimum of 30 seating capacity for Theory and Lab. The hardware and software resources required will be as per the requirements of the course mentioned in the Qualification Pack of the courses (Annexure VI – XVI).

#### **Minimum Computer Hardware Requirements:**

<b>Sl. No.</b>	<b>Course</b>	<b>Hardware Requirement</b>	<b>Any other specific requirement related to the course</b>
1	Certificate Course in IT-ITeS BPO, Soft Skills & Communicative English	Computer with configuration 1 GHz Processor, 4 GB RAM, 100 GB HDD or higher ,Multimedia Projector, Audio Visual Set ,Head Phone with Microphone ,PC with internet etc.	Speaker, Mic, Webcam, Broadband or any other connection with static IP Address,OHP /LCD Projector, LAN Connection
2	Certified Computer Application Accounting and Publishing Assistant	Computer with configuration 1 GHz Processor, 4 GB RAM, 100 GB HDD or higher.	
3	Certified Data Entry and Office Assistant (Upskilling)	Computer with configuration 1 GHz Processor, 4 GB RAM, 100 GB HDD or higher	
4	O level (IT)	Computer with configuration 1 GHz Processor, 4 GB RAM, 100 GB HDD or higher ,Arduino UNO or equivalent board sensors and motors	
5	NIELIT Certified	Computer with configuration 1 GHz Processor, 4 GB RAM, 100 GB HDD or higher	



	Web Developer		
6	NIELIT  Certified Multimedia Developer	Computer installed with Multimedia Software Minimum 16 GB RAM or Higher	
7	NIELIT  Certified Cloud Computing and Virtualization Expert	Minimum Requirement: Intel i3 / AMD Ryzen 3 with 3GHz processor having 16 GB RAM and 500GB HDD /256 GB SSD	
8	Certified Artificial Intelligence (AI)  Associate "Upskilling"	Minimum Requirement: Intel i3 / AMD Ryzen 3 with 3GHz processor having 8 GB RAM and 500GB HDD /256 GB SSD	
9	Internet of Things (IoT) Assistant	Computer with configuration 1 GHz Processor, 4 GB RAM, 100 GB HDD or higher,DHT11, DHT 22, LM35, MQ02,03,04,05,06,07,08,09,131,135,136,137,138,214, HC-05, 16X2 LCD, 16X4 LCD,128X64 OLED, Seven	
10	Internet of Things (IoT) Associate	Segment Display, 4- Channel Relay, Sound sensor, Ultrasonic sensor, Servo Motor(SG09) ,(MG995), MG(90), BO DC motor (5 volt) with wheels, Acrylic Plates (3mm) 15 x15 cm, LDR Sensor, LED (5 colour),Potentiometer, Breadboard, Jumper Wires,DS18B20, IR Sensor, RFID Module,I2C modules, Raspberry pi 4 Model B (8GB RAM) with accessories set, Accelerometer MPU6050, PIR Sensor ( HC- SR501), Pressure sensor (BMP180) Gyroscope (MPU9250), Magnetometer, GPS Module, Touch sensor, Rain sensor,Soil Moisture sensor, Real Time Clock (RTC) Module, Soil Hygrometer Detection Module, Digital Barometric Pressure Sensor, Rotary Encoder Module, Flame Sensor, RF 433MHz Transmitter/Receiver module, Hall Sensor, Joy Stick Module,Photo Resistor, Tilt sensor, Flux Sensor, Thermistor Sensor Module, Colour Sensor, Water flow Sensor, Load sensor, Lora RA-01, Lora RA-02, Load sensor(SEN-10245), ESP8266/ NodeMCU, TXS0108E,	

		ARM Cortex -M0, J-Link USB V9	
11	Assembly & Maintenance of Personal Computer	Soldering rod with stand, soldering wire, sandpaper, soldering paste, Thermal camera, Liquid electrical tape, Professional repair tool kit, hot air gun, Laser Printers, Solid Ink Printers, LED Printers, Business Inkjet Printers, Home Inkjet Printers, Multifunction Printers, Dot Matrix Printers, 3D Printers, LCD monitor, LED monitor, OLED monitor, CRT monitor, Plasma monitor, QWERTY Keyboard, Wired Keyboard, Numeric Keypad, Ergonomic Keyboard, Wireless Keyboard, USB Keyboard, Bluetooth Keyboard, Magic Keyboard, Mouse: wired, wireless, optical, mechanical, laser, and trackball, Analogue joysticks and digital joystick, drum scanner, flatbed, and handheld scanners, Memory module tester, Multimeter, PCI PCIE LPC MiniPCI-E Analyzer Type A Diagnostic Card KQCPET6-V8 for PC Laptop Tester, DDR2 DDR3 DDR4 Laptop Memory RAM Slots and Memory Module Solution, Diagnostic Analyzer, USB extender, ATX, Micro -ATX, MINI- ATX, Nano- ITX, Pico-ITX, Flex -ATX, BTX type of motherboards, Soft cleaning cloth, Cleaning agent, Antistatic wrist strap, Cables ties, Tweezers, Nut drivers, Screwdrivers, Air blower, Cable crimper, Wire cutter and stripper, Pliers, Flashlight	

**Software Requirement for the Courses:**

<b><u>Sl. No.</u></b>	<b><u>Course</u></b>	<b><u>Software</u></b>
1	Certificate Course in IT-ITeS BPO ,Soft Skills & Communicative English	Open source audio/ video recording and editing software/ Open Source Office
2	Certified Computer Application Accounting and Publishing Assistant	Microsoft-Office or Libre Office, tally, ERP 9, Conceptsof Image Editing & Advertising Adobe InDesign, Adobe Photoshop or Free open source alternate software Graphics Designing – Corel Draw, Adobe Flash or Free open source alternate software Windows 7/Latest or Free open source alternate Operating System Antivirus latest

3	Certified Data Entry and Office Assistant (Upskilling)	Operating System (Windows/Linux), Web Browser, Antivirus, Internet Connectivity, Microsoft Office, Libre Office
4	O level (IT)	Any relevant Word Processing / spreadsheet/
		Presentation like Libre Office 6.0, Linux / Ubuntu 16 or higher, Python, Standard Antivirus, Standard browser and publishing tools, Arduino IDE, Any open source Tool
5	NIELIT Certified Web Developer	Windows / Linux operating system ,Text editor software (any One), Notepad++/Sublime text/ Visual Studio Code etc. Other Software: WAMP/LAMP/XAMP/MAMP etc
6	NIELIT Certified Multimedia Developer	Operating System- (Windows/Linux), Web Browser, Antivirus latest & Internet Connectivity Microsoft Office/ Libre Office Adobe – Photoshop, Premiere Pro, Animate, After Effects, Illustrator, Dreamweaver 3D Max, Corel draw, Sonic Soundforge
7	NIELIT Certified Cloud Computing and Virtualization Expert	All Open Source Software will be used
8	Certified Artificial Intelligence (AI) Associate "Upskilling"	Windows / Linux operating system ,Python or Anaconda (Jupiter) with Required libraries
9	Internet of Things (IoT) Assistant	Operating System (Windows 8.1/10/11 with updated package) and device drivers(CP2102, CH340,FTDI)
10	Internet of Things (IoT) Associate	,Arduino IDE 1.8/ 2.2 ,Python 2.7/3.4 or Anaconda (Jupiter) with Required libraries, MS Office 2007/2010/2016
11	Assembly & Maintenance of Personal Computer	Windows 95/XP/Vista/7/8.1/10/11 with updated package and Device drivers,Fedora 19/20,Ubuntu 16,Debian OS,Data Recovery Software,Disk utility software,Antivirus and malware,Software uninstaller,Bootable devices(USB/CD/DVD)with OS

## F. Monitoring Mechanism –

a) TP may be asked to submit the CCTV footage of classroom on random basis.

Or

b) Flying squad surprise visit.

c) Sudden video call by Nodal Officer, RPCU or any NIELIT Official.

## G. Schedule for submission of documents

S.No	Description of the activity	Date
1	Date of Publishing the invitation on website	16-01-2024
2	Last date for submission of Sealed Documents	25-01-2024

Annexure -II

Format for covering letter (To be submitted on the Letter head of the applicant institution)

Ref: **NIELIT/KMA/04/38/2023-24-Proj-EELTP**

To

The Director-in-Charge  
NIELIT Kohima,

**Subject: EoI for Empanelment of Training Institutes for conducting NSQF courses of NIELIT.**

Dear Sir,

1. Having examined the EoI document, we, the undersigned, herewith submit our response to your EoI for Empanelment of Training Institutes for conducting training of NSQF aligned courses of NIELIT being implemented by NIELIT Kohima Centre in full conformity with the said EoI document.
2. We have read the provisions of the EoI document and confirm that these are acceptable to us. We further declare that additional conditions, variations, deviations, if any, found in our EoI shall not be given effect to.
3. We would like to declare that we are not involved in any litigation with any Government in India or any other organization and we are not under a declaration of ineligibility for corrupt or fraudulent practices.
4. We hereby declare that all the information and statements made in this EoI are true and accept that any misrepresentation contained in it may lead to our disqualification.
5. We understood that NIELIT Centre is not bound to short-list / accept any proposal received in response to this EoI.
6. We understood that Empanelment with NIELIT Centre Kohima does not guarantee that every /any of the applicants shall be invited under EoI, or be awarded a project /assignment.

Our correspondence details / authorised person to deal with regard to this EoI is:

	<b>Information</b>	<b>Details</b>
1.	Name of the Contact Person	
2.	Designation and contact address of the person to whom all references shall be made regarding this EoI	
3.	Telephone	
4.	Mobile number of the Contact Person.	
5.	Email	
6.	Corporate website URL	

We hereby declare that our proposal submitted in response to this EoI is made in good faith and the information contained is true and correct to the best of our knowledge and belief.

Sincerely, Signature:

[Authorised person]  
Name & Title with  
seal

Encl: Duly filled Application form.

**NIELIT Kohima Centre**

<b>APPLICATION PROFORMA FOR CONDUCTION OF NSQF ALIGNED COURSES OF NIELIT</b>	
<b>1. COURSES APPLIED FOR PROVIDING TRAINING</b>	<b>NSQF Affiliation Number of the institute</b>
i. Certificate Course in IT-ITeS BPO, Soft Skills & Communicative English	
ii. Certified Computer Application Accounting and Publishing Assistant	
iii. Certified Data Entry and Office Assistant (Upskilling)	
iv. O level (IT)	
v. NIELIT Certified Web Developer	
vi. NIELIT Certified Multimedia Developer	
vii. Internet of Things (IoT) Assistant	
viii. Internet of Things (IoT) Associate	
ix. Certified Artificial Intelligence (AI) Associate "Upskilling"	
x. Assembly & Maintenance of Personal Computer	
xi. NIELIT Certified Cloud Computing and Virtualization Expert	
<b>2. Category of the institute</b> <input type="radio"/> Government Organization <input type="radio"/> Accredited Institutes <input type="radio"/> Others	
<b>3. District :-</b>	
Mon	

<b>4. NAME OF THE INSTITUTE [where the training will be imparted]</b>			
<b>5. FULL ADDRESS WITH LANDLINE/MOBILE/ EMAIL</b>  <b>[ Training location address ]</b>			
<b>6. TYPE OF TRAINING PARTNER APPLYING FOR [Please Tick the appropriate choice]</b>		<b>1. NIELIT NSQF Training Partner (TP)</b> <b>2. LAB Training Partner (LTP)</b> <b>3. Online &amp; Lab Training Partner (O&amp;LTP)</b>	
<b>7. Name &amp; Designation of the Authorized person</b>			
<b>8. Contact Number</b>	<b>(Landline)</b>	<b>(Mobile)</b>	
<b>9. Email-id</b>			
<b>10. PAN Number</b>			
<b>11. No. of students registered in any NIELIT NSQF course in the last 2years at your institute</b>			
<b>Name of the NSQF Course</b>	<b>No. of Students registered</b>	<b>No. of Students Passed</b>	
1.			
2.			
3.			
4.			
<b>12. Distance in Km. from Municipal body (Nagar Palika /Parishad etc.)</b>			
<b>13. Date of Operations in Education field (particularly in IT &amp; Electronics courses)</b>  <b>(attach the documentary proof)</b>		<div style="text-align: center;">       ____ / ____ / ____     </div>	
<b>14. Tie-up with industry and Previous placement records</b>		Attach the report with documentary proof.	

<b>15. Availability of Hardware, Software and Faculty (attach the relevant documents)</b>			
(i)	Whether the Hardware is available as per the NSQF Guidelines	<input type="radio"/> No	<input type="radio"/> Yes
(ii)	Whether the Software is available as per the NSQF Guidelines	<input type="radio"/> No	<input type="radio"/> Yes
(iii)	Whether the Faculty is available as per the NSQF Guidelines	<input type="radio"/> No	<input type="radio"/> Yes
(iv)	Whether the Supporting Faculty is available as per the NSQF	<input type="radio"/> No	<input type="radio"/> Yes
<b>16. INFRASTRUCTURE DETAILS</b>			
<b>(Separate sheet may be enclosed)</b>			
<b>17 Training Facility Availability (attach the clear photographic evidence)</b>			
(i)	Availability of Safe Drinking water	<input type="radio"/> No	<input type="radio"/> Yes
(ii)	Availability of Separate Washroom for Men/Woman	<input type="radio"/> No	<input type="radio"/> Yes
(iii)	Availability of Parking Facility	<input type="radio"/> No	<input type="radio"/> Yes
(iv)	Availability of reliable Internet	<input type="radio"/> No	<input type="radio"/> Yes
(v)	Availability of Printer & Scanner	<input type="radio"/> No	<input type="radio"/> Yes
(vi)	Availability of Waiting Area/Room	<input type="radio"/> No	<input type="radio"/> Yes
<b>18. DETAILS OF SIMILAR PROGRAMS CONDUCTED &amp; GOVT. SCHEMES IF ANY (attach the relevant documents)</b>		<input type="radio"/> No	<input type="radio"/> Yes
<b>19. AVAILABILITY OF BIO-METRIC ATTENDANCE SYSTEM</b>		<input type="radio"/> No	<input type="radio"/> Yes
<b>Attach additional sheet, if the space is not sufficient and mark as Annexure --- (with Sr. No) Seal and sign this document.</b>			

*Attach documentary proof wherever necessary.*

**Date:**

**Signature of the authorized person**

**Name:**

**Seal of the institute:**

**Designation:**



## 20. DECLARATION:

- (i) I, \_\_\_\_\_ son/daughter of \_\_\_\_\_ have read and understood the RULES / GUIDELINES for Conduction of NIELIT NSQF aligned courses Training for SC/ST/EWS (Women) candidates in the five districts of Jharkhand and agree to abide by the same.
- (ii) I certify that I am the competent authority, by virtue of the administrative and financial powers vested in me by \_\_\_\_\_ to furnish the above information and to undertake the above stated commitment on behalf of my /our institution.
- (iii) I am aware that in case any information given by me is false or misleading, the Institute would be debarred from the conduction of training programs and / or debarred besides being subjected to any other action that may be deemed fit by NIELIT Kohima.
- (iv) I agree to abide by the decisions of the NIELIT Kohima or its designated agencies in respect of my application for permission to conduct NIELIT NSQF aligned training for SC/ST/EWS (Women) candidates under the above scheme.
- (v) I agree to all terms & conditions mentioned in the EOI Ref no: .....

Signature of the Witness:

Signature of the Authorized Signatory:

Name:

Name:

Designation:

Designation:

Date:

Date:

Address:

Address:

Seal of the organization

Seal of the organization

LIST OF ENCLOSURE:

SR NO	ANNEXURE NO	CONTENT

**(Revenue Sharing Model with Accredited Centres/ Training Partners)****The per hour NSQF charges will be as per NSQF Norms.**

Total course fee per candidate will depend on the duration (in Hrs) of the NSQF course and the proportion in which funds are received/dispensed from the Ministry to NIELIT RC through NIELIT Headquarters. The Theory/ Practical component in Hours will be as mentioned in the Qualification Pack of the course. The following ratio of Theory/Practical hours will be taken if not specifically mentioned in the Qualification File of the course.

**Theory: 40%**

**Practical: 60%**

The revenue sharing under the three models NSQF TP, LTP, L&OTP as an example will be as follows:

Activity	Model		
	NSQF TP Model	LTP Model	L&OTP Model
Revenue sharing/ Payment Model	Reimbursement will be made to TP @75% payment for total Course fee & RC will keep remaining 25%. In above case, TP will be given 75% of total course fee of Rs. 4000/-, i.e. Rs. 3000/- and RC will keep remaining 25% i.e. Rs. 1000/-.	Reimbursement will be made to LTP, @75 % of per hour rate for the duration of practical component of the course. RC will keep the remaining 25 % for duration of practical component for Faculty Development Program of faculty and Lab instructor at LTP. Since, theory component of training will be conducted by RC, entire remuneration for theory component will be kept by RC. In above case, TP will get 75% of Practical Component of Rs. 2400/-  i.e. Rs. 1800/- and remaining 25%  i.e. Rs. 600/- will be kept by RC. RC will keep 100% of theory component i.e. Rs. 1600/-.	Reimbursement will be made to L&OTP, @75 % of per hour rate for the duration of practical component of the course. RC will keep the remaining 25 % for duration of practical component for Faculty Development Program of faculty and Lab instructor at LTP. Since, theory component of training will be conducted by RC and L&OTP will provide classroom and other facility, 75% remuneration for theory component will be kept by RC and remaining 25% share will be given to L&OTP. In above case, TP will get 75% of Practical Component of Rs. 2400/- i.e. Rs. 1800/- and remaining 25% i.e. Rs. 600/- will be kept by RC. Further, TP will also get 25% of theory component of Rs. 1600/- i.e. Rs. 400/-.

## Annexure-V

### Format of Agreement

(on Rs. 100/- stamp paper)

This agreement entered into on this.....day of..... between **NIELIT**

**KOHIMA centre** (a unit of **NIELIT Society**, which is an autonomous scientific society of Ministry of Electronics & Information Technology, Government of India), 2<sup>nd</sup> Floor, RIADA Bhawan, Main Road, Kohima-834001 (hereinafter referred to as **First Party** which term and expression shall mean and include its successors and assignees) represented by its Head/Director on the **ONE PART**:

AND

The <.....Training Partner .....> (hereinafter referred to as **SECOND PARTY** which expression shall include its successors and assignees) and represented by authorized signatory Mr XXXXXX, Head /Director on the **OTHER PART**:

WHEREAS First Party invited applications for providing training for <Project title> with assistance of MeitY, Govt. of India and whereas the SECOND PARTY tendered to provide the same.

AND WHEREAS **FIRST PARTY** awarded the contract for the said training to SECOND PARTY, after due process of shortlisting the training partner.

AND WHEREAS **SECOND PARTY** has a security deposit in favor of **FIRST PARTY** for the due fulfillment of his obligation under this deed – Deposit amount of 'XXXX/- being 5 percent of the training fee for batch of 30 candidates for the course <Course Name> (in the form of DD or Bank Guarantee No. dated)

WHEREAS **FIRST PARTY** and **SECOND PARTY** desire to mutually associate with each other to commence the **training program in <Project title>** through its training centres in the said district of said state.

Now it is hereby agreed by and between the two parties hereto as follows:

1. SCOPE: SECOND PARTY will conduct training program in <Project title> through its centre in <District & State name> for the course <Course Name>.
  - 1.1. **Training program: <Project title>** as per details strictly as per NIELIT NSQF norms, Qualification file of the course and project guidelines
  - 1.2. **SECOND PARTY** through its respective district coordinators will ensure the availability of necessary infrastructure and qualified and trained faculty suitable for conducting the respective training programs at the respective training centre.
  - 1.3. The maximum number of candidates to be trained in the district of

<District State name> for the course <Course Name> is 30 per batch.

## 1. OBLIGATION OF SECOND PARTY:

**2.1. <Project title> for the <District name> for the course <Course name>,**

**2.1.1. SECOND PARTY** proposing to conduct the training program shall furnish an undertaking that it fulfils all the necessary requirements in terms of infrastructure, hardware, software, faculty and library if applicable, etc for conducting the training programs and shall allow the **FIRST PARTY** personnel or its representatives for inspections of the training centre if they so desire.

**2.1.2.** If the training is not carried out to the satisfaction of **FIRST PARTY**/end user and if the behavior or character or conduct of the personnel engaged by the **SECOND PARTY** are found to be unsatisfactory at any time during the period of operation of the contract, **FIRST PARTY** reserves the right to terminate the contract with one month's notice and if the contract is so terminated the **SECOND PARTY** shall not have any claim whatsoever for compensation for the remaining period of contract. The security deposit of the **SECOND PARTY** shall be forfeited in such cases.

**2.1.3. SECOND PARTY** or its district office shall monitor and coordinate the training programs conducted through its training centre and ensure that the training programs are conducted as per the criteria mentioned in Qualification File (QF) of the courses available at National Qualification Register <https://nqr.gov.in/>, NIELIT NSQF norms, and project implementation SoP/norms.

**2.1.4. SECOND PARTY** shall ensure that the persons employed for training possess the minimum essential qualification(s) and maintain a trainee: PC/lab practical training instruments ratio of 2:1 to ensure quality of the program

**2.1.5. SECOND PARTYS** Training charges for the Courses (includes GST and other applicable overhead charges) as per NSQF training fee rates per candidate which covers cost of publicity & study material also.

**2.1.6. SECOND PARTY** shall maintain a Student Registration Register, a Student Record Register and Student Attendance Register as given below.

(a) **Student Registration Register:** Student Registration Register shall contain details like Serial No.; Student Name & Address; Student ID Number; Date of Admission; Course Name, Course Code & Duration; Batch Code, Start Date & End Date, Sex, date of birth, caste, community details

(b) **Student Record Register:** Student Record Register shall contain details like Serial No.; Student Name; Student ID; Course Name; Period of Study; Assignment/Test paper/Model Exam Nos. & marks/Grades awarded.

(c) **Attendance Register:** with signatures of the candidates for each of the day's attendance

**SECOND PARTY** will be responsible for the verification and maintaining record of all relevant documents of the beneficiary like educational

qualification, caste certificate etc.

**2.1.7. SECOND PARTY** shall print and distribute the necessary Course material/handouts for the program as per the syllabus/course material mentioned in QF.

**2.1.8. SECOND PARTY** will ensure the quality of the training programme by implementing a Two-Tier Evaluation Project: (1) Continuous evaluation by means of Assignments & Class Tests and

(2) Final Evaluation by NIELIT as per Examination for NIELIT NSQF aligned courses.

**2.1.9. SECOND PARTY** shall tie-up with the local industries for providing placement assistance for the candidates.

**2.1.10. SECOND PARTY** shall provide any other reports or information required by **FIRST PARTY** in connection with this training program.

**2.1.11. SECOND PARTY** shall nominate a **Co-ordinator/authorized contact person** for this project.

**2.1.12. SECOND PARTY** shall not sub-contract the whole or part of the contract or assign the contract or any part thereof to any other third Party

**3. OBLIGATION OF FIRSTPARTY:**

**3.1. FIRST PARTY** shall coordinate the selection of the candidates based on the applications received and the candidates will be allocated to the nearest training centre of the **SECOND PARTY**.

**3.2. Payment terms:** Payment shall be made on completion of the courses and further certification of candidates based on the actual number of candidates certified on receipt of invoice along with relevant documents online through portal to **SECOND PARTY**.

**4. Tenure /Renewal of the Agreement**

This agreement shall come into force when duly signed by the representatives of both the parties and shall be valid for a period of **One Year** from the date of such signing. On the expiry of One year, parties hereto shall be entitled to renew by mutual consent on such terms as may be then be agreed upon. If not renewed, **SECOND PARTY** shall be entitled to stop conducting the training program for the candidates in this project. Before such action, both the parties shall ensure that the Courses already started are fully completed, examination conducted and certificates issued. This agreement shall not be terminated until successful completion of any pending Course.

**5. Breach of Terms of this Agreement**

If either party commits breach of any of the terms of this agreement, the other party may bring the fact of breach to the notice of the former and the former shall immediately take steps to rectify the breach and in case he fails to do so and the breach continues for a period of 1 Month, the aggrieved party may treat this agreement as repudiated by the other party and forthwith serve a notice of termination and the aggrieved party will have the right to claim from the other party the damages in respect of losses already sustained by him for the

unexpired period of the agreement on account of such termination of the agreement. The agreement will automatically be terminated within 1 month after the receipt of such notice, subject to the liability and arbitration clause. In the event of breach of any of the terms and conditions of the agreement signed by the **SECOND PARTY**, the security deposit will also be forfeited.

In case of any such termination of this agreement, in the middle of a Course, which has already been started, both the parties should take sufficient steps so as to complete the Course, already started. Termination of the agreement should be implemented in such a way that the future of the students/trainees is not affected by the termination. In case of such termination of the agreement, both the parties shall ensure that the Courses already started are fully completed, examination conducted and certificates issued.

## **6. Termination of contract**

The contract is liable to be terminated by either side on one month's notice. Abrupt termination or breach of the contract by the **SECOND PARTY** for reasons attributable to the **SECOND PARTY** will entail forfeiture of the Security Deposit of the **SECOND PARTY**.

If the **SECOND PARTY** (a) abandons the contract or has failed to proceed with the work or does not adhere to the committed schedules or technological requirements due to negligence or the progress on any particular item or items is slow (b) has failed to execute the work in accordance with the terms and conditions of the contract, (c) is persistently or frequently neglecting to carry out their obligation under the contract, then **FIRST PARTY** shall be competent to terminate the contract unilaterally at its discretion at any time without notice and without paying any compensation or any other amounts and to proceed with the balance of the work through any other agencies and the **SECOND PARTY** is liable to compensate **FIRST PARTY** for losses incurred by it in such cases. In such termination of the contract, the Security Deposit made by the **SECOND PARTY** shall also be forfeited

## **7. Jurisdiction**

This Agreement shall be governed by the Laws of Indian Union in force. Both the parties here in agree that all disputes between them shall be subject to the jurisdiction of courts in <District of Office of **SECOND PARTY** >

## **8. Arbitration or Mediation**

Any dispute arising between the parties if not resolved between them shall be referred after mutual consent of both the parties to an arbitrator or mediator. The selection of the arbitrator shall be decided by the above parties mutually.

In case of termination of this agreement, in the middle of a Course, which has already been started, both the parties should take sufficient steps so as to complete the Course, already started. Termination of the agreement should be

implemented in such a way that the future of the students/trainees is not affected by the termination. In case of such termination of the agreement, both the parties shall ensure that the Courses already started are fully completed, examination conducted and certificates issued.

## 9. **Modifications**

The modifications in the Agreement can be done with the mutual consent of both the parties but strictly in line with the project guidelines.

## 10. **IPR**

All Intellectual Property, including, but not limited to, copyrights, software and database rights, patents, trade secrets, trademarks, rights in designs and all other Intellectual Property or other proprietary rights ("Intellectual Property") owned by one Party prior to the date of this MOU will continue to be owned by that party. All Intellectual Property rights made available by one Party to the other Party in connection with this MOU, or otherwise, will remain the sole property of, and vest in, the first Party or its licensors. Neither Party will gain, by virtue of this MOU, any rights in or to any Intellectual Property rights owned by the other Party. Any Intellectual Property rights created by one Party without use of or reference to the Intellectual Property rights or Confidential Information of the other Party will be and will remain the sole and exclusive property of the first Party.

**11.** The application, submitted documents by **FIRST PARTY to SECOND PARTY** and the record of the negotiation meeting held between **FIRST PARTY** and **SECOND PARTY** also form part and parcel of this agreement.

IN WITNESS WHEREOF, the parties hereto have caused this AGREEMENT to be executed in duplicate on the day and the year first above written.

For (**FIRST PARTY**)

For (**SECOND PARTY**)

(Institute Head signature & stamp)

(Institute Head signature & stamp)

(Name in Block Letters)

(Name in Block Letters)

Name of <b>FIRST PARTY</b>	Name of <b>SECOND PARTY</b>
Address	Address



Contact Details	Contact Details
E-mail ID	E-mail ID
Web	Web

Witness 1:

Witness 2:

Signature.....  
Name ...(in Block Capital Letters)...

Signature.....  
Name...(in Block Capital letters) ...

Address .....

Address .....

.....

.....

.....

.....

Contact No. ....

Contact No. ....

## **Annexure –VI**

(NSQF Course Qualification File Details)

**Course Name: Certificate course in IT-ITeS BPO, Soft Skills & Communicative English**

The Qualification File Details for the courses are also available at –  
<https://nqr.gov.in/qualifications/2021>

# NSQF QUALIFICATION FILE

Approved in 13<sup>th</sup> NSQC Meeting – NCVET – 25<sup>th</sup> November, 2021

## SUMMARY

1	Qualification Title	Certificate Course in ITES BPO, Soft Skills & Communicative English
2	Qualification Code, if any	NIELIT /IT/ L4/035
3	NCO code and occupation	3429.10 (Call Centre Executive), 1411.0100 (Manager, Lodging and Catering Services/Resident Manager), 1412.0100 (Manager, Fast Food Service), 4113.35-Data Entry Operator
4	Nature and purpose of the Qualification (Please specify Whether qualification is short term or long term)	Successful trainees to be awarded certificates. The purpose of this qualification is to make the trainees understand and improve their 'Soft Skills' or 'Inter Personal Skills', along with a focus to improve their communicating ability in English and IT Skills, so as to enhance their opportunities towards meaningful employability. (Short Term Qualification)
5	Body/bodies which will award the qualification	Examination Wing, National Institute of Electronics and Information Technology
6	Body which will accredit providers to offer courses Leading to the qualification	National Institute of Electronics and Information Technology
7	Whether accreditation/affiliation norms are already in place or not, if applicable (if yes, attach a copy)	Yes, The Handbook for accreditation of Training Partner 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	Qualification is relevant across a host of occupations. More specifically qualification is suited for the customer care executives, front office executives and sales & marketing executives across all the sectors.
9	Job description of the occupation	Qualifiers will be trained in Soft Skills, ITes & Communicative English as per Industry Standards. Qualifiers will be suitable for ITes BPO jobs, Trainer, Career Counselor, Service & Hospitality Industry etc
10	Licensing requirements	No
11	Statutory and Regulatory Requirement of the relevant Sector (documentary evidence to be provided)	Not Required
12	Level of the qualification in the	4

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# NSQF QUALIFICATION FILE

Approved in 13<sup>th</sup> NSQC Meeting – NCVET – 25<sup>th</sup> November, 2021

Approved in 73<sup>rd</sup> NSQF Meeting – NOVEMBER – 2017

NSQF			
13	Anticipated volume of Training/learning required to complete the qualification	(a) 250 hrs. (Theory = 100 hrs, Practical = 150 hrs)	
14	Indicative list of training tools required to deliver this qualification	Multimedia Projector, Audio Visual Set up, PC etc.	
15	Entry requirements and/or Recommendations and minimum age	ITI/ 12 <sup>th</sup> with English as one of the subjects studied.	
16	Progression from the Qualification (Please show Professional and academic progression)	Empowers learners to continuously develop one-self to take on more responsibilities. Enhances employability through the practice of these skills.	
17	Arrangement for the Recognition of Prior learning (RPL)	Not available.	
18	International comparability Where known research evidence To be provided)	Not known	
19	Date of planned review of the Qualification.	After every 3 years.	
20	Formal structure of the qualification		
	Mandatory components		
	Title of component and Identification Code/NOSs/ Learning outcome	Estimated size (learning hours)	Level
(i)	<b>SOFT SKILL</b>		
	1. What is Soft Skills	90 hrs (Theory = 36 hrs, Practical = 54 hrs)	4
	2. Self Esteem & Stress Management		
	3. Communication Skills		
	4. Listening Skills		
	5. Leadership Skills		
	6. Problem Solving		
	7. Team Work		
	8. Corporate Culture		
	9. CRM- The Management Model		
	10. Telephone Etiquettes & Call Handling Skills		
	11. Time Management		
	12. Questioning Techniques		
	13. Cover letter & Resume writing		
	14. Group Discussion		
	15. Mock P.I./Role plays		
	16. Mock G.D / Role plays		
	17. Personal Interview skills		

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# NSQF QUALIFICATION FILE

Approved in 13<sup>th</sup> NSQC Meeting – NCVET – 25<sup>th</sup> November, 2021

Approved in 13<sup>th</sup> NSIC Meeting – NCVT – 25<sup>th</sup> November, 2021

	<b>NSQF</b>		
13	Anticipated volume of Training/learning required to complete the qualification	(a) 250 hrs. (Theory = 100 hrs, Practical = 150 hrs)	
14	Indicative list of training tools required to deliver this qualification	Multimedia Projector, Audio Visual Set up, PC etc.	
15	Entry requirements and/or Recommendations and minimum age	ITI/ 12 <sup>th</sup> with English as one of the subjects studied.	
16	Progression from the Qualification (Please show Professional and academic progression)	Empowers learners to continuously develop one-self to take on more responsibilities. Enhances employability through the practice of these skills.	
17	Arrangement for the Recognition of Prior learning (RPL)	Not available.	
18	International comparability Where known research evidence To be provided)	Not known	
19	Date of planned review of the Qualification.	After every 3 years.	
20	Formal structure of the qualification		
	<b>Mandatory components</b>		
	<b>Title of component and Identification Code/NOSs/ Learning outcome</b>	<b>Estimated size (learning hours)</b>	<b>Level</b>
(i)	<b>SOFT SKILL</b>		
	1. What is Soft Skills	90 hrs (Theory = 36 hrs, Practical = 54 hrs)	4
	2. Self Esteem & Stress Management		
	3. Communication Skills		
	4. Listening Skills		
	5. Leadership Skills		
	6. Problem Solving		
	7. Team Work		
	8. Corporate Culture		
	9. CRM- The Management Model		
	10. Telephone Etiquettes & Call Handling Skills		
	11. Time Management		
	12. Questioning Techniques		
	13. Cover letter & Resume writing		
	14. Group Discussion		
	15. Mock P.I./Role plays		
	16. Mock G.D / Role plays		
	17. Personal Interview skills		

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**NSQF QUALIFICATION FILE**Approved in 13<sup>th</sup> NSQC Meeting – NCVET – 25<sup>th</sup> November, 2021**SECTION 1****ASSESSMENT**

21	<b>Body/Bodies which will carry out assessment:</b> Examination Wing National Institute of Electronics and Information Technology, NIELIT Bhawan, Plot No. 3, PSP Pocket, Sector-8, Dwarka, New Delhi-110077
22	<b>How will RPL assessment be managed and who will carry it out?</b> Candidates may appear directly for assessment through student portal of NIELIT at: <a href="https://student.nielit.gov.in/">https://student.nielit.gov.in/</a>
23	<p><b>The assessment is aimed at judging the knowledge and skills learnt by the trainees. The trainees are expected to demonstrate the minimum skill uptake after the training. The following assessment methodologies are employed:</b></p> <p>Student is required to pass in all OUTCOMES individually. Following assessment methodologies are used.</p> <p>The assessment is aimed at judging the knowledge and skills learnt by the trainees. The following assessment methodologies are employed:</p> <ol style="list-style-type: none"><li>1. Written/Theory = 200 marks</li><li>2. Practical Evaluation = 90 marks</li><li>3. Internal Assessment = 30 marks</li><li>4. Presentation = 30 marks</li></ol> <p><b>About Examination Pattern:</b></p> <ul style="list-style-type: none"><li>➤ The question papers for the theory and practical exams are set by the Examination wing of NIELIT HQs.</li><li>➤ Candidates having Level-3 Qualification of Course On Computer Concepts will be exempted for Examination of Theory: Paper-2: Computer Skills.</li><li>➤ Theory examination would be conducted online and the paper comprise of MCQ.</li><li>➤ Practical examination/ internal assessment / Project/ Presentation/ Assignment would be evaluated internally. However, an External Examiner/ Observer may be deployed including NIELIT officials.</li><li>➤ Candidates may apply for re-examination within the validity of registration (only in the assessment component in which the candidate failed).</li><li>➤ For re-examination prescribed examination fee is required to be paid by the candidate only for the assessment component in which the candidate wants to reappear.</li><li>➤ The examination will be conducted in English language only.</li></ul> <p><b>Minimum Pass marks:</b></p> <p>Pass percentage would be 50% marks in each component, with aggregate pass percentage of 50% and above.</p> <p><b>Pass Percentage &amp; Grading System is as under:</b></p>

## NSQF QUALIFICATION FILE

Approved in 13<sup>th</sup> NSQF Meeting – NCVET – 25<sup>th</sup> November, 2021

Grade	S	A	B	C	D
Marks Range (in %)	≥85%	≥75% and <85%	≥65% and <75%	≥55% and <65%	≥50% and <55%
<b>Salient Features:</b> <ul style="list-style-type: none"> <li>Confidentiality and impartiality are maintained during all the examination and evaluation process.</li> <li>Examination is conducted for candidates that are enrolled in given session.</li> </ul> <b>Feedback System:</b> This system is for conducting "The Student Survey" for quality assurance of education. Students, Faculties and administrators can all benefit from survey. This is helpful in the continual improvements in teaching programs, processes as well as infrastructure and thereby enhancing the students' learning experience at NIELIT Centres.					

## ASSESSMENT EVIDENCE

### 24. Assessment evidences

Title of Component:

Certificate Course in ITES: BPO, Soft Skills & Communicative English

Outcome to be assessed/NOSs to be assessed	Assessment criteria for the outcome
Diagnostic test on the entry behavior of trainees.	<b>Outcome: - 1 – Written tests</b> <ul style="list-style-type: none"> <li>-To judge the understanding of the trainees regarding content discussed.</li> <li>-To get an understanding about trainees written communication skills.</li> <li>- Enable identification of shortfalls.</li> <li>-Should be able to construct simple sentences</li> </ul>
Practice session & analysis of the recorded materials by the faculty to judge the improvement of the trainees	<b>Outcome: - 2 – Internal Evaluation</b> <ul style="list-style-type: none"> <li>-A verbal interaction with trainees on topics/modules discussed.</li> <li>-To judge the verbal communication of trainees. Whether any improvement seen.</li> <li>-Should be able to carry out a simple conversation in English with proper use of correct body language.</li> <li>-Identify &amp; give feedback on shortfalls</li> </ul>

# NSQF QUALIFICATION FILE

Approved in 13<sup>th</sup> NSQF Meeting – NCVET – 25<sup>th</sup> November, 2021

Understanding Call Structure	<b>Outcome: - 3 – Remote Faculty (telephonic evaluation by faculty from other NIELIT Centres)</b> -Trainees should be able to properly handle a phone call. -Show confidence while talking to an unknown person. -Express one-self clearly.
Knowledge on Personality Development & Presentation Skills	<b>Outcome: - 5 – External Evaluation (physical/ telephonic evaluation by a third party, an expert on the subject)</b> -To judge the knowledge level of the trainees on course content. -The ability to introduce & express one-self-confidently in simple terms. -To assess the overall development of the trainee.

## Means of assessment

### Means of assessment

S. No	Examination Pattern	Duration in Minutes	Maximum Marks
1	Theory 1 – Soft skills & Communicative English	90	100
2	Theory 2 – Computer Skills	90	100
3	Practical – ITES, BPO, Soft skills	180	90
4	Internal Assessment	-	30
5	Presentation	-	30
<b>Total</b>		<b>360 Minutes</b>	<b>350 Marks</b>

### Pass/Fail

Pass percentage would be 50% marks in each component, with aggregate pass percentage of 50% and above.

### Grading System:

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



OPTION A

Title/Name of qualification/component: Soft Skill and Communication Skill Level: 4			
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relate to the NSQF level descriptors	NSQF Level
Process	Candidate will be learning effective communication which will make them smart in communicating with various companies and people and able to do front office administration.	Prepares person to/carry out processes that are repetitive, on a regular basis, with little application of understanding, more of practice.	3
Professional Knowledge	Prepares person to/carry out processes that are repetitive	Knowledge of facts, principles, processes and general concepts, in a field of work or study.	5
Professional skill	Prepares person to/carry out processes that are repetitive	Recall and demonstrate practical skill, routine and repetitive in narrow range of application	4
Core skill	Prepares person to/carry out processes that are repetitive	Communication written and oral, with minimum required clarity, skill of basic arithmetic and algebraic principles, personal banking, basic understanding of social and natural environment	4
Responsibility	Prepares person to/carry out processes that are repetitive	Responsibility for own work and learning.	4

**NSQF QUALIFICATION FILE**Approved in 13<sup>th</sup> NSQF Meeting – NCVET – 25<sup>th</sup> November, 2021**SECTION 3****EVIDENCE OF NEED**

26	<p><b>What evidence is there that the qualification is needed? What is the estimated uptake of this qualification and what is the basis of this estimate?</b></p> <p>It is often said that <b>"hard skills"</b>, which are certain job-specific skills characterized by degrees and diplomas, will get you the interview call, but it is more of your <b>"soft skills"</b> along with the <b>"hard skills"</b> which will ultimately get you the job. Soft Skills enhances an individual's employability. The phrase soft skills is also known as 'people skills', 'interpersonal skills', 'social skills' or 'transferable skills' and is perhaps one of the hardest skills to develop for certain people.</p> <p>It goes without saying that job-related expertise is absolutely necessary, but over the last two, three decades, it has been found that, it is ultimately the soft skills that are more important in determining the success levels of individuals, and which will ultimately determine the success of an organization.</p> <p>The interpersonal dynamics within an organization has evolved. The skill of listening to people, presenting ideas, conflict resolution, and encouraging an open and honest work environment all comes down to knowing how to build and maintain relationships with people within an organization.</p> <p>It is these relationships within an organization that allow people to participate fully in team projects, show appreciation for others, and enlist support for their projects.</p> <p>The following statistics makes the point –</p> <ol style="list-style-type: none"><li>1. According to a recent article in <i>The Economic Times</i>, out of three lakh MBA graduates every year, only 10 per cent are employable. <a href="http://www.ecoti.in/16ihya">http://www.ecoti.in/16ihya</a> [Annexure- II ]</li><li>2. A recent review article on "Current Employability Scenario of Indian Graduates (Engineering, MBA &amp; Other Streams): A Review" says "Major reason behind low employability of degree holders is that they are lacking in very basic skills which are of prime importance for getting the job in the today's competitive market. Many institutes are following university syllabus which is more theoretical than practical and also not focusing on improving the student's basic skills such as English Conversation/ Communication Skill, Maintaining Suitable Office attire, ability to apply theoretically learned concepts in practical experience, some soft skills and many more and lack of such basic skills in students drastically lower down their employability." (International Journal of Advances in Management and Economics [Available online at: <a href="http://www.managementjournal.info">www.managementjournal.info</a>]) [Annexure II ]</li></ol> <p>The estimated intake for this qualification is minimum of 300 candidates per year looking into the huge number of candidates qualifying the graduation examinations in the major cities in India.</p>
27	<p><b>Recommendation from the concerned Line Ministry of the government/Regulatory Body. To be supported by documentary evidences</b></p> <p>NA</p>
28	<p><b>What steps were taken to ensure that the qualification(s) does (do) not duplicate a ready existing or planned qualifications in the NSQF?</b></p> <p><b>Give justification for presenting a duplicate qualification</b></p>

#### NSQF QUALIFICATION FILE

Approved in 13<sup>th</sup> NSQF Meeting – NCVET – 25<sup>th</sup> November, 2021

	<p>While going through the NQR portal, a similar qualification was found under the name "Communication Skills and Soft Skills" (Course code: 2019/OAFM/HKCL/3548) which is a level-3 and 120 hours' duration course and comprises of only 08 modules such as Grammar, reading skills, pronunciation, art of conversation, honest listening skills through audio sessions and enhance communication &amp; soft skills through daily practice.</p> <p>Whereas the proposed "Certificate Course in ITES BPO, Soft Skills &amp; Communicative English" is a level 4 and 250 hours' duration unique blended course comprising 18 modules on Soft Skills, 14 modules on Communicative English and 09 modules on Computer skills. The course is designed considering the fact and present employability scenario that technical skills alone are not enough to help one get a job or excel in one's career. Employer's judge candidates partly based on their hard skills and partly on how well they utilize their soft skills, communication skills and computer skills to complement the technical expertise.</p>
29	<p><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></p> <p>This qualification needs to be monitored and reviewed on regular basis and updated in every 3 years, so that newer training techniques and material, in line with global standards can be incorporated into the qualification. But it is worth mentioning that whatever updating is to be done, it must be user friendly and in line with local standards. The following data will be used –</p> <ol style="list-style-type: none"><li>1. Trainee feedback: questionnaire which will incorporate subjects discussed, training methodology and delivery, trainer quality, time span and relevance.</li><li>2. The evaluation results will be used to get an insight into different areas that require more emphasis.</li><li>3. Feedback from employers after placement of trainees</li></ol>

#### SECTION 4

##### EVIDENCE OF PROGRESSION

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>The course is designed considering the fact and present employability scenario that technical skills alone are not enough to help one get a job or excel in one's career. Employer's judge candidates partly based on their hard skills and partly on how well they utilize their soft skills and communication skills to complement the technical expertise. So the entire course was designed keeping in mind the above factors and accordingly this unique course is a blend of Soft Skills, Communication skills and Computer skills. These are fundamental to any professional's career growth and success in the workplace. The future of work is fast approaching, and organizations have recognized the value of training their workforce needs to improve their soft skills and thereby have begun adopting learning solutions. Even during the recruitment process, more importance is now being given to candidates who have to possess these soft skills and have demonstrated good use of them in real-time. As our workplace continues to evolve with the rapid automation and adoption of technology, the onus lies on working professionals to prioritize their skill development and be future-ready.</p>
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## Annexure –VII

(NSQF Course Qualification File Details)

**Course Name: Certified Computer Application Accounting and Publishing Assistant**

Also available at:-

<https://nqr.gov.in/qualifications/3406>

### NSQF QUALIFICATION FILE

Approved in 22nd NSQF – NCVET, Dated: 25<sup>th</sup> August, 2022

### NCVET Code

2022/ITES/NIELIT/06336

### CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE

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

Name:

Vijai Shankar Jaiswal

Position in the organisation

Dy. Dir.(T)

Address if different from above

NIELIT Gorakhpur

Tel number(s)

0522-2720590

E-mail address

vsjaiswal@nielit.gov.in

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

1. Annexure 1 Model Curriculum
2. Annexure 2 Evidence of need

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# NSQF QUALIFICATION FILE

Approved in 22nd NSQC – NCVET, Dated: 25<sup>th</sup> August, 2022

## SUMMARY

1	Qualification Title	Certified Computer Application Accounting and Publishing Assistant
2	Qualification Code	NIELIT/OA/4/40
3	NCO Code and Occupation	3512.0200 Desktop Publishing Operator
4	Nature and Purpose of Qualification (Please specify whether qualification is short term or long term)	<ul style="list-style-type: none"> <li>- Create Skilled Man Force for Computer Application Accounting and Publishing, candidates can be easily absorbed in any publishing house or press.</li> <li>- Short term Qualification</li> </ul>
5	Body/bodies which will award the qualification.	National Institute of Electronics and Information Technology NIELIT Bhawan, Plot No 3, PSP Pocket, Sector-8, Dwarka, New Delhi-110077
6	Body which will accredit providers to offer the qualification.	NIELIT
7	Whether accreditation/affiliation norms are already in place or not, if applicable (Yes)	Yes  Available at link: <a href="https://www.nielit.gov.in/">https://www.nielit.gov.in/</a>
8	Occupation(s) to which the qualification gives access	Office Assistant, Desktop Publisher, Account Assistant, Technical Assistant.  Can start their own Small-Scale business and can be self employed
9	Job description of the occupation	<ul style="list-style-type: none"> <li>• Can Work In Call Centre for After Sale Support - can be also absorbed in Local Markets</li> <li>• Can start their own Small-Scale business and can be self employed</li> </ul>
10	Licensing requirement	N/A
11	Statutory and Regulatory requirement of the relevant sector(documentary evidence to be provided)	N/A

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**NSQF QUALIFICATION FILE**

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12	Level of the qualification in the NSQF.	3
13	Anticipated volume of training/learning required to complete the qualification	Total: 360 Theory: 120 Practical: 180 OJT: 30 ES: 30
14	Indicative list of training tools required to deliver this qualification	<p><b>Recommended hardware/software tools:</b></p> <p><b>Hardware</b> We required following hardware for smooth functioning of training program -</p> <ul style="list-style-type: none"> <li>➤ Processor: Core-2 or Above</li> <li>➤ Memory: Min. 2 GB RAM</li> <li>➤ Disk space: Min. 160 GB</li> <li>➤ UPS</li> <li>➤ Printer</li> </ul> <p><b>Software</b> This course required following software:-</p> <ul style="list-style-type: none"> <li>➤ Microsoft-Office, Tally, ERP 9</li> <li>➤ Concepts of Image Editing &amp; Advertising- Adobe InDesign, Adobe Photoshop</li> <li>➤ Graphics Designing - Corel Draw, Adobe Flash</li> </ul> <p>Here is list of <b>additional software</b> required for computer:-</p> <ul style="list-style-type: none"> <li>➤ Windows 7 or Above</li> <li>➤ Antivirus latest</li> </ul> <p><b>Or Free open source alternative available Software</b></p>
15	Entry requirements / recommendations. And minimum age	<p>10th Pass Or 8th Class Pass and pursuing continuous regular schooling Or 8th Class Pass + 2 Years ITI in relevant field Or 8th Class Pass + 1 Year of Experience in relevant field</p>

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		Or NSQF Level 2 with 1 Year of Experience in relevant field	
16	Progression from the qualification (Please show Professional and academic progression)	<b>Professional Progression:</b> Account Assistant ->Admin -cum - Finance Assistant  Can work as a trainer in Academic Institutes providing training in courses till NSQF Level-2 in the related area.  <b>Academic Progression:</b> Higher level courses in Advanced Accounting with Tally ERP	
17	Arrangements for the Recognition of Prior learning (RPL)	NA	
18	International comparability	Not known	
19	Date of planned review of qualification	25/08/2025	
20	Formal structure of the qualification		
	Mandatory components		
	Title of component and Identification code/NOSs/Learning outcomes	Estimated size (learning hours)	Level
1	Computer fundamental and office automation software	60	3
2	Concepts of Financial Accounting	60	
3	Preparation of Account Books Using Accounting Packages	90	
4	Concept of Desktop Publishing Softwares	90	
5	Project / OJT	30	

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6	Employability Skill	30	
	<b>Total</b>	<b>360</b>	

**SECTION 1  
ASSESSMENT**

21	<b>Body/Bodies which will carry out assessment:</b> <b>Examination Cell,</b> National Institute of Electronics and Information Technology NIELIT Bhawan , Plot No.3, PSP Pocket, Sector-8, Dwarka, New Delhi-110077
22	<b>How will RPL assessment be managed and who will carry it out?</b> The candidates who will undergo training shall only be assessed.
23	<b>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.</b>  The emphasis is on practical demonstration of skills & knowledge based on the performance criteria. Each OUTCOME is assessed & marked separately. Student is required to pass in all OUTCOMES individually and marks are allotted. Following assessment methodologies are used.  A. Written Assessment (Multiple Choice Questions) B. Practical Assessment C. Viva Voce Assessment  The assessment results are backed by following evidence. 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. 3. The assessor assigns roll number. 4. The assessor takes photograph of all the students along with the assessor standing in the middle and with the centre name/banner at the back as evidence.

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**NSQF QUALIFICATION FILE**Approved in 22nd NSQC – NCVET, Dated: 25<sup>th</sup> August, 2022**ASSESSMENT EVIDENCE**

Complete the grid for each component of NOS, assessment unit or other component as listed in "Formal structure of the qualification" in the summary.

**24. Title of Unit/Component:**

Outcomes to be assessed/NOSs to be assessed	Assessment criteria for the outcome
1. Getting Knowledge of Computer Fundamental and office automation software	Learn basic concepts of Computer Fundamental
	Identify different concepts of Operating System and its functions
	Take necessary action how to use Office Automation Software
2. Explain Concepts of Financial Accounting	Prepare and Practice Financial Accounting
	Prepare and Practice Advance Financial Accounting
3. To familiarize with Preparation of Account Books Using Accounting Packages	Prepare Account Books Through Accounting Package
	Prepare Account Books Through Advance Accounting Package
4. Develop Concept of Desktop Publishing Softwares	Execute Advance Skills on Page Maker
	Execute Advance Skills on Photo Shop and Coral Draw

Means of assessment 1				
Sl No	Examination Pattern	Modules Covered	Duration in Minutes	Maximum Marks

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1	Theory Paper – 1: Computer & Financial Accounting Fundamentals	1-2	90	100
2	Theory Paper – 2: Desktop Publishing and Accounting	3-4	90	100
3	Practical -1: Computer Application Accounting and Publishing	All modules	120	60
4	Internal Assessment	All modules	-	20
5	Assignment	All modules	-	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	Fail
Marks Range (in %)	≥85%	≥75% and <85%	≥65% and <75%	≥55% and <65%	≥40% and <55%	<40%

3. Theory examination would be conducted online and the paper comprise of MCQ and each question will carry 1 marks.
4. Practical examination/Internal Assessment/ Project/Presentation/Assignment would be evaluated internally.
5. Major Project/Dissertation would be evaluated preferably by External / Subject Expert including NIELIT Officials.
6. Candidate may apply for re-examination within the validity of registration.
7. The examinations would be conducted in English Language only.

\*Assessment for the Qualification will be conducted as per the guidelines as applicable from time to time.

**SECTION 2****25.EVIDENCE OF LEVEL**

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# NSQF QUALIFICATION FILE

Approved in 22nd NSQC – NCVET, Dated: 25<sup>th</sup> August, 2022

## OPTION A

Title/Name of qualification/component: Certified Computer Application Accounting and Publishing Assistant Level: 3			
NSQF Domain	Outcomes of the Qualification/Component	How the outcome relates to the NSQF level descriptors	NSQF Level
Process Required	Individual after acquiring the knowledge of Computer fundamental and office automation software is able to manage all office work through computer. Individual After acquiring skill of Financial Accounting and Accounting Packages is able to prepare account books	The mentioned activities are very routine and repetitive in nature and the scope of the same is very limited in context of the occupation	3
Professional Knowledge	The candidate should have the knowledge of all the topics given in the curriculum in terms of the concept as well as its practical implementation. Acquainted with common software tools and process. Understand the context of work and trade at basic level. Familiar with local specific profession and basic numeracy with literacy skills	The job holder understands the basic facts, process and materials involved in his job role like tools required, equipment etc.	3
Professional Skill	Handling of appropriate software tools. Take adequate steps. Posses soft skills required to deal with profession efficiently	Limited service skills used in limited context; select and apply tools; assist in professional works with no variables; differentiate good and bad quality	3
Core Skill	Individual should have strong	Receive and transmit written and oral messages,	3

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# **NSQF QUALIFICATION FILE**

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	technical, analytical and problem solving, skills. For updating job knowledge by researching latest enhancements in the technology and software products. Can demonstrate routine, basic operating tasks independently	basic arithmetic, personal financing, understanding of social, political, and religious diversity, hygiene and environment.	
<b>Responsibility</b>	Office Assistants and Technical Assistants are able to deliver services to any corporate offices as per their requirements Desktop Publisher are able to work with any advertising firm OR start their own business Account Assistants are able to work in account and finance department of any requirements. After acquiring skill of Desktop Publishing Softwares, individual is able to prepare and design pamphlet brochures.	No responsibility; works under instruction and close supervision.	<b>3</b>

## **SECTION 3**

### **EVIDENCE OF NEED**

<b>26</b>	What evidence is there that the qualification is needed? What is the estimated uptake of this qualification and what is the basis of this estimate? Need of the Qualification and industry relevance
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#### NSQF QUALIFICATION FILE

Approved in 22nd NSQC – NCVET, Dated: 25<sup>th</sup> August, 2022

	<p>The IT services and business process management (IT-BPM) industry is on a positive hiring trajectory, and is expected to add 375,000 jobs to reach a head count of 4.85 million in financial year 2022, a report by <b>TeamLease Digital</b>, the specialized staffing division of TeamLease Services has found. The industry is on track to reach 10 million workforce in the next five years, with significant increase in contract hiring, the report found.</p> <p>The rise in hiring in IT-BPM has been helped by increased investments in the sector and rapid adoption of technology by enterprises.</p> <p><b>Estimated uptake:</b></p> <p>30 students / Batch</p>
27	<p><b>Recommendation from the concerned Line Ministry of the Government/Regulatory Body. To be supported by documentary evidences</b></p> <p>NA</p>
28	<p><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></p> <p>As the understanding and adoption models of QPs evolve in the industry and across its sub-sectors, we foresee consolidation of qualification packs as a natural progression. The Qualification does not exist as per information available in the public domain.</p>
29	<p><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></p> <p>The Qualification is to be monitored and reviewed every three years. The following data will be used</p> <ol style="list-style-type: none"><li>1. Results of assessments</li><li>2. Employer feedback will be sought post-placement</li><li>3. Student feedbacks</li></ol>

#### SECTION 4

#### EVIDENCE OF PROGRESSION

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**NSQF QUALIFICATION FILE**

Approved in 22nd NSQC – NCVET, Dated: 25<sup>th</sup> August, 2022

30	<p>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?</p> <p>This qualification has both technical and analytic skills and can be linked to any qualification higher than this one, existing or to come.</p>
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## **Annexure –VIII**

(NSQF Course Qualification File Details)

**Course Name: Certified Data Entry and Office Assistant (Upskilling)**

Also available at:-

<https://nqr.gov.in/qualifications/3407>

NCVET Code

2022/ITES/NIELIT/06337

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

**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**

- |                                 |   |  |
|---------------------------------|---|--|
| 1) Name                         | : | Ms. Kanchan Rani   |
| Position in the organisation    | : | Joint Director (Systems)   |
| Address if different from above | : | same as above  |
| Tel number(s)                   | : | 011-23644849, 23644149   |
| E-mail address                  | : | <a href="mailto:kanchan.rani@nielit.gov.in">kanchan.rani@nielit.gov.in</a> |
| 2) Name                         | : | Mr. Ankur Pruthi   |
| Position in the organisation    | : | Senior Technical Officer   |
| Address if different from above | : | same as above  |
| Tel number(s)                   | : | 011-23644849, 23644149   |
| E-mail address                  | : | <a href="mailto:ankurpruthi@nielit.gov.in">ankurpruthi@nielit.gov.in</a>   |

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

1. Annexure I : Model Curriculum
2. Annexure II : Evidence of need

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# NSQF QUALIFICATION FILE

Approved in 22nd NSQC – NCVET, Dated: 25<sup>th</sup> August, 2022.

## SUMMARY

1	Qualification Title	Certified Data Entry and Office Assistant (Upskilling)
2	Qualification Code, if any	-
3	NCO code and occupation	4132.0401
4	Nature and purpose of the qualification (Please specify whether qualification is short term or long term)	<p><b>Nature:</b></p> <ul style="list-style-type: none"> <li>◆ Certificate Course which will help in employment.</li> </ul> <p><b>Purpose:</b></p> <ul style="list-style-type: none"> <li>◆ To get unemployed youth in work.</li> <li>◆ To upgrade the skills of people.</li> </ul>
5	Body/bodies which will award the qualification	National Institute of Electronics and Information Technology, NIELIT Bhawan, Plot No 3, PSP Pocket, Sector-8, Dwarka, New Delhi 110077
6	Body which will accredit providers to offer courses leading to the qualification	NIELIT
7	Whether accreditation/affiliation norms are already in place or not, if applicable (if yes, attach a copy)	Yes. Available at the link: <a href="https://www.nielit.gov.in">https://www.nielit.gov.in</a>
8	Occupation(s) to which the qualification gives access	Data Entry Operator, Technical Assistant, Computer Operator
9	Job description of the occupation	A person who completed Certified Data Entry and Office Assistant (Upskilling) can apply for Data Entry for Software Execution roles and also perform Noting & Drafting Assistance, EDP Assistance
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 3

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# NSQF QUALIFICATION FILE

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13	Anticipated volume of training/learning required to complete the qualification	Total: 210 Theory: 60 Practical: 90 OJT: 30 ES: 30			
14	Indicative list of training tools required to deliver this qualification	Typing Master, Libre Office, GUI based Operating System			
15	Entry requirements and/or recommendations and minimum age	10 <sup>th</sup> Pass Or 8th Class Pass and pursuing continuous regular schooling Or 8th Class Pass + 2 Years ITI in relevant field Or 8th Class Pass + 1 Year of Experience in relevant field Or NSQF Level 2 with 1 Year of Experience in relevant field			
16	Progression from the qualification (Please show Professional and academic progression)	<b>Professional Progression:</b> Data Entry Operator-> Administrative Assistant->Office Assistant-> Executive Assistant  <b>Academics Progression:</b>  O-Level 'IT' -> A-Level 'IT' -> B- Level 'IT'			
17	Arrangements for the Recognition of Prior learning (RPL)	The Candidates who will undergo training shall only be assessed.			
18	International comparability where known	N/A			
19	Date Planned to review the qualification	25/08/2025			
20	Formal structure of the qualification				
Mandatory Components					
S no	Title of component and identification code/ NOSs/ Learning outcomes	Duration (Theory) in Hours	Duration (Practical) in Hours	Level	
1.	Introduction to Computer	After completing this unit, Candidate should know	2	3	3

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**NSQF QUALIFICATION FILE**

Approved in 22nd NSQC – NCVET, Dated: 25<sup>th</sup> August, 2022

		basic architecture of computer and the difference between hardware and software and should know about the basics of data representation and basic idea about programming knowledge.			
2.	Introduction to GUI Based Operating System	After completing this unit Candidate should know basics of operating systems and the User interface of operating system. Candidate should also know how to change the settings of operating system and should be able to do File and directory management.	2	3	3
3.	Elements of Word Processing	After completing this unit Candidate should be able to create and format documents.	10	10	3
4.	Spreadsheets	Candidate should know the basics of spreadsheets and should be able to do cell manipulation and should also know basics of Function and Charts.	10	10	3
5.	Introduction to Internet, WWW and web browsers	Candidate should know the basics of computer networks and how to use web browsers. Candidates should also know the internet access techniques and should be aware about the various services of internet.	10	10	3
6.	Communication and Collaboration	Candidate should know basics Emails and should know how to create and send Email and should know about the advance Email features.	3	2	3
7.	Application of presentations	Candidate should know how to create presentation and apply various settings on it.	10	10	3

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# NSQF QUALIFICATION FILE

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8.	Application of Digital Financial Services	Candidate should be aware about various digital financial services	3	2	3
10.	Data Entry / Typing Test (in English)	Candidate should be able to meet the minimum typing speed Typing with criteria of a minimum typing speed 35 wpm on computer or 10500 key depressions per hour.	10	40	3
<b>Sub Total (A)</b>			60	90	
11.	Project / OJT (B)	Learner will carry out a Project using the knowledge learned in this course. Or, Learner will experience a working environment where records and files maintenance, system status checking etc. are done.	30		3
12.	Employability Skill(C)	Learner will be able to know the various qualities required for employability.	30		3
<b>Total (A+B+C)</b>			210		

Detailed curriculum attached at Annexure I

## SECTION 1 ASSESSMENT

21	<p><b>Body/Bodies which will carry out assessment:</b></p> <p>National Institute of Electronics and Information Technology NIELIT Bhawan, PSP Pocket, Plot No. 3, Sector 8, Dwarka, New Delhi - 110077</p>
22	<p><b>How will RPL assessment be managed and who will carry it out?</b></p> <p>The Candidates who will undergo training shall only be assessed.</p>

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#### NSQF QUALIFICATION FILE

Approved in 22nd NSQC – NCVET, Dated: 25<sup>th</sup> August, 2022

23	<p><b>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.</b></p> <p>The emphasis is on practical demonstration of skills &amp; knowledge based on the performance criteria. Student is required to pass in all OUTCOMES individually and marks are allotted.</p> <p>Following assessment methodologies are used.</p> <p>The Following assessment methodologies are used.</p> <ul style="list-style-type: none"><li>A. Theory Assessment (MCQ Type - Online Exam)</li><li>B. Practical Assessment &amp; Viva</li><li>C. English Typing Test</li><li>D. Internal Assessment</li><li>E. Assignment</li></ul> <p>The assessment results are backed by following evidences.</p> <ul style="list-style-type: none"><li>1. The assessor collects a copy of the attendance for the training done. The attendance sheets are signed and stamped by the Examination Superintendent appointed by Regional Centre.</li><li>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.</li></ul> <p><b>About Question Paper Pattern:</b></p> <p>Examination will consist of Five sections</p> <ul style="list-style-type: none"><li>1. Theory (Online MCQ Test) -Theory exam will be a 100 Marks consisting of Multiple Choice Questions conducted as a centralised Online Exam through Remote Proctor by NIELIT HQ.</li><li>2. Practical - Practical exam will be of 60 Marks</li><li>3. Typing test- Typing in English with criteria of a minimum typing speed 35 wpm on computer or 10500 key depressions per hour.</li><li>4. Internal Assessment- Internal Assessment will be of 20 Marks conducted by Centre Only.</li><li>5. Assignment-Assignment will be submitted by candidates containing 20 Marks.</li></ul>
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#### ASSESSMENT EVIDENCE

Complete a grid for each component as listed in "Formal structure of the qualification" in the Summary.

*NOTE: this grid can be replaced by any part of the qualification documentation which shows the same information – ie Learning Outcomes to be assessed, assessment criteria and the means of assessment.*

**24. Assessment evidences Title of Component:** Certified Data Entry and Office Assistant (Upskilling)

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**NSQF QUALIFICATION FILE**

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Outcomes to be assessed/NOSs to be assessed	Assessment criteria for the outcome
Introduction to Computer	Various parameters like familiarity with the computers, handling of computer. Interfacing basic parts of computer.
Introduction to GUI Based Operating System	Basics of Operating System Basics of popular operating system (LINUX, WINDOWS) The User Interface , Task Bar , Icons, Start Menu, Running an Application To Add Or Remove A Windows Component
Elements of Word Processing	Word Processing Basics, Menu Bar Using The Icons Save and Save as and Page Setup, Print Preview Text Creation and manipulation and Formatting the Text Table Manipulation
Spreadsheets	Elements of Electronic Spread Sheet, Addressing of Cells, Printing of Spread Sheet, Manipulation of Cells Creating Text, Number and Date Series Editing Worksheet Data Inserting and Deleting Rows, Column Using Function and Charts and Formulas
Introduction to Internet, WWW and web browsers	Anatomy of Internet, ARPANET and Internet history of the World Wide Web. Basic Internet terminology, Net etiquette.
Communication and Collaboration	Email drafting and forwarding
Application of presentations	Creating designing Presentations as per the requirement of Target Audience, Transition and Animation and various settings on it.
Application of Digital Financial Services	Why Savings are needed Drawbacks of keeping Cash at home Banking Products, Documents for Opening Accounts Banking Service Delivery Channels, Various Schemes , Bank on your mobile
Soft Skills	Importance of communication, Types of communication – Verbal/ Non-verbal, Barriers of Communication Interview dress code, controlling nerves, positive visualization, creating an impression, Selling yourself at the interview, Mock interview

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# NSQF QUALIFICATION FILE

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	Importance of etiquette, Professional etiquette, Social etiquette Unit, Corporate Culture, Professional ethics, Mutual respect, Time management  Report writing, CV writing, Business letters for general/professional purposes			
Data Entry / Typing Test (in English)	The minimum typing speed Typing with criteria of a minimum typing speed 35 wpm on computer or 10500 key depressions per hour			
Project / OJT	Preparation of a project report based the theoretical knowledge and practical skills acquired			
Employability Skill	Introduction, Career Development & Goal setting, Becoming a Professional in the 21 <sup>st</sup> century, Basic English skills, Communication Skills, Financial and Legal literacy, Entrepreneurship, Diversity & Inclusion, Constitutional value – Citizenship			
<b>Means of Assessment</b>				
A. Theory Assessment (MCQ Type - Online Exam) B. Practical Assessment & Viva C. English Typing Test D. Internal Assessment E. Assignment				
<b>Sl No</b>	<b>Examination Pattern</b>	<b>Modules Covered</b>	<b>Duration in Minutes</b>	<b>Maximum Marks</b>
1	Theory Paper: Data Entry and Office Automation	Module 1 to 9	90	100
2	Practical: Data Entry and Office Automation	Module 1 to 9	120	60
3	Internal Assessment	Module 1 to 12	-	20
4	Assignment	Module 1 to 12	-	20
5	Typing	Module 10	10	Typing with criteria of a minimum typing speed 35 wpm on computer or 10500 key depressions per hour.

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**NSQF QUALIFICATION FILE**Approved in 22nd NSQC – NCVET, Dated: 25<sup>th</sup> August, 2022

Total			200
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**Note:**

1. Pass percentage would be 50% marks in each component, with an aggregate pass percentage of 50% and above.
2. Following Grading Scheme (on the basis of Total marks) will be followed:

Grade	S	A	B	C	D
Marks	$\geq 85\%$	$\geq 75\%$ and $< 85\%$	$\geq 65\%$ and $< 75\%$	$\geq 55\%$ and $< 65\%$	$\geq 50\%$ and $< 55\%$
Range (in %)					

1. Theory examination would be conducted online and the paper comprises MCQ and each question will carry 1 mark.
2. Practical examination/Internal Assessment/ Project/Presentation/Assignment would be evaluated internally.
3. The OJT and Employability Skills will be assessed by concerned NIELIT Centre itself.
4. For OJT, a NIELIT Official will be assigned as supervisor.
5. Candidates may apply for re-examination within the validity of registration.
6. The examinations would be conducted in English Language only.

\*Assessment for the Qualification will be conducted as per the guidelines as applicable from time to time.

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## NSQF QUALIFICATION FILE

### SECTION 2

#### EVIDENCE OF LEVEL

Title/ Name of Qualification: Certified Data Entry and Office Assistant (Upskilling) Level: 03			
NSQF Domain	Outcome of the Qualification / Component	How the outcomes relates to NSQF Level descriptors	NSQF Level
Process	After Completing this qualification, the candidate will be able to perform data entry for any software, noting, drafting and any documentation and processing the data, calculations and charts creations for any financial sheets, can make the presentations etc. He/she can also use internet services, send/receive emails and can do record keeping.	Person may carry out as data entry operator or Lab assistant or Junior assistant	3
Professional Knowledge		Learning Office automation and typing it will help the students to get employment opportunity in computer related fields.	3
Professional Skill		Candidate can develop their computer skills based on practical knowledge.	3
Core Skill		Candidate will be learning effective communications which will make them smart in communicating with various companies and people.	3
Responsibility	He/She can do any DTP work as well.	Candidate can perform well under supervision of team lead.	3

### SECTION 3

#### EVIDENCE OF NEED

26 What evidence is there that the qualification is needed? What is the estimated uptake of this qualification and what is the basis of this estimate?	
Need of the Qualification	<p>This course has been designed to meet the growing demand for data entry operators in the market.</p> <p>A computer Data Entry operator are in high demand in all sectors of the market. They are used at shops to create a database for all the items with their serial numbers, price and quantity ratios. At schools, computer operators are required to sit behind the desk and manage the computer database for the school, list of all the students, their details, fee payment, enrolment details and all other activities of students are recorded in the computer.</p> <p>An efficient computer operator is needed to handle such large data. In offices, computer operator takes care of the back door operating and keeps employees' information in the computer.</p>
Estimated uptake	Estimated uptake is 30 students / Batch with 6 Batches / Year and on the basis of Facilities and Infrastructure in training centres

#### NSQF QUALIFICATION FILE

27	<p>Recommendation from the concerned Line Ministry of the Government/Regulatory Body. To be supported by documentary evidences</p> <p>NA</p>
28	<p>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</p> <p>The Qualification does not exist as per information available in the public domain.</p>
29	<p>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</p> <p>The Qualification is to be monitored and reviewed every three years. The following criterions shall be used</p> <ul style="list-style-type: none"> <li>❖ Results of assessments</li> <li>❖ Employer feedback regarding student skill after conducting a placement drive</li> <li>❖ Alumni survey</li> </ul>

#### SECTION 4

##### EVIDENCE OF PROGRESSION

30	<p>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?</p> <p><i>Show the career map here to reflect the clear progression</i></p> <p>This qualification comprises both technical and analytical skills and can be linked to any qualification higher than this one such as NIELIT O Level, existing or to come.</p>
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## **Annexure -IX**

(NSQF Course Qualification File Details)

**Course Name: O level (IT)**

Also available at:-

<https://nqr.gov.in/qualifications/3063>

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

**Name and address of submitting body:**

National Institute of Electronics and Information Technology (NIELIT)  
NIELIT Bhawan, Plot No 3, PSP Pocket, Institutional Area  
Sector-8, Dwarka, South West Delhi, Delhi-110077

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

**Name:** Shri Rajneesh Asthana

**Position in the organisation:** Joint Director (Academics)

**Address if different from above:** Same as above

**Tel number(s):** 011 25308300 Ext 412

**E-mail address:** nsqf@nielit.gov.in

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

- Annexure I** – Detailed Curriculum
- (A) Syllabus and Lesson Plan
  - (B) Indicative list of hardware and software to conduct the training
  - (C) Trainer's qualification
  - (D) Practical & Project guidelines
  - (E) Credit system
  - (F) Sample Practical Assignments
  - (G) Sample question papers
- Annexure II** – List of Recognitions
- Annexure III** – ISO Certificate
- Annexure IV** – International Recognitions
- Annexure V** – Accreditation Norms
- Annexure VI** – Multiple entry exit channel
- Annexure VII** – Constitution of Committee
- (i) Academic Advisory Committee
  - (ii) Examination Board
- Annexure VIII** – Registered and certified candidates of last three years.

NSQC Approved

NSQF QUALIFICATION FILE  
Approved in 19th NSQC Meeting – NCVET – 26/05/2022

**SUMMARY**

1	Qualification Title	O Level 'IT'
2	Qualification Code, if any	NIELIT/IT/L5/003
3	NCO code and occupation	2166.0300, 2511.0100, 2512.0100
4	Nature and purpose of the qualification (Please specify whether qualification is short term or long term)	IT/ITES Skilling Course with the sole purpose to generate skilled manpower in the area of Information Technology (IT) at the national level by utilizing the facilities and infrastructure available with the institutions/organizations in the non-formal sector.
5	Body/bodies which will award the qualification	Examination Wing, NIELIT Headquarters, National Institute of Electronics and Information Technology (NIELIT) NIELIT Bhawan, Plot No 3, PSP Pocket, Institutional Area, Sector-8, Dwarka, South West Delhi, Delhi -110077
6	Body which will accredit providers to offer courses leading to the qualification	NIELIT Headquarters, National Institute of Electronics and Information Technology (NIELIT) NIELIT Bhawan, Plot No 3, PSP Pocket, Institutional Area, Sector-8, Dwarka, South West Delhi, Delhi -110077
7	Whether accreditation/ affiliation norms are already in place or not, if applicable (if yes, attach a copy)	Yes, Given in Annexure V
8	Occupation(s) to which the qualification gives access	i. User Interface (UI) Designer ii. Web Designer iii. Web Publication Assistant iv. Office Automation Assistant v. IoT Application Integrator

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**NSQF QUALIFICATION FILE**

Approved in 19th NSQC Meeting – NCVET – 26/05/2022

9	<b>Job description of the occupation</b>	<p>After undergoing this qualification, candidate will be able to perform different job roles. The job roles are User Interface (UI) designer, Web Designer, Web Publication Assistant, Office Automation Assistant and IoT Application Integrator.</p> <p>The job of a UI designer is to make software interfaces interactive in terms of looks, style and customer's experience in accessing website/applications.</p> <p>The job of a Web Designer is to design the layout of website and coding. Web Designer further focuses on graphics and contents part of web site and its flow.</p> <p>The responsibility of a Web Publication Assistant is to upload images, contents, videos and other web site related material on web site. Before uploading material, a Web Publication Assistant ensures that data is correct in all respects.</p> <p>The responsibility of Office Automation Assistant is to format and edit any type of document using tools. The person is also responsible for maintaining records digitally.</p> <p>IoT Application Integrator ensures that all the IoT Devices, IoT Data, IoT Platforms and applications work together in an organization in order to meet business objectives.</p>
10	<b>Licensing requirements</b>	-NA-
11	<b>Statutory and Regulatory requirement of the relevant sector (documentary evidence to be provided)</b>	-NA-
12	<b>Level of the qualification in the NSQF</b>	4
13	<b>Anticipated volume of training/learning required to complete the qualification</b>	<p>540 hrs learning hours</p> <p>Including 60 hours of Project and the minimum period to cover contents is one year</p>

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Approved in 19th NSQC Meeting – NCVET – 26/05/2022

		for candidates undergoing 'O' Level after 10+2 and six months for candidates undergoing 'O' Level after Graduation.
14	Indicative list of training tools required to deliver this qualification	Given in Annexure I (B)
15	Entry requirements and/or recommendations and minimum age	<p><b>1. Students registered through O-Level Accredited Institutes:</b></p> <p>12<sup>th</sup> Or</p> <p>ITI Certificate (Two Years) after class 10 Or</p> <p>ITI Certificate (One Years) after class 10 with one year of experience post qualification. Or</p> <p>Successful completion of the second year of a Government recognized polytechnic engineering diploma course after class 10. Training of 'O' Level course concurrently during the third year of the said 3 years Polytechnic engineering diploma course.</p> <p><i>The certificate of 'O' level will be awarded only after successful completion of the polytechnic engineering diploma.</i> Or</p> <p>10<sup>th</sup> pass and certification in the immediate previous NSQF Level Qualification in relevant field. Or</p> <p>Relevant Qualification of immediate previous NSQF Level with 2 Years of experience.</p> <p><b>2. Direct Applicants</b> As mentioned at Point 1 above with an additional of two-years of relevant experience.</p>

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		<p>Relevant experience connotes job experience in IT, including teaching in a recognized institution as a faculty member, excludes coaching.</p> <p><b>3. Students from Central/State Education Boards/University/ Recognized Schools authorized for conducting "O" Level Course:</b></p> <p>Students continuing regular schooling from class 9<sup>th</sup> and onward. Such students have to concurrently undergo training of "O" Level course in their school itself (or at any Accredited NIELIT Institute if the facility is not available at School) with regular classes till class 12<sup>th</sup> or other qualifications after Class 10<sup>th</sup> as detailed in point 1 above. The certificate of 'O' level will be awarded only after successful completion of qualifications as detailed in point 1 above i.e. the minimum qualification for attaining "O" Level qualification as an institute candidate and completing all requirements of "O" Level qualification.</p> <p>If candidate's dropout from regular classes, then the candidates has to reregister fulfilling criteria as per Point 1 or Point 2 above. Exemption in the modules passed will be given as applicable, to the eligible candidate as per the exemption policy of NIELIT.</p> <p>Age: No Bar</p>
16	Progression from the qualification (Please show Professional and academic progression)	<p><b>Academic:</b> O level-&gt;A Level -&gt;B level</p> <p><b>Professional:</b> User Interface Designer-&gt; UX Designer -&gt;Graphics Designer</p> <p>Web Designer-&gt;Web Developer-&gt; Front-end Developer</p> <p>Web Publication Assistant-&gt; Sr Web Publication Assistant-&gt; Sr. Web Designer</p>

NSQC Approved:



NSQF QUALIFICATION FILE

Approved in 19th NSQC Meeting – NCVET – 26/05/2022

		Office Automation Assistant ->Senior Assistant ->Section Manager  IoT Application Integrator-> IoT Support Engineer-> IoT Application Developer		
17	Arrangements for the Recognition of Prior learning (RPL)	Yes, Given at Sr. no 15		
18	International comparability Where known (research Evidence to be provided)	Yes, Given in Annexure IV 'O' Level course of NIELIT is equivalent to TQC Certification of Computer skill Foundation (CSF) Standards, Taiwan.		
19	Date of planned review of the Qualification	5 years		
20	Formal structure of the Qualification			
	Mandatory components			
	Title of Component and Identification Code/NOSs/Learning outcomes	Estimated size (learning hours)		Level
		Theory Learning Hours	Practical Learning Hours	
	M1-R5: Information Technology Tools and Network Basics	48	72	4
	M2-R5: Web Designing & Publishing	48	72	4
	M3-R5: Programming and Problem Solving through Python	48	72	4
	M4-R5: Internet of Things and its Applications	48	72	4
	PJ1-R5: Project	60		4
	Sub Total (A)	540		
	Optional Components			
	Title of Component and Identification Code/NOSs/Learning outcomes	Estimated size (learning hours)		Level
	Sub Total (B)			
	Total (A+B)	540		

NSQC Approved:

**SECTION 1**  
**ASSESSMENT**

2 1	<p><b>Body/Bodies which will carry out assessment:</b></p> <p><b>Examination Wing, NIELIT Headquarters,</b> National Institute of Electronics and Information Technology (NIELIT) NIELIT Bhawan, Plot No 3, PSP Pocket, Institutional Area, Sector-8, Dwarka, South West Delhi -110077</p>
2 2	<p><b>How will RPL assessment be managed and who will carry it out?</b></p> <p>Details provided at Sr. No. 15.</p>
2 3	<p><b>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.</b></p> <p>23.1 Classification of examination: The examination of each paper/module will be comprised of theory and practical examinations.</p> <p>(a) Papers/ Modules in O Level and having equivalent modules/papers in A/B Level: 04 nos.</p> <p>(b) Theory : 04 examinations</p> <p>(c) Practical : 04 examinations</p> <p>(d) Project : 01 no.</p> <p>23.2 Mode of Examination – Theory: Dual Mode Online / OMR Based.</p> <p>23.3 Mode of Examination – Practical: Practical examination of three hours duration and 100 marks would be conducted. The emphasis is on the practical demonstration of skills &amp; knowledge based on the performance criteria. Practical exam carrying 100 marks, out of which 80 marks shall be for the Practical/Hands-on and 20 marks for Viva Voce.</p> <p>The Practical examination of the particular module will be based on the syllabi based on the corresponding M1-R5, M2- R5, M3-R5 and M4-R5 modules of 'O' Level course.</p> <p>Laboratory/ Practical work may be conducted at Institutions / organizations, which are running the course along with other facilities having sufficient resources to conduct practical examinations.</p>

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Efforts shall be made to make practical examinations completely online and remote proctor based to avoid dependency on the practical examination centres.

23.4 Mode of submission of Project: The Project is to be carried out after completing all the training of the modules by the student. The project is to be done under guidance and support of faculty and management of the respective Institute/ Organization). Project Completion Certificate is mandatory to qualify 'O' Level-IT.

23.5 The question paper for Theory examination would be MCQ based.

23.6 The examination pattern for 01 module/paper is tabulated below:

Examination	Duration	Mode of Examination	No. of Questions	Pattern of Question	Max. Marks	Min. Pass Marks	Weightage in Final Total per paper/Module
Theory	2 Hours	Online / OMR	100	MCQ	100	33%	60%
Practical & Viva	3 Hours	Lab Session / Online	3/4	Demonstration Viva	80 20	33%	40%
Minimum Pass Percentage is 50% of total weightage (Theory + Practical) in each module							

23.7 Minimum and Maximum Marks Matrix is as under:

	Title of Component and Identification	Theory Marks		Practical Marks		Module Marks (60% of Theory Marks+ 40% of Practical Marks)	
		Min	Max	Min	Max	Min	Max
1	<b>M1-R5:</b> Information Technology Tools and Network Basics	33	100	33	100	50	100
2	<b>M2-R5:</b> Web Designing & Publishing	33	100	33	100	50	100
3	<b>M3-R5:</b> Programming and	33	100	33	100	50	100

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	Problem Solving through Python						
4	<b>M4-R5:</b> Internet of Things and its Applications	33	100	33	100	50	100
6	<b>PJ1-R5:</b> Project	Project completion certificate is required to qualify O' Level-IT					
		<b>Maximum Marks in the level</b> 400					

And the qualification matrix for 01 module/paper is:

Theory	Practical	Result	Re-appear
Pass (Qualifying 33% criteria)	Pass (Qualifying 33% criteria)	Pass (Qualifying 50% criteria)	NA
Pass (Qualifying 33% criteria)	Pass (Qualifying 33% criteria)	Fail (Not qualifying 50% criteria)	Need to re-appear in both theory and practical.
Pass (Qualifying 33% criteria)	Fail (Not qualifying 33% criteria)	Qualifying 50% criteria, but Fail	-do-
Fail (Not qualifying 33% criteria)	Pass (Qualifying 33% criteria)	Qualifying 50% criteria, but Fail	-do-
Fail (Not qualifying 33% criteria)	Fail (Not qualifying 33% criteria)	Fail	-do-
Absent (Zero marks would be awarded)	Pass / Fail (as per 33% qualifying criteria)	Fail	-do-
Pass/Fail (as per 33% qualifying criteria)	Absent (Zero marks would be awarded)	Fail	-do-

23.8 There would be no negative marking in theory examination.

23.9 The marks will be translated into grades, while communicating results to the candidates. No rounding takes place in the calculation of grades. The gradation structure is as given-

Pass Percentage	Grade
Failed (<50)	F
>= 50% to < 55%	D
>= 55% to < 65%	C
>= 65% to < 75%	B
>= 75% to < 85%	A

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>=85%	S
<p>23.10 The candidates who have passed practical examination in the previous pattern of examination whereas yet to pass all the required theory modules/papers, would require to take the examination of remaining modules/papers in the new pattern. The final grade of the candidates would be calculated sans practical marks, and certificate would also be issued sans independent practical examination grades, so as to maintain the uniform certificate issuance.</p> <p>23.11 The candidates who have already passed in the previous pattern of examination all the four theory modules/ papers, but yet to pass the practical examination would be given two chances to pass the practical examination (July 2022 and January 2023 Examination Cycles).</p> <p>23.12 The candidates would be required to apply for the examinations at the online portal as per the existing procedure.</p> <p>23.13 The candidates would be issued separate Admit Cards for appearing in Theory and Practical Examinations.</p> <p>23.14 The candidates would be issued other examination related instructions/guidelines along with the Admit Card.</p>	

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## ASSESSMENT EVIDENCE

### 24. Assessment evidences -

#### (i) M1-R5: Information Technology Tools and Network Basics

Outcomes to be assessed/NOSs to be assessed	Assessment criteria for the outcome
Introduction to Computer-	<ul style="list-style-type: none"> <li>Identify computers, IT gadgets</li> <li>Their evolution and applications.</li> <li>Identify various input, output and hardware components of a computer along with storage devices.</li> <li>familiar with various types of software, utilities used for computer and mobile apps.</li> </ul>
Introduction to Operating System	<ul style="list-style-type: none"> <li>Use of Operating System for both desktop and mobile devices.</li> <li>Identify various desktop screen components and modify various properties, date, time etc.</li> <li>Add and remove new program and features, manage files and folders.</li> <li>Well versed with printing</li> <li>Various types of file extensions.</li> </ul>
Word Processing	<ul style="list-style-type: none"> <li>Usage of Word Processing, details of word processing screen.</li> <li>Opening, saving and printing a document including pdf files.</li> <li>Document creation, formatting of text, paragraph and whole document.</li> <li>Inserting Header and Footer on the document.</li> <li>Finding text on a word document and correcting spellings.</li> <li>Inserting and manipulating tables, enhancing table using borders and shading features.</li> <li>Preparing copies of a document labels etc. for sending various recipients using Mail Merge.</li> </ul>
Spreadsheet	<ul style="list-style-type: none"> <li>Use of Spreadsheet Processing and details of Spreadsheet screen.</li> <li>Opening, saving and printing a Spreadsheet.</li> <li>Spreadsheet creation, inserting and editing data in cells, sorting and filtering of data.</li> <li>Inserting and deleting rows/columns.</li> <li>Use of basic formulas and functions.</li> <li>Preparation of chart to represent the information in a pictorial form.</li> </ul>

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<b>Presentation</b>	<ul style="list-style-type: none"> <li>• Create Presentation</li> <li>• Opening/saving a presentation and printing of slides and handouts.</li> <li>• Manipulating slides to enhance the look of the slides as well as whole presentation by inserting a picture, objects, multimedia formatting etc.</li> <li>• Running a slide show with various transitions.</li> </ul>
<b>Introduction to Internet and WWW</b>	<ul style="list-style-type: none"> <li>• Test of knowledge of various types of networks and topologies</li> <li>• Use of the Internet and various browsers available to access the Internet.</li> <li>• Connect to the Internet using various modes of connections/devices available.</li> </ul>
<b>E-mail, Social Networking and e-Governance Services</b>	<ul style="list-style-type: none"> <li>• Creation of an email account, compose an email, reply an email and send the email along with attachments</li> <li>• Use of Social Networking sites, Instant Messaging and Blogs.</li> <li>• Get familiar with e-Governance Services,</li> <li>• e-Commerce and Mobile Apps</li> </ul>
<b>Digital Financial Tools and Applications</b>	<ul style="list-style-type: none"> <li>• Use of Digital Financial Tools.</li> <li>• Use of Internet Banking Modes.</li> <li>• Use of the Digital Locker and will be able to store documents in Digital Locker.</li> </ul>
<b>Overview of Future Skills &amp; Cyber Security</b>	<ul style="list-style-type: none"> <li>• Latest trends and technologies in upcoming fields in IECT.</li> <li>• Need of Cyber Security and will be able to secure their PC and Mobile devices by using basic security features.</li> </ul>
<b>Means of assessment</b>	Assessment details are given at Sr. no 23
<b>Pass/Fail</b>	Pass/Qualifying Criteria is also given at Sr. no 23.

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(ii) **M2-R5: Web Designing & Publishing**

Outcomes to be assessed/NOSs to be assessed	Assessment criteria for the outcome
Introduction to Web Design	<ul style="list-style-type: none"> <li>Types of web site.</li> <li>Role of front end and back end application.</li> <li>Concept of client-side scripting and server-side scripting</li> </ul>
Editors	<ul style="list-style-type: none"> <li>Use of different editors available for writing code.</li> <li>Working of editors.</li> </ul>
HTML Basics	<ul style="list-style-type: none"> <li>Develop static website using different HTML Controls.</li> </ul>
Cascading Style Sheets (CSS)	<ul style="list-style-type: none"> <li>Purpose of CSS.</li> <li>Role of CSS in web sites.</li> <li>Roles of effects in Web site.</li> </ul>
CSS Framework	<ul style="list-style-type: none"> <li>Use of CSS Framework to develop web site effectively.</li> </ul>
JavaScript and Angular JS	<ul style="list-style-type: none"> <li>Apply client-side scripting.</li> <li>Addition of validations and checks on forms (web pages).</li> </ul>
Photo Editor	<ul style="list-style-type: none"> <li>Editing of images and embed in web pages.</li> </ul>
Web Publishing and Browsing	<ul style="list-style-type: none"> <li>Publish the web sites.</li> </ul>
Means of assessment	Assessment details are given at Sr. no 23
Pass/Fail	Pass/Qualifying Criteria is also given at Sr. no 23.

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(iii) **M3-R5: Programming and Problem Solving through Python**

Outcomes to be assessed/NOSs to be assessed	Assessment criteria for the outcome
1. Introduction to Programming	<ul style="list-style-type: none"> <li>• Concept of Programming.</li> <li>• History and evolution of Programming.</li> </ul>
2. Algorithm and Flowcharts to solve problems	<ul style="list-style-type: none"> <li>• Purposes &amp; concepts of algorithm and flowchart.</li> <li>• Use of algorithm and flowchart to solve problem independent of language.</li> <li>• Different constructs of algorithm and flowchart.</li> </ul>
3. Introduction to Python	<ul style="list-style-type: none"> <li>• Why it one the most popular languages in the industry i.e., features of Python.</li> <li>• Structure of Python program.</li> <li>• Scope of Python.</li> </ul>
4. Operators, Expressions and Python Statements	<ul style="list-style-type: none"> <li>• Use of the basic operators and expressions available in Python in developing program.</li> <li>• Use of various Python statements like conditional constructs, looping constructs in writing Python program.</li> </ul>
5. Sequence data types	<ul style="list-style-type: none"> <li>• Work with various built-in Sequence datatypes and their use.</li> <li>• Use of mutable and immutable objects and their concepts.</li> </ul>
6. Functions	<ul style="list-style-type: none"> <li>• Apply the in-built functions available in Python in solving different problems.</li> <li>• Work with modular approach using user defined functions.</li> </ul>
7. File Processing	<ul style="list-style-type: none"> <li>• Work with files</li> <li>• Reading/ writing onto files.</li> </ul>
8. Modules	<ul style="list-style-type: none"> <li>• Concept of modules</li> <li>• Modular Programming</li> <li>• Importing</li> </ul>
9. NumPy Basics	<ul style="list-style-type: none"> <li>• Work on NumPy array manipulation to access data and subarrays and to split, reshape, join arrays etc.</li> </ul>
Means of assessment	Assessment details are given at Sr. no 23.
Pass/Fail	Pass/Qualifying Criteria is also given at Sr. no 23.

(iv) **M4-R5: Internet of Things and Its Applications**

Outcomes to be assessed/NOSs to be assessed	Assessment criteria for the outcome
1. Introduction to IoT – Applications/ Devices, Protocols and Communication Model	<ul style="list-style-type: none"> <li>• Applications, protocols, architecture, etc. of IoT</li> <li>• Characteristics of IoT devices.</li> <li>• Physical Design/Logical Design, Functional blocks of IoT and Communication Models.</li> </ul>
2.Things and Connections	<ul style="list-style-type: none"> <li>• Closed loop/ feedback loop system.</li> <li>• Use of sensors, actuators and controllers in the IoT process flow.</li> <li>• TCP/IP Versus OSI models</li> <li>• Wired and wireless connectivity</li> </ul>
3.Sensors, Actuators and Microcontrollers	<ul style="list-style-type: none"> <li>• The role of Sensors, transducers in measuring physical quantities.</li> <li>• Working and characteristics of actuators.</li> <li>• Role and use of microcontroller in building various electronic devices</li> </ul>
4.Building IoT Applications	<ul style="list-style-type: none"> <li>• Working of microcontroller and hardware prototyping Arduino platform.</li> <li>• The role of 'C' language in building IoT applications.</li> <li>• Built-in Data-type, operators' expressions</li> <li>• Conditional statements and loops.</li> <li>• Arrays, functions.</li> <li>• Digital, analog pins of Arduino.</li> <li>• Interfacing sensors, actuator.</li> <li>• Use of ArduBlock GUI tool.</li> </ul>
5. Security and Future of IoT Ecosystem	<ul style="list-style-type: none"> <li>• Need of security in IoT.</li> <li>• Various basic concept of security.</li> <li>• Security levels.</li> <li>• Need of powerful CPU for Future IoT eco system.</li> </ul>
6. Soft skills- Personality Development	<ul style="list-style-type: none"> <li>• Role of positive personality and determinants of personality.</li> <li>• Test of Communication and writing skills.</li> </ul>
Means of assessment	Assessment details are given at Sr. no 23
Pass/Fail	Pass/Qualifying Criteria is also given at Sr. no 23.

**SECTION 2**  
**25. EVIDENCE OF LEVEL**  
**OPTION A**

Title /Name of Qualification/Components: O Level 'IT'			Level: 4
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
Process	Candidate is required to install and maintain operating system, create documentation, make charts, handle database, apply formulas and functions, make presentations and web sites publishing, programming using Python, familiar with various protocols of IoT, cyber security etc.	Job that requires well developed skill, with clear choice of procedures in familiar context	4
Professional Knowledge	Candidate on the job needs to have factual knowledge of computer hardware, software, operating systems, creating documents, spreadsheets, presentations, database handling, and web designing and publishing tools, cyber security, knowledge of social networking sites, programming using Python, knowledge of internet of Things, protocols etc. and implementation of IoT.	Knowledge of facts, principles, processes and general concepts in the field of work or study	4
Professional Skills	Candidate needs to recall and demonstrate practical skill related to basic computer, internet activities and programming related to web site development, testing, designing and modifying programs related to IoT/website development in	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information	4

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	routine and repeat them until required outcomes are met. The outcomes of these test cases are recorded using appropriate rules, tools & using quality concepts through appropriate templates. Need to be competent to identify technical requirements in terms of hardware, software and other IT related devices.		
Core Skills	The candidate should possess good communication skills both verbal and written, with the required clarity in order to understand the work should have knowledge of basic arithmetic and algebraic principles, to demonstrate knowledge of the foundational mathematical concepts in computing. Candidate should be able to create and maintain effective working relationships and team environment.	Desired mathematical skill: understanding of social, political, and some skill of collecting and organizing information, communication.	4
Responsibility	They would able to develop web site or initially assist web developer. They assist in the analysis and design phase of the project and designing websites in a timely, accurate fashion and provide status/report. Candidate is independently responsible to perform all the tasks as per requirements of the job, hence is responsible for own work and learning.	Responsibility for own work and learning and some responsibility to other's works and learning.	4

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## SECTION 3

### EVIDENCE OF NEED

26	What evidence is there that the qualification is needed? What is the estimated uptake of this qualification and what is the basis of this estimate?	
	<b>Basis</b>	<b>In case of other Awarding Bodies (Institutes under Central Ministries and states departments)</b>
	Need of the qualification	This course has been designed to meet the increasing manpower requirements in computers after discussion with various ministries, MHRD etc. Recognition has been given by the Government of India to NIELIT 'O' level examination conducted by the NIELIT as equivalent to Foundation Course in IT for the purpose of employment to the posts and services under Central Government.
	Industry Relevance	Enrolment and certified details of last 3 years are attached. The job role defined for the qualification is as per the National Qualification of Occupation 2015 which is developed by Employment Directorate under the ministry of Labour and Employment in collaboration with different industry partners and as per ILO guidelines. This justifies the qualification is very much relevance for industry
	Usage of the qualification	With this qualification student will be equipped with required knowledge to develop web site/software. Participants can be employed as Web Designer/ Office Automation Assistant/IoT Support Engineer
	Estimated uptake	NIELIT is having 46 Centers of its own and 800+ Accredited Centres spread all over India and approx. 50,000 candidates per year are expected to register in this course.
27	<b>Recommendation from the concerned Line Ministry of the Government/Regulatory Body. To be supported by documentary evidences</b> This qualification is run by National Institute of Electronics & Information Technology (NIELIT). It is an Autonomous Scientific Society under the administrative control of Ministry of Electronics & Information Technology (MoE&IT), Government of India.	
28	<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>  As the understanding and adoption models of QPs evolve in the industry and across its sub-sectors, we foresee consolidation of qualification packs as a natural	

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	<p>progression. The Qualification does not exist as per information available in public domain.</p> <p>The Ministry of Human Resource Development, Govt. of India has earlier recognized 'O' level examination conducted by the Computer Society of India (CSI) under the Department of Electronics Accreditation of Computer Courses (DOEACC) Scheme as equivalent to Foundation Level course for the purpose of employment to posts and services under the Central Government w.e.f. 1st March 1995 vide their notification No. F. 18-23/92-TD.V/TS-IV dated 1st March 1995.</p>
29	<p><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></p> <p>The Qualification is to be monitored and reviewed every 5 years.</p> <p>The following data will be used</p> <ol style="list-style-type: none"><li>1. Results of assessments</li><li>2. Employer feedback will be sought post-placement</li><li>3. Student feedbacks</li><li>4. Workshops and seminar for reviewing the qualifications</li><li>5. Industry Requirements</li><li>6. Consultation/ Tie-up with Industries or Expert for review of the Curriculum</li></ol>

#### SECTION 4

##### EVIDENCE OF PROGRESSION

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? Show the career map here to reflect the clear progression</b></p> <p>This qualification consists of both technical and analytical skills and designed in such a way that it will provide core concepts of IT Skills and leading various programming techniques.</p> <p>This course gives link to higher qualification which is existing like 'A' level of NIELIT vide notification No. F2/ 6/ 97-TS.IIIa (.) 54 dated 26th September 2000). A successful candidate will get a certificate from NIELIT, which gives the following options of progression to the candidate</p> <ol style="list-style-type: none"><li>i. User Interface (UI) Designer</li><li>ii. Web Designer</li><li>iii. Web Publication Assistant</li><li>iv. Office Automation Assistant</li><li>v. IoT Application Integrator</li></ol>
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## **Annexure -X**

(NSQF Course Qualification File Details)

**Course Name: NIELIT Certified Web Developer**

Also available at:-

<https://nqr.gov.in/qualifications/2723>



**QUALIFICATION FILE - CONTACT DETAILS OF THE SUBMITTING BODY**

NATIONAL INSTITUTE OF ELECTRONICS AND INFORMATION TECHNOLOGY  
NIELIT Bhawan, Plot No. 3, PSP Pocket, Sector-8,  
Dwarka, New Delhi-110077

**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**

Name: **Shri. Piyush Shrivastava**  
Position in the organization: Scientist - C, NIELIT Guwahati  
Address if different from above: NIELIT Guwahati, 2<sup>nd</sup> Floor, Assam Financial Corporation Building, Md. Shah Road, Paltanbazar, Guwahati-781008, Assam, India.  
Tel number(s): 0361-2730269 / 2731940  
E-mail address: [piyush@niet.gov.in](mailto:piyush@niet.gov.in)

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

- |                   |   |
|-------------------|---|
| 1. Annexure I -   | Detailed Course Curriculum              |
| 2. Annexure-II-   | Evidence of Job/Requirement in industry |
| 3. Annexure III - | Industry Validations                    |
| 4. Annexure IV -  | Lesson Plan                             |

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

- Indicative list of tools/equipment to conduct the training  
Attached of Section 2 of Annexure-I
- Trainers' qualification  
Attached of Section 3 of Annexure-I
- Lesson Plan  
Attached of Annexure-IV
- Distribution of training duration into theory/practical/OJT component
  1. Theory- 90 Hours
  2. Practical- 120 Hours
  3. OJT component – Nil

# NSQF QUALIFICATION FILE

Approved in 17<sup>th</sup> NSQC Meeting, 31<sup>st</sup> March 2022

## SUMMARY

1. Qualification Title	Certified Web Developer
2. Qualification code, if any	--
3. NCO code and occupation	2166.0300
4. Nature and purpose of the qualification (Please specify whether the qualification is short term or long term)	Short Term Course
5. Body/bodies which will award the qualification	National Institute of Electronics and Information Technology, NIELIT Bhawan, Plot No. 3, PSP Pocket, Sector-8, Dwarka, New Delhi-110 077.
6. Body which will accredit providers to offer courses leading to the qualification	National Institute of Electronics and Information Technology, NIELIT Bhawan, Plot No. 3, PSP Pocket, Sector-8, Dwarka, New Delhi-110 077.
7. Whether accreditation/affiliation norms are already in place or not, if applicable (if yes, attach a copy)	Yes
8. Occupation(s) to which the qualification gives access	<ul style="list-style-type: none"> <li>• PHP Developer</li> <li>• Web Application Developer</li> <li>• Back End Developer</li> </ul>
9. Job description of the occupation	<p><u>Academic:</u></p> <p>After completion of the course student will be able to pursue <u>Microsoft Certified Solutions Developer (MCSD)</u>, Responsive Web Design Course, Server-Side Script Programming Which Combines Programming Languages with Database like Dot Net Java, and ASP with MySQL.*</p> <p>Candidates can start from level 4 and lead to further levels.</p>

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	<p><b>Professional:</b></p> <p>The candidate will be able to do Client-side programming and scripting such as Web Site maintenance, Front end, Backend, and Database Developer. Further getting the exposure he/she may be able to do Server-Side Programming also.</p> <p>Web Developer is responsible for the coding, design, and layout of a website according to a company's specifications. As the role takes into consideration user experience and function, a certain level of both graphic design and computer programming is necessary.</p>
10. Licensing requirements	<p>MS-Office Software License required.</p> <p>Text editor software (any One): Notepad++/Sublime text/ Visual Studio Code etc.</p> <p>Other Software: WAMP/LAMP/XAMP/MAMP etc.</p>
11. Statutory and Regulatory requirements of the relevant sector (documentary evidence to be provided)	NA
12. Level of the qualification in the NSQF	03
13. Anticipated volume of training/learning required to complete the qualification	210 hours for both Theory and Practical Learning (4 months short term course)
14. Indicative list of training tools required to deliver this qualification	Windows / Linux operating system, Microsoft office, etc.

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<b>15. Entry requirements and/or recommendations and minimum age</b>	<p>Eligibility:</p> <p>Final-year Polytechnic Diploma in CS/IT after class 10<sup>th</sup></p> <p>Or</p> <p>2-Year ITI Certificate in IT/ITeS after class 10<sup>th</sup></p> <p>Or</p> <p>12<sup>th</sup> pass</p>
<b>16. Progression from the qualification</b> <b>(Please show Professional and academic progression)</b>	<p><b>Academic:</b></p> <p>After completion of the course, students will be able to pursue Microsoft Certified Solutions Developer (MCS D), Responsive Web Design Course, Server-Side Script Programming Which Combines Programming Languages with Databases like Dot NET, Java, and ASP with MySQL.</p> <p>Candidates can start from level 3 and lead to further levels.</p> <p><b>Professional:</b></p> <p>The candidate will be able to do Client-side programming and scripting such as Web Site maintenance, Front end Developer. Further getting exposure he/she may be able to do Server-Side Programming also.</p>
<b>17. Arrangements for the Recognition of Prior learning (RPL)</b>	<p>As per minimum eligibility criteria RPL is not mandatory</p>
<b>18. International comparability where known (research evidence to be provided)</b>	<p>NA</p>

19. Date of planned review of the qualification		Every 5 Years	
20. Formal structure of the qualification Mandatory components			
	Title of component and identificationcode/NOSs /Learning outcomes	Estimated size (Learning hours)	Level
(i)	Introduction to the Internet to web Design	10	3
	HTML5	20	3
	CSS	20	3
	JavaScript	20	3
	Bootstrap	20	3
	Linux Introduction	10	3
	Server-side programming language PHP	50	3
	Database connectivity with PHP and MySQL (Linux/Window)	30	3
	Project on website Development	30	3
	Including Theory/ Lecture Hours / practical Hours	210	3
	Sub Total (A)	210	3
Optional Components			
	Title of component and identification code/NOSs Learning outcomes	Estimated size (Learning hours)	Level
		0	
	Sub Total (B)	0	
Total (A+B)		210	

## **SECTION 1**

### **ASSESSMENT**

21	<b>Body/Bodies which will carry out an assessment:</b>  <b>The Examination Section:</b> National Institute of Electronics and Information Technology NIELIT Bhawan, Plot No. 3, PSP Pocket, Sector-8,Dwarka, New Delhi-110077
22	<b>How will RPL assessment be managed and who will carry it out?</b> RPL Policy will be described as and when available
23	<b>Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that the assessment is always valid, reliable and fair and show that these are in line with the requirements of the NSQF.</b>  <b>ASSESSMENT GUIDELINE:</b>  The major point of concentration of the course is solely on practical skill enhancement of the candidate and testing his core skills based on rigorous performance criteria. Each Outcome is assessed and marked separately. Candidates must pass in all Outcomes individually and accordingly; marks are allotted for each Outcome. Following assessment, methodologies are adopted:  A. Written Assessment (Multiple Choice Questions) B. Practical Assessment C. Internal Assignment  The candidate's overall knowledge shall be tested based on a comprehensive written assessment. His practical skills shall be equally measured with a detailed practical assessment. The technical skills of the student and his ability to express himself shall be monitored vide internal Assignment.



**24. Assessment evidence**

Outcomes to be assessed / NOSs to be assessed	Assessment criteria for the outcome	Estimate Learning Hours
1. Explain Internet Concept, Basics of Web Site	Learn to use the Internet and the basics of networking and recognize various Servers available. Recognize Various Browsers, also how the Client (i.e.) browser will communicate with the server using the internet	10
2. Learn to create a web page using HTML, CSS, JavaScript & Bootstraps	1- Understand the HTML tags & its element 2- Know the method to use CSS to HTML code 3- Able to create a responsive website using JavaScript and Bootstraps	80
3. Fundamental of Linux Operating System and Server-Side Development using PHP	1- Able to create PHP scripts & code blocks 2- Use Expression, function & operator 3- PHP Syntax and embedding in HTML 4- User Interface Design (UI) using HTML5 and PHP	60
4. Practice concepts of Database Connectivity with PHP	Learn the Configure PHP and MySQL	30
5. Develop a simple project	Able to develop a simple project on website creation using the above learning techniques	30
<b>Total Marks</b>		<b>210</b>



# NSQF QUALIFICATION FILE

Approved in 17<sup>th</sup> NSQC Meeting, 31<sup>st</sup> March 2022

## Means of assessment

Learning Hours	NSQF Level	Theory			Practical		Internal Assessment (Marks)	Project / Presentation / Assignment (Marks)	Major Project / Dissertation (Marks)		Total
		Papers	No. of Ques (Q) / Paper	Marks /paper	Papers	Marks / Paper			No. of Projects	Marks	
210	3	2 (T1 and T2)	100 Q for T1 and 100 Q for T2	100 marks for T1 and 100 marks for T2	1 (P)	90 marks	30 marks for (IA)	30 marks for (AS & P)	0	0	350

T1 (TP1): Theory paper 1

T2 (TP2): Theory paper 2

P (P): Practical paper comprising of 2 practical exams (P-1, P-2) 1 for each module.

IA: Internal Assessment

AS & P: Assignment

Examination Pattern

S. No	Examination Pattern	Modules Covered	Duration in Minutes	Maximum Marks
1	Theory Paper (TP1)- 1: Front End Web Development	1,2,3,4,5	90	100
2	Theory Paper (TP2) - 2: Database & Backend	6,7,8,9	90	100

# NSQF QUALIFICATION FILE

Approved in 17<sup>th</sup> NSQC Meeting: 31<sup>st</sup> March 2022

	Development			
3	Practical (P) comprising of P-1, P-2, and P-3 for each of the respective modules.	1 to 10	180	90
4	Internal Assessment (IA)	1 to 10	-	30
5	Assignments	1 to 10	-	30
	<b>Total</b>			<b>350</b>

## Project / Presentation / Assignment

From the option Project/Presentation/Assignment, it is proposed that an Assignment of 30 marks should be given to every student enrolled in the course (with 15marks each for each of the 2-part of the course). The detailed breakup of Assignment marks is given below:

S.no	Module Number	Marks
1	1 to 5 ( Front End Developer Part)	15
2	6 to 10 ( Back End Developer Part)	15
	<b>Total</b>	<b>30</b>

(Detailed Curriculum attached As Annexure-I)

## Note

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

Grade	S	A	B	C	D
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#### NSQF QUALIFICATION FILE

Approved in 17<sup>th</sup> NSQC Meeting: 31<sup>st</sup> March 2022

Marks	>=85%	>=75% and <85%	>=65% and <75%	>=55% and <65%	>=50 % and <55%
Range (in %)					

3. Theory examination would be conducted online and the paper comprises MCQ and each question will carry 1 mark
4. Practical examination/Internal Assessment/ Project/Presentation/Assignment would be evaluated internally
5. Project would be evaluated preferably by an External / Subject Expert including NIELIT Officials
6. Candidates may apply for re-examination within the validity of registration
7. The examinations would be conducted in English Language only.

## NSQF QUALIFICATION FILE

### SECTION 2

#### 25. EVIDENCE OF LEVEL

##### OPTION A

Title/Name of qualification/component: Certified Web Developer			Level: 03
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relate to the NSQF level descriptors	NSQF Level
Process	Candidates can become more familiar with web development applications with the help of HTML, CSS, Java Script, PHP and MySQL. The theory and practical knowledge will provide knowledge on Web site creation and maintenance.	Work in a familiar, predictable, routine, situation of clear choice.	03
Professional Knowledge	The candidate will be able to do Client-side programming and scripting such as Web Site maintenance, Front end, Backend and database Developer. Further getting exposure he/she may be able to do Server-Side Programming also.	Factual knowledge of field of knowledge or study.	03
Professional	Web Developer is responsible for the coding, design and layout of a website according to a	Recall and demonstrate practical skill, routine and repetitive in narrow range of application, using	03

## NSQF QUALIFICATION FILE

skill	company's specifications. As the role takes into consideration user experience and function, a certain level of both graphic design and computer programming is necessary.	appropriate rule and tool, using quality concepts	
Core skill	<ul style="list-style-type: none"> <li>To identify customer requirements and needs</li> <li>Design UI with above requirements</li> <li>To refine preliminary design if necessary</li> </ul>	Language to communicate written or oral, with required clarity, skill to basic arithmetic and algebraic principles, basic understanding of social political and natural environment.	03
Responsibility	The candidate will be able to do Client-side programming and scripting such as Web Site maintenance, Front end Developer. Further getting exposure, he/she may be able to do Server-Side Programming or acts as a freelancer to develop websites.	Responsibility for own work and learning	03

## NSQF QUALIFICATION FILE

### SECTION 3

#### EVIDENCE OF NEED

26	<b>What evidence is there that the qualification is needed? What is the estimated uptake of this qualification and what is the basis of this estimate?</b>
Need of the qualification	<p>This is a programming course that uses current industry standard tools to developed and operate the web-based application like create styled web pages, Graphical User Interfaces (GUIs), multi-page static/dynamic web sites, Content management system, Server side (back-end) devices and skills for developing database applications.</p> <p>Also, the contents have been designed such that a wide range of career options are possible for an individual after completing the course. He/she may be working as a front end or/and web-based developer.</p>
Estimated uptake	Estimated about 200 candidates per year. Estimation is done on the basis of regular advertisements coming in different newspapers/websites about this skill.
27	<b>Recommendation from the concerned Line Ministry of the Government/Regulatory Body. To be supported by documentary evidences</b>  NA
28	<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 does not exist as per information available in the public domain.
29	<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>  The Qualification is to be monitored and reviewed by Academic committee members for every two years. With the help of following inputs provided  1. Results Analysis

#### NSQF QUALIFICATION FILE

	2. Employer Survey 3. Alumni Survey
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#### SECTION 4

#### EVIDENCE OF PROGRESSION

30	<p>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?</p> <p><b>Show the career map here to reflect the clear progression</b></p> <p>Both Theory and analytics skills are acquired from this qualification, so that the student may upgrade them by taking further courses on advanced web designing. Source: <a href="http://www.webtechlearning.com/future-career-scope-of-web-designingcourse-in-india/">http://www.webtechlearning.com/future-career-scope-of-web-designingcourse-in-india/</a>. Today the world is dominated by the web. Every business is now conducted globally using the web. In this digital world, the online presence on the web is very important for every organization to advertise, promote and sell their products and services to worldwide users. A candidate who will be learning about the basic of web designing which include HTML, CSS, Php, Photoshop, Dreamweaver, Word press, Joomla, and Magento become a web developer.</p>
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## **Annexure -XI**

(NSQF Course Qualification File Details)

**Course Name: NIELIT Certified Multimedia Developer**

Also available at:-

<https://nqr.gov.in/qualifications/2692>



**NSQF QUALIFICATION FILE**

Approved in 18th NSQF meeting – NCVET- Dated: 24th February, 2022

**CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE****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****Name:** Bhaskar Banerjee**Position in the organisation:** Scientist-C**Address if different from above:** NIELIT Kolkata, Jadavpur University Campus,  
Kolkata 700032**E-mail address:** [b.banerjee@nielit.gov.in](mailto:b.banerjee@nielit.gov.in)**List of documents submitted in support of the Qualifications File**

Annexure 1: Detailed Syllabus of the course

Annexure 2: Trainee Details

Annexure 3: Evidence of Course requirement in the industry

Annexure 4: Evidence of Job requirement from the industry

Annexure 5: 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 section 2 of Annexure 1
- **Trainers qualification**  
Attached in section 3 of Annexure 1
- **Lesson Plan**  
Attached in section 1 of Annexure 1
- **Distribution of training duration into theory/practical/QJT component**

Theory	50 Hrs
Practical	150 Hrs

NSQF Approved

**NSQF QUALIFICATION FILE**

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

**SUMMARY**

1	<b>Qualification Title</b>	Certified Multimedia Developer
2	<b>Qualification Code, if any</b>	Code : Code : NIELIT/IT/L5/017-2
3	<b>NCO code and occupation</b>	2513.0302: Media Developer- Application Development
4	<b>Nature and purpose of the qualification (Please specify whether qualification is short term or long term)</b>	This is a Qualification Pack (QP) and it is a short term course. The purpose of the qualification is to build proficiency in students in Multimedia and Animation to cater to the needs of growing Animation and Multimedia Industry like Television, Advertising, Architectural, Modelling, Multimedia Presentations, Web Designing, Films and Movies. The objective of the course is to enable the students to apply knowledge, techniques, skills of modern multimedia tools in different digital media disciplines like text, images, audio, video and animation (2D & 3D)
5	<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
6	<b>Body which will accredit providers to offer courses leading to the qualification</b>	National Institute of Electronics and Information Technology NIELIT Bhawan, Plot No. 3, PSP Pocket, Sector-8, Dwarka, New Delhi-110077
7	<b>Whether accreditation/affiliation norms are already in place or not, if applicable (if yes, attach a copy)</b>	NIELIT accreditation / affiliation norms for NSQF Courses are as per guidelines given in NIELIT Training Partners Handbook. It is a comprehensive guideline/norms which can be accessed by visiting the link: <a href="https://www.nielit.gov.in/content/nsqf">https://www.nielit.gov.in/content/nsqf</a>

# NSQF QUALIFICATION FILE

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

8	Occupation(s) to which the qualification gives access	<ul style="list-style-type: none"> <li>• Multimedia Developer</li> <li>• Graphic Designer</li> <li>• 2D Animator</li> <li>• Audi &amp; Video Editor</li> <li>• Web Developer</li> </ul>
9	Job description of the occupation	Job that requires well developed skill, with clear choice of procedures in familiar context. A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information
10	Licensing requirements	Adobe Creative Cloud 3D Max Corel Draw Sonic Sound Forge
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	200 Hours
14	Indicative list of training tools required to deliver this qualification	Attached in section 2 of Annexure I
15	Entry requirements and/or recommendations and minimum age	<p>12<sup>th</sup> pass and above</p> <p>OR</p> <p>10<sup>th</sup> pass with pass in NSQF Level 3 IT/ITeS Course in IT/Multimedia discipline</p>
16	Progression from the qualification (Please show Professional and academic progression)	<p>1) In Academic</p> <p>After completion of this course, the students may take up specialised courses on Multimedia Technologies</p>

# NSQF QUALIFICATION FILE

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

		to further enhance their skills and job prospects	
		<p><u>2) Professional</u></p> <p>Multimedia Developers may hold different titles and work in different specialties. They may pursue their career in industries including film, communications, graphic arts, marketing and computers. Job titles may include web developer, film editor, animation specialist and game designer.</p>	
17	Arrangements for the Recognition of Prior learning (RPL)	Presently only candidates who undergo training shall be assessed. It will be incorporated once RPL strategy is finalized	
18	International comparability Where known (research evidence to be provided)	Will be made available when established	
19	Date of planned review of the Qualification.	After Every 4 years	
20	Formal structure of qualification		
	Mandatory Components		
	Title of component and identification code/NOSs/Learning out comes	Estimated Size (Learning Hours)	Level
1	Multimedia Fundamentals	10 Hours	Level 4
2	Image Editing & Graphic Designing	25 Hours	Level 4
3	Audio Editing	20 Hours	Level 4
4	2D Animation	30 Hours	Level 4
5	Video Editing & Special Effects	25 Hours	Level 4
6	3D Animation	30 Hours	Level 4
7	Introduction to Web Page Development	20 Hours	Level 4
8	Project Work	40 Hours	Level 4

NSQC Approved

**NSQF QUALIFICATION FILE**

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

	<b>Total</b>	<b>200 Hours</b>	
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NSQC Approved



**NSQF QUALIFICATION FILE**

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

**SECTION 1****ASSESSMENT**

21	<b>Body/Bodies which will carry out assessment:</b> The Examination Section National Institute of Electronics and Information Technology NIELIT Bhawan, Plot No. 3, PSP Pocket, Sector-8, Dwarka, New Delhi-110077
22	<b>How will RPL assessment be managed and who will carry it out?</b> RPL Policy will be described as and when available
23	<b>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.</b>  A. One theory paper will be conducted for duration of ninety (90) minutes and the total marks would be 100. Theory examination will be conducted in the ONLINE Mode. B. One practical examination for two hours duration and sixty (60) marks would be conducted. The emphasis will be on the practical demonstration of skills and knowledge based on the performance criteria. Laboratory / Practical Work will be conducted at Institutions/Organizations which are running the course. C. Project: The project is carried out by the student under the guidance and support of management of the respective organization.

	<b>Title of the component and Identification</b>	<b>Max Marks</b>	<b>Pass Marks</b>
1	Multimedia Development	100	50 % in each of the Assessment Component
2	Practical	60	
3	Project	20	
4	Internal Assessment	20	
	<b>Total</b>	<b>200</b>	

The following grading pattern will be followed:

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

NSQC Approved

NSQF QUALIFICATION FILE

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

NSQC Approved

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**NSQF QUALIFICATION FILE**

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

**ASSESSMENT EVIDENCE****24. Assessment evidences**

Sl. No	Title of Component and Identification Code/NOSs/Learning Outcomes	Estimated Size (Learning Hours)		
		Theory	Lab	Total
1.	Multimedia Fundamentals	10	-	10
2.	Image Editing & Graphic Designing	05	20	25
3.	Audio Editing	05	15	20
4.	2D Animation	10	20	30
5.	Video Editing & Special Effects	05	20	25
6.	3D Animation	10	20	30
7.	Introduction to Web Page Development	05	15	20
8.	Project Work	-	40	40
	<b>Total (A)</b>	<b>50</b>	<b>150</b>	<b>200</b>

**NSQF QUALIFICATION FILE**

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

**Means of assessment**

Sl No	Examination Pattern	Modules Covered	Duration in Minutes	Maximum Marks
1	Theory Paper	1,2,3,4,5,6,7	90	100
2	Practical	1,2,3,4,5,6,7	120	60
3	Internal Assessment		-	20
4	Project		-	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	Fail
Marks Range (in %)	$\geq 85\%$	$\geq 75\%$ to $< 85\%$	$\geq 65\%$ to $< 75\%$	$\geq 55\%$ to $< 65\%$	$\geq 50\%$ to $< 55\%$	$< 50\%$

3. Theory examination would be conducted online and the paper comprises of MCQ and each question will carry 1 marks.
4. Practical examination, Internal Assessment and Project 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/Name of qualification: Certified Multimedia Developer - Level 4			
NSQF Domain	Key requirement of job role	How the job role relates to the NSQF level descriptors	NSQF Level
Process Required	The multimedia developer after acquiring wide range of theoretical & practical skills on processing and editing of multimedia content are capable of providing multimedia post-production solutions to clients.	Job that requires well developed skill, with clear choice of procedures in familiar context.	4
Professional Knowledge	Appreciate the role multimedia content in	Knowledge of facts, principles, processes and	4

NSQC Approved

# NSQF QUALIFICATION FILE

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

	multimedia post-production activities. Develop competency to use different software tools to generate image and graphics pattern in multimedia contents including audio and video .	general concepts, in a field of work or study.	
Professional Skill	Acquire skill on editing multimedia contents image editing, sound editing and video editing with different software tools	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information	4
Core Skill	Multimedia Developers after acquiring skills at this level are able to provide technical solutions in multimedia post-production activities	Desired mathematical skill, understanding of social, political, and some skill of collecting and organising information, communication.	4
Responsibility	Assess, predict, and articulate the influence and importance of multimedia development within the human environment from social responsibility, sustainability and interdisciplinary perspectives	Responsibility for own work and learning and some responsibility for others works and learning.	4

## NSQF QUALIFICATION FILE

### SECTION 3

#### EVIDENCE OF NEED

26	<p><b>What evidence is there that the qualification is needed? What is the estimated uptake of this qualification and what is the basis of this estimate?</b></p> <p><b>Need of the Qualification and industry relevance</b> Based on the survey reports (Annexure 3) about the job market and the interaction with employers it was revealed that there is huge skill gap in the academic programs in the field of Multimedia Development and there is a better job market for Multimedia trained professionals. This course is framed to facilitate skill development in Multimedia Development sector focusing on students/unemployed youth at Diploma, Engineering graduates, etc. to increase their employability to work in Multimedia Design &amp; Development.</p> <p><b>Estimated uptake:</b> 20 students / Batch – 4 Batches / Year for each NIELIT Centre implementing the course. NIELIT is having 43 Centres and 900+ accredited Centres spread all over India.</p>
27	<p><b>Recommendation from the concerned Line Ministry of the Government/Regulatory Body. To be supported by documentary evidences</b></p> <p>This qualification is run by National Institute of Electronics &amp; Information Technology (NIELIT). It is an Autonomous Scientific Society under the administrative control of Ministry of Electronics &amp; Information Technology (MoE&amp;IT), Government of India.</p>
28	<p><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></p> <p>As the understanding and adoption models of QPs evolve in the industry and across its sub-sectors, we foresee consolidation of qualification packs as a natural progression. The Qualification does not exist as per information available in public domain.</p>

#### NSQF QUALIFICATION FILE

29	<p>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</p> <p>The Qualification is to be monitored and reviewed every 4 years. The following data will be used:</p> <ul style="list-style-type: none"><li>Results of assessments</li><li>Employer feedback will be sought post-placement</li><li>Student feedbacks</li><li>Workshops and seminar for reviewing the qualifications</li><li>Industry Requirements</li><li>Consultation/ Tie-up with Industries or Expert for review of the Curriculum</li></ul>
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## NSQF QUALIFICATION FILE

### SECTION 4

#### EVIDENCE OF PROGRESSION

30	<p>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?</p> <p>This qualification that is based on the foundation of acquiring basic skills on Interactive Multimedia Development can be linked to any qualification higher than this one, existing or yet to come.</p>
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## **Annexure -XII**

(NSQF Course Qualification File Details)

**Course Name: NIELIT Certified Cloud Computing and Virtualization Expert**

Also available at:-

<https://nqr.gov.in/qualifications/2725>



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

**Name:** Dr. Manish Arora

**Position in the organisation:** Additional Director(Systems)

**Address if different from above:**

NATIONAL INSTITUTE OF ELECTRONICS AND INFORMATION TECHNOLOGY  
(NIELIT) Chandigarh, Permanent campus at Ropar, Birla Farms, Bada Phull, Ropar,  
Punjab. PIN – 140001.

**Tel number(s):** 01561-257008

**E-mail address:** manish@nielit.gov.in

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

Annexure 1: Detailed Syllabus of the course  
Annexure 2: Trainee Details  
Annexure 3: Evidence of Course requirement in the industry  
Annexure 4: Evidence of Job requirement from the industry  
Annexure 5: 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 section 2 of Annexure 1
- **Trainers qualification**  
Attached in section 3 of Annexure 1
- **Lesson Plan**  
Attached in section 1 of Annexure 1
- **Distribution of training duration into theory/practical/OJT component**

Theory	88 hrs
Practical	122 hrs
OJT Component /Internship/ Project	0

**NSQF Qualification File**

Approved in 17th NSQC, dated- 31/03/22

**SUMMARY**

1	Qualification Title	Certified Cloud Computing and Virtualization Expert
2	Qualification Code, if any	–
3	NCO code and occupation	3114.0801
4	Nature and purpose of the qualification (Please specify whether qualification is short term or long term)	To provide technical skill to manage Cloud based Data Centres
5	Body/bodies which will award the qualification	Certification Division, National Institute of Electronics and Information Technology, NIELIT Bhawan, Plot No. 3, PSP Pocket, Sector-8, Dwarka, New Delhi-110077
6	Body which will accredit providers to offer courses leading to the qualification	Accreditation Division, National Institute of Electronics and Information Technology, NIELIT Bhawan, Plot No. 3, PSP Pocket, Sector-8, Dwarka, New Delhi-110077
7	Whether Accreditation / affiliation norms are already in place or not, if applicable (if yes, attach a copy)	NA
8	Occupation(s) to which the qualification gives access	Cloud Computing and Virtualization Expert
9	Job description of the occupation	Cloud Engineer, Data Centre Manager, Data Centre Architect
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	210 Hours
14	Indicative list of training tools required to deliver this qualification	Attached in section 2 of Annexure I

NSQF Qualification File

Approved in 17th NSQC, dated- 31/03/22

15	Entry requirements and / or recommendations and minimum age	2 <sup>nd</sup> Year B.Tech /BE in Computer science/ Information technology/ Electronics/Electronics and Communication Engg  Or 2 <sup>nd</sup> Year MCA  Or Final Year students of 3 Year Diploma in Computer science/ Information technology/ Electronics/Electronics and Communication Engg
16	Progression from the qualification (Please show Professional and academic progression)	<b>In Academic</b> Integrate Cloud Computing and Advance Diploma in Big Data analytics (NIELIT Course) in Data Centres. Many companies are providing Big Data as a Service solution to individuals and organization for analysing large data using Big Data tools over Cloud Computing and virtualization infrastructure.  <b>Professional progression:</b> Initially, candidates can work as Virtualization Engineer/Programmer/Cloud and Virtualization Expert whose role would be to identify virtualization requirement and provide virtualized solution in Cloud to clients at service provider end. Later on, they can be <b>Data Centre Architect</b> whose job would be to setup Data Centre that provides various services like IaaS, SaaS and PaaS. Data Centre Architect is a very highly skilled architect with cross-industry and cross-functional know-how.
17	Arrangements for the Recognition of Prior learning (RPL)	Presently only candidates who undergo training shall be assessed. It will be incorporated once RPL strategy is finalized
18	International comparability Where known (research evidence to be provided)	NA
19	Date of planned review of the	After Every 5 years

NSQC Approved

3

# NSQF Qualification File

Approved in 17th NSQC, dated- 31/03/22

Qualification			
20	Formal structure of qualification		
Mandatory Components			
	Title of component and identification code/NOSs/Learning out comes (A)	Estimated Size (Learning Hours)	Level
1	Networking and Cloud Computing Concepts	45 hours	Level 4
2	Preparation of Infrastructure Services	75 hours	Level 4
3	Preparation of Software Services	60 hours	Level 4
4	Secured Cloud Management Concept	15 hours	Level 4
5	Enhancing Communication Skill	15 hours	Level 4
Sub Total A		210 hours	
Optional Components			
Sub Total B		0 hours	
Total (A+B)		210 hours	

## SECTION 1 ASSESSMENT

21	<b>Body/Bodies which will carry out assessment:</b> <b>The Examination Section:</b> National Institute of Electronics and Information Technology NIELIT Bhawan, Plot No. 3, PSP Pocket, Sector-8, Dwarka, New Delhi-110077
22	<b>How will RPL assessment be managed and who will carry it out?</b> RPL Policy will be described as and when available
23	<b>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.</b>  <b>ASSESSMENT GUIDELINE:</b> The major point of concentration of course is solely on practical skill enhancement of the candidate and testing his core skills based on a rigorous performance criteria. Each Outcome is assessed and marked separately.

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	<p>Candidate must pass in all Outcomes individually and accordingly marks are allotted for each Outcome. Following assessment methodologies are adopted.</p> <ul style="list-style-type: none"><li>A. Written Assessment (Multiple Choice Questions)</li><li>B. Practical Assessment</li><li>C. Internal Assignment</li></ul> <p>The candidate's overall knowledge shall be tested based on a comprehensive written assessment. His practical skills shall be equally measured with a detailed practical assessment. The technical skills of the student and his ability to express himself shall be monitored vide internal Assignment.</p> <p style="text-align: center;">d</p>
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#### ASSESSMENT EVIDENCE

##### 24. Assessment evidences

S. No.	Title of Component and Identification Code / NOSs / Learning Outcomes	Estimated Size (Learning Hours)		
		Theory	Lab	Total
1.	Networking and Cloud Computing Concepts	18	27	45 hrs
2.	Preparation of Infrastructure Services	30	45	75 hrs
3.	Preparation of Software Services	20	40	60 hrs
4.	Secured Cloud Management Concept	10	5	15 hrs
5.	Enhancing Communication Skill	10	5	15 hrs
	Total	88	122	210 hrs

##### Means of assessment

Learning Hours	NSQF Level	Theory			Practical		Internal Assessment (Marks)	Project / Presentation / Assignment (Marks)	Major Project / Dissertation, (Marks)		Total
		Papers	No. of Ques (Q) / Paper	Marks/paper	Papers	Marks / Paper			No. of Projects	Marks	

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210	6	2 (T 1 an d T2 )	100 Q for T1 and 100 Q for T2	100 mark s for T1 and 100 mark s for T2	1 (P)	90 mark s	30 marks for (IA)	30 marks for (AS & P)	0	0	350
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T1 (TP1): Theory paper 1

T2 (TP2): Theory paper 2

P (P): Practical paper comprising of 2 practical exams (P-1, P-2) 1 for each module.

IA: Internal Assessment

AS & P: Assignment

#### Examination Pattern

S. No	Examination Pattern	Module s Covered	Duration in Minutes	Maximum Marks
1	Theory Paper (TP1)– 1: Networking and Cloud Infrastructure	1,2	90	100
2	Theory Paper (TP2) – 2: Software Preparation and Cloud Management	3,4	90	100
3	Practical (P) comprising of P-1, P-2 and P-3 for each of the respective module	1,2,3 and 4	180	90
4	Internal Assessment (IA)	1,2,3 and 4	-	30
5	Assignments (AS)	1,2,3 and 4	-	30
	<b>Total</b>			<b>350</b>

#### Project / Presentation / Assignment

From the option Project/Presentation/Assignment, it is proposed that Assignment of 30 marks should be given to every student enrolled in the course (with 7.5 marks each for

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each of the 4 modules of the course). The detailed breakup of Assignment marks is given below:

S.no	Name of the Module	Marks
1	Networking and Cloud Computing Concepts	7.5
2	Preparation of Infrastructure Services	7.5
3	Preparation of Software Services	7.5
4	Secured Cloud Management Concept	7.5
Total		30

#### 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	Fail
Marks Range (in %)	>85%	75%>= and < 85%	65%>= and < 75%	55%>= and < 65%	50%>= and < 55%	<50%

3. Theory examination would be conducted online and the theory papers comprise of MCQ and each question will carry 1 mark.
4. Practical examination/Internal Assessment / Project / Presentation / Assignment would be evaluated internally.
5. Candidate may apply for re-examination within the validity of registration.
6. There would be no exemption for any paper/ module for candidates having similar qualification Skills.
7. A candidate would get a maximum of six examination cycles to pass the course ( assuming that there is no provision for re-registration)
8. The examinations would be conducted in English Language only.

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## SECTION 2

### 25. EVIDENCE OF LEVEL

Title/Name of qualification: Certificate Course in Computer Aided Design using CREO - Level 5			
NSQF Domain	Key requirement of job role	How the job role relates to the NSQF level descriptors	NSQF Level
Process	Cloud and Virtualization Expert carries out jobs to manage networks and prepare data centres for virtualization.  Cloud and Virtualization Expert acquires wide range of practical and conceptual skills to virtualize server and	Successful candidate Individual who has gone through the process would tend to exhibit Advance Skills in which he is both Conceptually strong and practically sound.	4

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	provide services over Cloud to clients		
<b>Professional Knowledge</b>	Cloud and Virtualization Expert will be competent to identify technical requirements in terms of hardware, software and other IT related devices for providing virtualized services over Cloud.	The professional knowledge gained would eventually help the candidate to enter the industry as an expert and not as a novice. He would not be required to undergo any sort of training or refresher course in order to run the operations of the concern that he joins. Network management of a company would be efficiently handled by the Candidate.	<b>4</b>
<b>Professional Skill</b>	Individual is able to manage and secure cloud. They are proficient in managing servers in Cloud environment based on detailed design and practical knowledge gained during course	The skill set acquired by the candidate would Encompass Installation, Configuration, implementation, Management and Troubleshooting of Data Communication Network that would be efficiently handled by him.	<b>4</b>
<b>Core Skill</b>	Individual is able to manage and secure cloud. They are proficient in managing servers in Cloud environment based on detailed design and practical knowledge gained during course	This skill will help the individual to manage entire cloud.	<b>4</b>
<b>Responsibility</b>	They are able to lead team as well as work in team.	The responsibility levels would be equally important in all the phases of the Project implementation starting from Requirement analysis , Designing the project, Implementation of the project and Maintenance and Troubleshooting of the project.	<b>4</b>

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### SECTION 3

#### EVIDENCE OF NEED

26	<p>What evidence is there that the qualification is needed? What is the estimated uptake of this qualification and what is the basis of this estimate?</p> <p><b>Need of the Qualification and industry relevance</b> Attached at Annexure 3</p> <p><b>Estimated uptake:</b> 10 students / Batch – 4 Batches / Year</p>
27	<p><b>Recommendation from the concerned Line Ministry of the Government/Regulatory Body. To be supported by documentary evidences</b></p> <p>No information available</p>
28	<p><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></p> <p>The course was scrutinized with National Qualification Register (NQR) for resemblance with other courses. As per the search it was found that, no duplicate Certified Cloud Computing and Virtualization Expert exists in the NQR as on date</p>
29	<p><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></p> <p>The Qualification is to be monitored and reviewed every two years. The following data will be used</p> <ol style="list-style-type: none"> <li>1. Results of assessments.</li> <li>2. Student's feedback who have completed the course.</li> <li>3. The NOS approved by NSDA will also be referred from time to time</li> </ol>

### SECTION 4

#### EVIDENCE OF PROGRESSION

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30	<p>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?</p> <p>The qualification consists of both the technical skill set and practical skill set and may be associated with any other qualification higher than this one in the NQR.</p>
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## **Annexure -XIII**

(NSQF Course Qualification File Details)

**Course Name: Certified Artificial Intelligence (AI) Associate "Upskilling"**

Also available at:-

<https://nqr.gov.in/qualifications/3019>



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-11007

Name and contact details of individual dealing with the submission

Name	:	Ripunjay Dinesh Singh
Position in the organization	:	Scientist-D
Address if different from above	:	NA
Tel number(s)	:	044-2442 1445 ext. 215, 9445220125
E-mail address	:	<a href="mailto:ripunjay@nielit.gov.in">ripunjay@nielit.gov.in</a>

List of documents submitted in support of the Qualifications File

- |  |
|--|
| 1. Annexure I – Evidence of Job /Requirement in Industry |
| 2. Annexure II – Detailed Curriculum/Syllabus            |
| 3. Annexure III –Candidates Trained and Their Feedback   |

**NSQF QUALIFICATION FILE**  
Approved in 18th NSQC, dated- 28/05/22

**SUMMARY**

1	<b>Qualification Title</b>	Certified Artificial Intelligence (AI) Associate "Upskilling"
2	<b>Qualification Code, if any</b>	–
3	<b>NCO code and occupation</b>	2512.0300, Programmer, Data Analyst
4	<b>Nature and purpose of the qualification (Please specify whether qualification is short term or long term)</b>	<p><b>Nature:</b></p> <ul style="list-style-type: none"> <li>❖ This Course is aimed at creating qualified Data Science &amp; Artificial Intelligence professionals which will help in employment generation and Entrepreneur development.</li> </ul> <p><b>Purpose:</b></p> <ul style="list-style-type: none"> <li>❖ The purpose is to develop the skills required for AI Technologies with use of Python to analyse data, create beautiful visualizations, and problem solving using powerful Machine Learning/Deep Learning algorithms.</li> </ul>
5	<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
6	<b>Body which will accredit providers to offer courses leading to the qualification</b>	National Institute of Electronics and Information Technology NIELIT Bhawan, Plot No. 3, PSP Pocket, Sector-8, Dwarka, New Delhi-110077
7	<b>Whether accreditation/affiliation norms are already in place or not, if applicable (if yes, attach a copy)</b>	NA
8	<b>Occupation(s) to which the qualification gives access</b>	<b>AI Engineer, AI / ML Associate, Data Analyst</b>
9	<b>Job description of the occupation</b>	AI Engineer: Must have to work with deep learning libraries such as TensorFlow and Machine Learning library such as Scikit-Learn. Required to have programming skills in Python.

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		<p>Should be able to work on Image Processing and Computer Vision.</p> <p>AI / ML Associate: Creating programmes and algorithms that enable machines to take actions without being directed feed data into models defined by data scientists.</p> <p>Data Analyst: Collecting and interpreting data, analysing results, Reporting the results back to the relevant members of the business, identifying patterns and trends in data sets, working alongside teams within the business or the management team to establish business needs, defining new data collection and analysis processes.</p>
10	Licensing requirements	NA (All Open Source Software will be used)
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	240 Hours
14	Indicative list of training tools required to deliver this qualification	Attached in Section 2 of Annexure II
15	Entry requirements and/or recommendations and minimum age	<p>Pursuing final year BE/BTech/MCA in any discipline</p> <p>Or</p> <p>BCA/ B.Sc. IT/ B.Sc. Electronics</p> <p>Or</p> <p>3 Years Diploma after class 10<sup>th</sup> in Electronics/ IT/ Electrical with 1 Years of Experience in IT Sector</p>

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		Or Level- 5 Qualified in IT Sector		
16	Progression from the qualification (Please show Professional and academic progression)	<b>Professional:</b> AI / ML Associate / Engineer → Senior AI / ML / Engineer → Team Lead (AI) Data Analyst → Senior Data Analyst → Principal Data Analyst  <b>Academic:</b> Skills gain through program will help the students pursuing higher studies in carrying out their research, application development and projects activity more appropriately by applying the data analytic and predictive modelling technique skills.		
17	Arrangements for the Recognition of Prior learning (RPL)	Presently only candidates who undergo training shall be assessed. It will be incorporated once RPL strategy is finalized		
18	International comparability Where known (research evidence to be provided)	NA		
19	Date of planned review of the Qualification.	After Every 5 years		
20	Formal structure of qualification			
Module Code	Module Name	Mandatory/ Optional	Estimated Size (Learning Hours)	Level
AI101	Python Programming	Mandatory	40	5
AI102	Statistical Concepts	Mandatory	20	5
AI103	Data Science and Analytics	Mandatory	20	5
AI104	Machine Learning	Mandatory	80	5
AI105	Deep Learning	Mandatory	80	5

Detail Curriculum attached at **Annexure II.**

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**NSQF QUALIFICATION FILE**

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**SECTION 1**

**ASSESSMENT**

21	<b>Body/Bodies which will carry out assessment:</b> The Examination Section National Institute of Electronics and Information Technology NIELIT Bhawan, Plot No. 3, PSP Pocket, Sector-8, Dwarka, New Delhi-110077
22	<b>How will RPL assessment be managed and who will carry it out?</b> RPL Policy will be described as and when available
23	<b>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.</b>  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. A. Written Assessment (Multiple Choice Questions) B. Practical Assessment & Assignments C. Mini Project  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 course coordinator 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. 3. The assessor assigns roll number. 4. The assessor takes signature of all the students along with the assessor in a prescribed attendance sheet.

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ASSESSMENT EVIDENCE

24. Title of Unit/Component:

Outcomes to be assessed	Assessment Criteria for the outcome	Means of Assessment		
		Total Marks	Written	Practical
Python Programming Skills Required for Artificial Intelligence	Able to write simple Python programs for Real-time problems.	20	8	12
	Develop problem solving capability using python scripts	15	6	9
	Gained Hands on experience to design object-oriented programs with python classes	15	8	9
	<b>Total</b>	<b>50</b>	<b>20</b>	<b>30</b>
Acquiring Skills on Statistical Concepts	Able to use Descriptive & Inferential Statistics concepts in data analysis and algorithm development.	20	8	12
	Develop software applications using Probability Concept: Marginal, Joint & Conditional Probability, Bayes Theorem	15	6	9
	Able to write applications using Probability Distributions, Hypothesis Test, Entropy & Information Gain, Regression & Correlation, Confusion Matrix, Bias & Variance	15	6	9
	<b>Total</b>	<b>50</b>	<b>20</b>	<b>30</b>
Acquiring skills on Data Science and Analytics	Able to Analyze and Process the Data	20	8	12
	Able to use Data Analytics Library: Numpy, Panda for various application	15	6	9

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# NSQF QUALIFICATION FILE

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	Develop applications using Data Visualization techniques such as Matplotlib and Seaborn Library	15	6	9
	<b>Total</b>	<b>50</b>	<b>20</b>	<b>30</b>
Skills acquiring in Machine Learning	Able to develop applications using Machine learning algorithms & Scikit tool	50	20	30
	Develop ML models using Python	50	20	30
	<b>Total</b>	<b>100</b>	<b>40</b>	<b>60</b>
Skills acquiring in Deep Learning	Able to develop applications using Deep learning algorithms & Keras, TensorFlow tool	50	20	30
	Develop DL models using Python	50	20	30
	<b>Total</b>	<b>100</b>	<b>40</b>	<b>60</b>
<b>Total Marks</b>		<b>350</b>	<b>140</b>	<b>210</b>

## Means of assessment

S. No	Examination Pattern	Modules Covered	Duration in Minutes	Maximum Marks
1	Theory 1 - Python Programming, Statistical Concepts and Data Science	1,2,3	90	100
2	Theory 2 - Machine Learning and Deep Learning	4,5	90	100
3	Practical 1 -Data Science, Machine Learning & Deep Learning	3,4,5	180	90
4	Internal Assessment	1,2,3,4,5	-	30
5	Project/Presentation /Assignment		-	30
	<b>Total</b>			<b>350</b>

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## NSQF QUALIFICATION FILE

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### Theory Papers:

1. Python Programming, Statistical Concepts and Data Science - Theory 1
2. Machine Learning and Deep Learning - Theory 2

### Practical Papers:

1. Data Science, Machine Learning & Deep Learning - Practical 1

### 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/ Project/Presentation/Assignment would be evaluated internally.
5. Major Project/Dissertation would be evaluated preferably by External / Subject Expert including NIELIT Officials.
6. Candidate may apply for re-examination within the validity of registration.
7. The examinations would be conducted in English Language only.

## SECTION 2

### 25. EVIDENCE OF LEVEL

Title: Certified Artificial Intelligence (AI) Associate			Level: 5
NSQF Domain	Outcomes of the Qualification/Component	How the job role relates to the NSQF Level Descriptors	NSQF Level
Process required	Developing Artificial Intelligence models using python as the programming language and other data analytics tools.	Requires a command of wide-ranging specialized theoretical and practical skills, involving variable routine and non-routine contexts.	5

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<b>Professional knowledge</b>	Acquiring Knowledge in Python Fundamentals, Statistical concepts, Data Science and Analytics package required for developing Artificial Intelligence models.	Wide-ranging factual and theoretical knowledge in broad contexts within a field of work or study.	5
<b>Professional skill</b>	Ability to develop software systems using AI Models as per the requirement of the application for solving real life problems.	Wide range of cognitive and practical skills required to generate solutions to specific problems in a field of work of study.	5
<b>Core skill</b>	Ability to independently develop the Programming Skills Required for Artificial Intelligence. Ability to use Data Analytics tools: Numpy, Panda for various applications. Ability to use AI tools: Scikit- Learn and keras tensorflow for various applications. Good communication skills in identifying sources of data, as well as new methods of data collection, analysis, and reporting.	Good logical and mathematical skill understanding of social political and natural environment and organising information, communication and presentation skill.	5
<b>Responsibility</b>	Ability to manage the system resources in the most effective manner by appropriate planning, estimation, coordination and control of the activities involved in the design & development of any software applications /project	Full responsibility for output of group and development.	5

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## NSQF QUALIFICATION FILE – Certified Artificial Intelligence (AI) Associate

### SECTION 3

#### EVIDENCE OF NEED

26	<p><b>What evidence is there that the qualification is needed?</b></p> <p>This course has been designed for Up-skilling and to meet the increasing manpower requirements in Artificial Intelligence industry after discussion with our alumni working in various Top IT Industries across in India.</p> <p>a) Market Survey – <a href="https://www.grandviewresearch.com/industry-analysis/machine-learning-market">https://www.grandviewresearch.com/industry-analysis/machine-learning-market</a></p> <p>b) Evidence of Requirement in the Industry <a href="https://insidebigdata.com/2020/12/21/big-data-industry-predictions-for-2021/">https://insidebigdata.com/2020/12/21/big-data-industry-predictions-for-2021/</a></p> <p>c) Evidence of Requirement in the Industry <a href="https://www.newgenapps.com/blog/how-machine-learning-is-changing-the-it-industry/">https://www.newgenapps.com/blog/how-machine-learning-is-changing-the-it-industry/</a></p> <p>d) Market Shares - <a href="https://www.forbes.com/sites/louiscolumnbus/2020/01/19/roundup-of-machine-learning-forecasts-and-market-estimates-2020/?sh=55cdc4e15c02">https://www.forbes.com/sites/louiscolumnbus/2020/01/19/roundup-of-machine-learning-forecasts-and-market-estimates-2020/?sh=55cdc4e15c02</a></p>
27	<p><b>What is the estimated uptake of this qualification and what is the basis of this estimate?</b></p> <p>Estimated uptake is 30 students / Batch / centre with 2 Batches / Year and on the basis of Facilities and Infrastructure in respective NIELIT Centre.</p> <p>Program may also run using Virtual Lab setup for cloud software's and remote access facility available with NIELIT Chennai.</p>
28	<p><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></p> <p>The Qualification does not exist as per information available in public domain.</p>
29	<p><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></p> <p>Based on feedback by participants, employers and based on market survey the qualification will be reviewed in every 5 years.</p>

## NSQF QUALIFICATION FILE – Certified Artificial Intelligence (AI) Associate

### SECTION 4

#### EVIDENCE OF PROGRESSION

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. Evaluation criteria have been added to ensure progression to related path ways identified as per career path.</p>
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### SECTION 5

#### EVIDENCE OF INTERNATIONAL COMPARABILITY

List any Comparisons which have been established

##### 1. Course on Machine Learning & Data Science

- Department of Computer Science, Harvard University offers similar course.  
<https://online-learning.harvard.edu/course/data-science-machine-learning?delta=3>

##### 2. Advanced Certification in Data Science and AI

[https://intellipaat.com/advanced-certification-data-science-artificial-intelligence-iiit-madras/?utm\\_source=google&utm\\_medium=search&utm\\_term=data%20science%20course&utm\\_campaign=s\\_datascience\\_in\\_india\\_nt&gclid=Cj0KCQjws4aKBhDPARIsAIWH0JXn\\_HOVGpAzW\\_rN\\_HrxQmThryLRj3xKTYk7LANtaiTc5psQ33FK7kaAoybEALw\\_wcB](https://intellipaat.com/advanced-certification-data-science-artificial-intelligence-iiit-madras/?utm_source=google&utm_medium=search&utm_term=data%20science%20course&utm_campaign=s_datascience_in_india_nt&gclid=Cj0KCQjws4aKBhDPARIsAIWH0JXn_HOVGpAzW_rN_HrxQmThryLRj3xKTYk7LANtaiTc5psQ33FK7kaAoybEALw_wcB)

##### 3. Course on Machine Learning & AI With Python

- iit Bombay  
(Source: [https://eruditus.exec-ed.iitb.ac.in/certificate-program-in-machine-learning-and-ai-with-python/index.php?utm\\_source=Google&utm\\_medium=Search&utm\\_campaign=IS\\_IN\\_IITB\\_MLAIP\\_GG\\_SE\\_Dec\\_20\\_ML\\_Core\\_BMM\\_Tier\\_1&utm\\_content=ML\\_Course&utm\\_term=%2Bmachine%20%2Blearning%20%2Bcourse](https://eruditus.exec-ed.iitb.ac.in/certificate-program-in-machine-learning-and-ai-with-python/index.php?utm_source=Google&utm_medium=Search&utm_campaign=IS_IN_IITB_MLAIP_GG_SE_Dec_20_ML_Core_BMM_Tier_1&utm_content=ML_Course&utm_term=%2Bmachine%20%2Blearning%20%2Bcourse))

**NSQF QUALIFICATION FILE – Certified Artificial Intelligence (AI) Associate**

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aAgjnEALw\_wcB)

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## Annexure -XIV

(NSQF Course Qualification File Details)

**Course Name: Internet of Things (IoT) Assistant**

Also available at:-

<https://nqr.gov.in/qualifications/4136>



Please refer [Guidelines for STT/TT/Apprenticeship/DQM Qualification File](#)

### QUALIFICATION FILE

Internet of Things (IoT) Assistant

☒ Short Term Training (STT) ☐ Long Term Training (LTT) ☐ Apprenticeship

☐ Upskilling ☐ Dual/Plex Qualification ☐ For ToT ☐ For ToA

☐ General ☐ Multi-skill (MS) ☐ Cross Sectoral (CS) ☒ Future Skills ☐ DEM

NCV/NSQF Level

Submitted By

National Institute of Electronics and Information Technology

NIELIT Bhawan,  
Plot No. 3, PSP Pocket, Sector-8,  
Dwarka, New Delhi-110077,  
Phone: 91-11-2530 8300  
e-mail: [contact@nielit.gov.in](mailto:contact@nielit.gov.in)



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## Section 1: Basic Details

1. Qualification Name	Internet of Things (IoT) Assistant											
2. Sector/s	IT-ITeS											
3. Type of Qualification: <input checked="" type="checkbox"/> New <input type="checkbox"/> Revised <input type="checkbox"/> Has Electives/Options <input type="checkbox"/> OEM	NQR Code & version of existing/previous qualification: (change to previous, once approved)	Qualification Name of existing/previous version:										
4. a. OEM Name b. Qualification Name (Wherever applicable)	Internet of Things (IoT) Assistant											
5. National Qualification Register (NQR) Code & Version (Will be issued after NSQC approval)	6. NC/F/NSQF Level: 3											
7. Award (Certificate/Diploma/Advance Diploma/ Any Other (Wherever applicable specify multiple entry/exits also & provide details in annexure))	Certificate											
8. Brief Description of the Qualification	The Internet of Things (IoT) Assistant Qualification enable the enrolled trainee identify, assemble and do the basic troubleshooting of various electronic components/product used in the IoT ecosystem. After course completion, the trained learner will exhibit a refined posture about the basic working of different IoT based products, its working, testing, installation, debugging-maintenance and troubleshooting.											
9. Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: <table border="1"> <thead> <tr> <th>S. No.</th> <th>Academic/Skill Qualification (with Specialization - if applicable)</th> <th>Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Grade 10<sup>th</sup> Pass</td> <td>NA</td> </tr> <tr> <td>2.</td> <td>Grade 8<sup>th</sup> Pass with two year of (NTC/ NAC) after 8<sup>th</sup> Grade 8 pass and pursuing continuous schooling in regular school with vocational subject</td> <td>NA</td> </tr> </tbody> </table>			S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1.	Grade 10 <sup>th</sup> Pass	NA	2.	Grade 8 <sup>th</sup> Pass with two year of (NTC/ NAC) after 8 <sup>th</sup> Grade 8 pass and pursuing continuous schooling in regular school with vocational subject	NA
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)										
1.	Grade 10 <sup>th</sup> Pass	NA										
2.	Grade 8 <sup>th</sup> Pass with two year of (NTC/ NAC) after 8 <sup>th</sup> Grade 8 pass and pursuing continuous schooling in regular school with vocational subject	NA										



	3. 8th grade pass	2 year relevant experience												
	b. Age: <u>18 to 35</u>													
10. Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCRF))	10 Credits	11. Common Cost Norm Category (S/IBB) (wherever applicable): Category II												
12. Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)	NA													
13. Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)	<input checked="" type="checkbox"/> Offline <input checked="" type="checkbox"/> Online <input type="checkbox"/> Blended <table border="1"> <thead> <tr> <th>Training Delivery Modes</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>OJT Mandatory (Hours)</th> <th>ES</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td>Classroom*</td> <td>90</td> <td>150</td> <td>30</td> <td>30</td> <td>300</td> </tr> </tbody> </table> <p>*As per the availability of online tools the training shall also be offered in online/blended mode. (Refer Blended Learning Annexure for details) 3113.9900</p>		Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	ES	Total (Hours)	Classroom*	90	150	30	30	300
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	ES	Total (Hours)									
Classroom*	90	150	30	30	300									
14. Aligned to NCO/ISCO Codes (if no code is available mention the same)	Academic: Vertical: Level 4: Foundation course in Internet of Things(IoT), Internet of Things (IoT) Associate Level 5: IoT Data Analyst Level 6: Certificate course on Internet of Things (IoT) Applications Professional: IoT Associate → IoT Data Analyst → Team Lead (IoT Analyst) → IoT Developer → Project Manager (IoT Analyst)													
15. Progression path after attaining the qualification (Please show Professional and Academic progression)														
16. Other Indian languages in which the Qualification & Model Curriculum are being submitted	None													

17. Is similar Qualification(s) available on NQR-if yes, justification for this qualification	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No URLs of similar Qualifications:	
18. Is the Job Role Amenable to Persons with Disability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
19. How Participation of Women will be Encouraged	If "Yes", specify applicable type of Disability: to be shared by stake Participation of Women Candidates will be ensured as per Existing government norms. Time to time exclusive batches for women would be run for the proposed course. funding of women batches from IT for masses scheme /other schemes launched by Govt. from time to time	
20. Are Greening/ Environment Sustainability Aspects Covered (Specify the hOS/Module which covers it)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
21. Is Qualification Suitable to be Offered in Schools/Colleges	Schools <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Colleges <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
22. Name and Contact Details of Submitting / Awarding Body SPOC (In case of CS or MS, provide details of both Lead AB & Supporting ABs)	Name: Prakash Pratik Email: ppratik@niet.gov.in Website: www.niet.gov.in Contact No.: 9805081099	
23. Final Approval Date by NSQC: 29/03/2023	24. Validity Duration: 3 years	25. Next Review Date: 29/03/2026

## Section 2: Module Summary

## NOS/s of Qualifications

1. Identification and troubleshooting of Basic Electronics components.
2. Conceptualising IoT Platform - Arduino
3. Conceptualising IoT based use-cases

## Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level. For further details, refer curriculum document.

Th -Theory Pr-Practical OJT-On the Job Man-Mandatory Training Rec-Recommended Proj-Project

S. No	NOS/Module Name	Core/ Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)			Assessment Marks			
					Th.	Pr.	Total	Th.	Pr.	Total	Weightage (%) (if applicable)
1.	NOS 1: Identification and troubleshooting of Basic Electronics components	Core	3	2	20	40	60	50	22.5	72.5	20.71
2.	NOS 2: Conceptualising IoT Platform - Arduino	Core	3	4	50	70	120	100	45	145	41.42
3.	NOS 3: Conceptualising IoT based use-cases	Core	3	2	20	40	60	50	22.5	72.5	20.71
Sub total (A)					90	150	240	200	90	290	
4.	Employability Skills (B)	Non-Core	3	1	30			30			8.57
5.	OJT/Project* (C)	Core	3	1	30			30			8.57
Duration (in Hours) /Total Marks (A+B+C)					10			360			100

Assessment Components	NOS Included	Duration (in mins)	Marks
Theory 1: IoT Assistant Paper-1	NOS 1, NOS 3	90	100
Theory 2: IoT Assistant Paper-2	NOS 2	90	100
Practical: IoT Assistant	NOS 1, NOS 2, NOS 3	180	90
Employability Skills	Employability Skills	-	30
OJT	OJT	-	30
Total:			350

\*\*\*Assessment strategy shall be as per NIELIT Norms prevailing at times.

## Assessment - Minimum Qualifying Percentage

Minimum Pass Percentage – Aggregate at qualification level: 55 % (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)

## Section 3: Training Related

1.	Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	O-Level (IT) / BCA / BSc(IT/CS) / Diploma in CS/IT/EC/EE allied area with 1 year of Experience in training or higher.
2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	B-LEVEL / MCA / B.Tech in CS/IT/EC/EE/ allied areas with an experience of 2 years in training

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3.	Tools and Equipment Required for Training	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If "Yes", details to be provided in Annexure)
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	NA

## Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) (as per NCVT guidelines)	External Experts prepare the Question bank who have domain expertise. Theory and Practical Papers prepared from the question bank by the experts in the field. The theory examinations shall be conducted in online mode
2.	Proctor's Qualification and experience in relevant sector (in years) (as per NCVT guidelines)	Graduate in any discipline with 3 years of experience
3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVT guidelines)	B.Tech in CS/IT/EC/EE/ allied areas, MCA, B-Level IT
4.	Assessment Mode (Specify the assessment mode)	Online for Theory Online/Offline/Blended for Practical
5.	Tools and Equipment Required for Assessment	<input checked="" type="checkbox"/> Same as for training <input type="checkbox"/> Yes <input type="checkbox"/> No (details to be provided in Annexure-if it is different for Assessment)

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## Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name

1.	Latest Skill Gap Study (not older than 2 years) (Yes/No): Yes
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): Yes
3.	Government/Industry initiatives/ requirement (Yes/No): Yes
4.	Number of Industry validation provided: ?
5.	Estimated nos. of persons to be trained and employed:
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: If "No", why: No NIELIT is recognized as AB and AA under Government Category. NIELIT is HRD arm of MeitY.

## Section 6: Annexure &amp; Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	Annexure: NCIF/NSQF level justification based on NCIF level/NSQF descriptors (Mandatory)	Available at Annexure-I: Evidence of Level
2.	Annexure: List of tools and equipment relevant for qualification (Mandatory, except in case of online course)	Available at Annexure-II: Tools and Equipment
3.	Annexure: Detailed Assessment Criteria (Mandatory)	Available at Annexure-VI: Detailed Assessment Criteria
4.	Annexure: Assessment Strategy (Mandatory)	Available at Annexure-VI: Detailed Assessment Strategy
5.	Annexure: Blended Learning (Mandatory, in case selected Mode of delivery is "Blended Learning")	Available at Annexure-V: Blended Learning
6.	Annexure: Multiple Entry-Exit Details (Mandatory, in case qualification has multiple Entry-Exit)	NA
7.	Annexure: Acronym and Glossary (Optional)	Available at Annexure-X: Acronym and Glossary
8.	Supporting Document: Model Curriculum (Mandatory - Public view)	Available at Annexure-A: Model Curriculum
9.	Supporting Document: Career Progression (Mandatory - Public view)	Available at Annexure-VIII: Career Progression

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10.	Supporting Document: Occupational Map (Mandatory)	NA
11.	Supporting Document: Assessment SOP (Mandatory)	Available at Annexure-C: Examination SoP
12.	Any other document you wish to submit:	NA

## Annexure I: Evidence of Level

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
Professional Theoretical Knowledge/Process	1. Gain the understanding and learn the power of embedded system and its ecosystem 2. Students are able to understand the concept of IoT devices and its applications. 3. Students learn the code and build simple IoT applications/use cases	1. Possesses specialized operational knowledge and understanding of the work. 2. Have complete knowledge of the concept of time required for delivery; and Quality for a range of issues	3
Professional and Technical Skills/ Expertise/ Professional Knowledge	1. Work in embedded C language 2. Read data from sensors and perform operations 3. Display the processed data on LCD output and/or control actuators accordingly.	1. Possesses specialized professional and technical skills, displays clarity of professional knowledge and technical skills in a broad range of activities/ tasks. 2. Have knowledge of collecting and interpreting the available information, drawing conclusions & communicating the same	3
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	1. Introduction to Employability Skills 2. Career Development & Goal Setting 3. Becoming a Professional in the 21st Century 4. Constitutional values - Citizenship 5. Basic English Skills 6. Communication Skills 7. Essential Digital Skills 8. Financial and Legal Literacy 9. Customer Service 10. Entrepreneurship 11. Diversity & Inclusion	1. Can explain Entrepreneurial Mindset and describe the importance of it in the context of opportunity creation for future jobs. 2. Can comfortably use most of the basic software with proficiency. 3. Have the ability to relate to the 5 pillars of Social Emotional Skills and describe the similarities between SES and Emotional Intelligence.	3

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	12. Getting Ready for Apprenticeship & Jobs		
Broad Learning Outcomes/Core Skill	1. Build and test prototype for IoT based use cases	1. Students are able to code and build IoT based system using sensors and actuators	3
Responsibility	1. Code embedded programs in C language to interface sensors 2. Read input from sensors and display on LCD output	1. Takes complete responsibility for delivery and quality of own work and output.	3

## Annexure II : Tools and Equipment (Lab Set-Up)

## List of Tools and Equipment

## Batch Size:

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1.	Desktop computer with accessories	Installed with Arduino IDE (Open Source)	15
2.	Sensors and actuators (DHT11, ultrasonic sensor, LDR, MQ3, MQ135, water level sensor, soil moisture sensor, Motor driver, Relay, Displays)	As per requirement	
3.	Arduino Uno		15
4.	Classroom	1 (30 Sq.m)	30
5.	Student Chair	30	30
6.	Student Table	30	30

## Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Classroom-1, 30 Sq. mtr area, white Board, LCD projector-1
2. Study Chair- 30, Study table-30

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Annexure III: Industry Validations Summary

Provide the summary information of all the industry validations in table. This is not required for OEM qualifications.

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID
1	Jen Samridhi Dumka	Gobind Nath Maji	Secretary	Mahesh Munda Road, Nutandih, Near Sido Kanhu Model School Nutandih, Nala, Jamtara, Jharkhand-815355	8789620133	gobind107@gmail.com
2	Jay Enterprise	Gagandeep Singh	CEO	Plot No 181/31, Industrial Area Phase 1 Chandigarh 160002	6284385976	gagandeepsingh@jenterpris.in
3	Jagan Electronic Circuits	Jagan Singh	Proprietor	Plot no. 539, Industrial Area, Phase 9, SAS Nagar, Mohali, Punjab-160062	9417621856	jagarpct@gmail.com
4	Ekam Mechatronics Systems	Manjit Singh	Proprietor	Plot no. EL-641-A, Industrial Area, Phase 9, SAS Nagar, Mohali, Punjab	7087296011	machopra@hotmail.com
5	Filipert Technologies Pvt. Ltd.	Ekampreet Kaur	Director	Reg Office: 3174 Sector 46C, Chandigarh 160047	7087273174	Ekam01kaur@gmail.com
6	United Computer	Subhasis Choudhury	Chief Executive	Chotonipura (Patala), P.O. Sripally, Burdwan-713103	9641820665	United-computer97@rediffmail.com
7	Buanel Studio Pvt. Ltd.	Lalrinsuala	CEO	Buanel Studio Pvt. Ltd.	8732856261	psalrinsuala@gmail.com

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Annexure IV : Training & Employment Details

Training and Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities
2023	1000	100	200	20	10	1
2024	1000	100	200	20	10	1
2025	1000	100	200	20	10	1

Data to be provided year-wise for next 3 years

Annexure V: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools:

Refer NCVET "Guidelines for Blended Learning for Vocational Education, Training & Skilling" available on:

<https://ncvet.gov.in/sites/default/files/Guidelines%20for%20Blended%20Learning%20for%20Vocational%20Education%20Training%20&20Skilling.pdf>

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline: Online Ratio
1	Theory/ Lectures - Imparting theoretical and conceptual knowledge	Online interaction platforms like Jitsi Meet, Bharat VC, Google Meet, MS Teams, etc.	60:40
2	Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	Online interaction platforms like Jitsi Meet, Bharat VC, Google Meet, MS Teams, etc.	60:40
3	Showing Practical Demonstrations to the learners	Online interaction platforms like Jitsi Meet, Bharat VC, Google Meet, MS Teams, etc.	60:40
4	Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	NA	100:0
5	Tutorials/ Assignments/ Onlr Practice	Online interaction platforms like Jitsi Meet, Bharat VC, Google Meet, MS Teams, etc.	50:50

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6	Proctored Monitoring/ Assessment/ Evaluation/ Examinations	NIELIT Remote Proctored Software	Online: 100% Theory Offline: 100% Practical
7	On the Job Training (OJT) Project Work Internship/ Apprenticeship Training	Simulated Platform	Either 100% online on virtual environment Or 100% offline in the Industry.

## Annexure VI: Detailed Assessment Criteria

Detailed assessment criteria for each NOS/Module are as follows:

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks
NOS1: Identification and troubleshooting of Basic Electronics components.	1. Identification of electronic components 2. Understanding the Fundamentals of basic electronics 3. Troubleshooting of electronics components 4. Understanding the operation of measurement devices.	50	22.5
NOS 2: Conceptualising IoT Platform - Arduino	1. Introduction to microprocessor and micro controller 2. Introduction to Internet of Things(IoT) – applications, protocols, use-cases 3. Introduction to Arduino 4. Embedded C Language 5. Interfacing of sensors and actuators with Arduino Boards	100	45
NOS 3 : Conceptualising IoT based use-cases	1. Smart Street Light control 2. Home automation using Arduino 3. Password enabled Digital Lock using Arduino	50	22.5
Employability skill			30
OJT/Project			30
<b>Total</b>			<b>358</b>

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## Annexure VII : Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program.

Mention the detailed assessment strategy in the provided template.

## 1. Assessment System Overview:

- Batches assigned to the assessment agencies for conducting the assessment on SIF or email
- Assessment agencies send the assessment confirmation to VTP/TC looping SSC
- Assessment agency deploys the ToA certified Assessor for executing the assessment
- SSC monitors the assessment process & records

## 2. Testing Environment:

- Check the Assessment location, date and time
- If the batch size is more than 30, then there should be 2 Assessors
- Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.

## 3. Assessment Quality Assurance levels/Framework:

- Question bank is created by the Subject Matter Experts (SME) are verified by the other SME
- Questions are mapped to the specified assessment criteria
- Assessor must be ToA certified & trainer must be ToT Certified

## 4. Types of evidence or evidence-gathering protocol:

- Time-stamped & geo-tagged reporting of the assessor from assessment location
- Centre photographs with signboards and scheme specific branding

## 5. Method of verification or validation:

- Surprise visit to the assessment location
- Method for assessment documentation, archiving, and access

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- Hard copies of the documents are stored

**On the Job:**

1. Each module (which covers the job profile of Automotive Service Assistant Technician) will be assessed separately.
2. The candidate must score 60% in each module to successfully complete the OJT.
3. Tools of Assessment that will be used for assessing whether the candidate is having desired skills and etiquette of dealing with customers, understanding needs & requirements, assessing the customer and perform Soft Skills effectively.
  - Video of Trainees during OJT
4. Assessment of each Module will ensure that the candidate is able to:
  - Effective engagement with the customers
  - Understand the working of various tools and equipment

## Annexure-VIII: Career Progression

**Academic:****Vertical:**

Level 4 : Foundation course in Internet of Things(IoT), Internet of Things (IoT) Associate

Level 5: IoT Data Analyst

Level 6: Certificate course on Internet of Things (IoT) Applications

**Professional:**

IoT Associate -&gt;

IoT Data Analyst -&gt;Team Lead (IoT Analyst)-&gt;IoT Developer-&gt;Project Manager (IoT Analyst)

## Annexure X : Acronym and Glossary

**Acronym**

Acronym	Description
AA	Assessment Agency

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AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCRF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training

**Glossary**

Term	Description
National Occupational Standards (NOS)	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. <a href="https://ncvet.gov.in/sites/default/files/NCVET.pdf">https://ncvet.gov.in/sites/default/files/NCVET.pdf</a>

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## Annexure –XV

(NSQF Course Qualification File Details)

**Course Name: Internet of Things (IoT) Associate**

Also available at:-

<https://nqr.gov.in/qualifications/4137>



Please refer [Guidelines for STT/LTT/Apprenticeship/OEM Qualification File](#)

### QUALIFICATION FILE

Internet of Things(IoT) Associate

☒ Short Term Training (STT) ☐ Long Term Training (LTT) ☐ Apprenticeship  
☐ Upskilling ☐ Dual/Flexi Qualification ☐ For ToT ☐ For ToA

☐ General ☐ Multi-skill (MS) ☐ Cross Sectoral (CS) ☒ Future Skills ☐ OEM

NCrF/NSQF Level:

Submitted By:

National Institute of Electronics and Information Technology

NIELIT Bhawan,  
Plot No. 3, PSP Pocket, Sector-8,  
Dwarka, New Delhi-110077,  
Phone : 91-11-2530 5300  
e-mail : [contact@nielit.gov.in](mailto:contact@nielit.gov.in)

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## Section 1: Basic Details

1. Qualification Name	Internet of Things (IoT) Associate								
2. Sector/s	IT-TeS								
3. Type of Qualification: <input checked="" type="checkbox"/> New <input type="checkbox"/> Revised <input type="checkbox"/> Has Electives/Options <input type="checkbox"/> OEM	NQR Code & version of existing/previous qualification: (change to previous, once approved)	Qualification Name of existing/previous version:							
4. a. OEM Name b. Qualification Name (Wherever applicable)	Internet of Things (IoT) Associate								
5. National Qualification Register (NQR) Code & Version (Will be issued after NSQC approval)	6. NCRF/NSQF Level: 4								
7. Award (Certificate/Diploma/Advance Diploma/ Any Other (Wherever applicable specify multiple entry/exits also & provide details in annexure))	Certificate								
8. Brief Description of the Qualification	The Internet of Things (IoT) Associate Qualification enables the enrolled trainee program, install and do the required troubleshooting of IoT based products. After course completion, the trained learner will exhibit a refined posture about the basic programming skills required to program the microcontroller used in IoT devices. This enhances the working of these devices in interdisciplinary areas without degrading their performance.								
9. Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: <table border="1"> <thead> <tr> <th>S. No.</th> <th>Academic/Skill Qualification (with Specialization - if applicable)</th> <th>Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td> <ul style="list-style-type: none"> <li>12th grade pass</li> <li>Completed 2nd year of 3-year diploma (after 10th) and pursuing regular diploma</li> </ul> </td> <td>NA</td> </tr> </tbody> </table>			S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1.	<ul style="list-style-type: none"> <li>12th grade pass</li> <li>Completed 2nd year of 3-year diploma (after 10th) and pursuing regular diploma</li> </ul>	NA
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)							
1.	<ul style="list-style-type: none"> <li>12th grade pass</li> <li>Completed 2nd year of 3-year diploma (after 10th) and pursuing regular diploma</li> </ul>	NA							

	<ul style="list-style-type: none"> <li>10th grade pass plus 2-year NTC</li> <li>10th grade pass plus 1-year NTC plus 1 year NAC</li> <li>10<sup>th</sup>-grade pass and pursuing continuous schooling</li> <li>Internet of Things (IoT) Assistant NOS from 1-6 will be exempted from Previous NSQF Qualification of Level 3</li> </ul>													
	b. Age: <u>No Bar</u>													
10. Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCF))	15 Credits	11. Common Cost Norm Category (if/where applicable): Category II												
12. Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)	N/A													
13. Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)	<table border="1"> <thead> <tr> <th>Mode of Training Delivery</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>OJT Mandator y (Hours)</th> <th>ES</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td>Classroom*</td> <td>120</td> <td>210</td> <td>80</td> <td>60</td> <td>450</td> </tr> </tbody> </table> <p>*As per the availability of online tools the training shall also be offered in online/blended mode. (Refer Blended Learning Annexure for details) 3113 9900</p>		Mode of Training Delivery	Theory (Hours)	Practical (Hours)	OJT Mandator y (Hours)	ES	Total (Hours)	Classroom*	120	210	80	60	450
Mode of Training Delivery	Theory (Hours)	Practical (Hours)	OJT Mandator y (Hours)	ES	Total (Hours)									
Classroom*	120	210	80	60	450									
14. Aligned to NCO/ISCO Codes (if no code is available mention the same)	Academic: Vertical: Level 4.5: Internet of Things (IoT) Developer													
15. Progression path after attaining the qualification (Please show Professional and Academic progression)														

	Level 5: IoT Data Analyst Level 6: Certificate course on Internet of Things (IoT) Applications Professional: IoT Data Analyst -> Team Lead (IoT Analyst)->IoT Developer->Project Manager (IoT Analyst)	
16. Other Indian languages in which the Qualification & Model Curriculum are being submitted	None	
17. Is similar Qualification(s) available on NQR-if yes, justification for this qualification	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No URLs of similar Qualifications:	
18. Is the Job Role Amenable to Persons with Disability	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If "Yes", specify applicable type of Disability: <i>to be shared by stake</i>	
19. How Participation of Women will be Encouraged	Participation of Women Candidates will be ensured as per Existing government norms. Time to time exclusive batches for women would be run for the proposed course, funding of women batches from IT for masses scheme /other schemes launched by Govt. from time to time	
20. Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
21. Is Qualification Suitable to be Offered in Schools/Colleges	Schools <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Colleges <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
22. Name and Contact Details of Submitting / Awarding Body SPOC (In case of CS or MS, provide details of both Lead AB & Supporting ABs)	Name: Dr. Sarwan Singh Email: <a href="mailto:sarwan@nielit.gov.in">sarwan@nielit.gov.in</a> Website: <a href="http://www.nielit.gov.in">www.nielit.gov.in</a> Contact No.: 9815621657	
23. Final Approval Date by NSQF: 29/03/2023	24. Validity Duration: 3 years	25. Next Review Date: 29/03/2026

## Section 2: Module Summary

## NOS/s of Qualifications

1. Identification and troubleshooting of Basic Electronics components.
2. Conceptualising IoT Platform - Arduino.
3. Conceptualising IoT based use-cases.
4. Fundamentals of wireless IoT using NodeMCU.

## Mandatory NOS/s

Specify the training duration and assessment criteria at NOS/Module level. For further details, refer curriculum document.

Th - Theory Pr - Practical OJT-On the Job Man-Mandatory Training Rec-Recommended Proj-Project

S. No	NOS/Module Name	Core/Non-Core	NCrF/N SQF Level	Credits as per NCrF	Training Duration (Hours)			Assessment Marks			
					Th.	Pr.	Total	Th.	Pr.	Total	Weightage (%) (If applicable)
1.	NOS 1: Identification and troubleshooting of Basic Electronics components	Core	4	2	20	40	60	40	16	56	18
2.	NOS 2: Conceptualising IoT Platform - Arduino	Core	4	4	45	75	120	67	33	100	29
3.	NOS 3: Conceptualising IoT based use-cases.	Core	4	2	15	45	60	33	16	49	14
4.	NOS 4: Fundamentals of wireless IoT using NodeMCU	Core	4	3	40	50	90	60	25	85	24

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S. No	NOS/Module Name	Core/Non-Core	NCrF/N SQF Level	Credits as per NCrF	Training Duration (Hours)			Assessment Marks			
					Th.	Pr.	Total	Th.	Pr.	Total	Weightage (%) (If applicable)
Sub-total (A)					120	210	330	200	90	290	83
5.	Employability Skills (B)	Non-Core	4	2	60			30			8.5
6.	OJT/Project* (C)	Core	4	2	60			30			8.5
Duration (in Hours) / Total Marks (A+B+C)				18	450			350			100

Assessment Components	NOS Included	Duration (in mins)	Marks
Theory 1: IoT Associate Paper-1	NOS 1, NOS 4	90	100
Theory 2: IoT Associate Paper-2	NOS 2, NOS 3	90	100
Practical: IoT Assistant	NOS 1, NOS 2, NOS 3, NOS 4	180	90
Employability Skills	Employability Skills	-	30
Project/OJT	Project/OJT	-	30
Total:			350

\*\*\*Assessment strategy shall be as per NIELIT Norms prevailing at times.

Assessment - Minimum Qualifying Percentage

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**Minimum Pass Percentage – Aggregate at qualification level: 50 %** (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)

#### Section 3: Training Related

1. Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	BCA / BSc(IT/CS) / Diploma in CS/IT/EC/EE allied area with 1 year of Experience in training or higher.
2. Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	B-LEVEL / MCA/ B.Tech in CS/IT/EC/EE/ allied areas with an experience of 2 years in training
3. Tools and Equipment Required for Training	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If "Yes", details to be provided in Annexure)
4. In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	NA

#### Section 4: Assessment Related

1. Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	External Experts prepare the Question bank who have domain expertise. Theory and Practical Papers prepared from the question bank by experts in the field. The theory examinations shall be conducted in an online mode
2. Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Graduate or any discipline, with 2 years of experience
3. Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	B.Tech in CS/IT/EC/EE/ allied areas, MCA, B-Level IT
4. Assessment Mode (Specify the assessment mode)	Online for Theory Online/Offline/Blended for Practical
5. Tools and Equipment Required for Assessment	<input checked="" type="checkbox"/> Same as for training <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (details to be provided in Annexure if it is different for Assessment)

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#### Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name

1. Latest Skill Gap Study (not older than 2 years) (Yes/No): Yes	
2. Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): Yes	
3. Government/Industry initiatives/ requirement (Yes/No): Yes	
4. Number of Industry validation provided: ?	
5. Estimated nos. of persons to be trained and employed:	
6. Evidence of Concurrence/Consultation with Line Ministry/State Departments: If "No", why: No NIELIT is recognized as AB and AA under Government Category. NIELIT is HRD arm of MeitY.	

#### Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1. Annexure: NCIF/NSQF level justification based on NCIF level/NSQF descriptors (Mandatory)	Available at Annexure-I: Evidence of Level
2. Annexure: List of tools and equipment relevant for qualification (Mandatory, except in case of online course)	Available at Annexure-II: Tools and Equipment
3. Annexure: Detailed Assessment Criteria (Mandatory)	Available at Annexure-VI: Detailed Assessment Criteria
4. Annexure: Assessment Strategy (Mandatory)	Available at Annexure-VI: Detailed Assessment Strategy
5. Annexure: Blended Learning (Mandatory, in case the selected Mode of delivery is "Blended Learning")	Available at Annexure-V: Blended Learning
6. Annexure: Multiple Entry-Exit Details (Mandatory, in case of qualification has multiple Entry-Exit)	NA
7. Annexure: Acronym and Glossary (Optional)	Available at Annexure-X: Acronym and Glossary
8. Supporting Document: Model Curriculum (Mandatory – Public view)	Available at Annexure-A: Model Curriculum

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9.	Supporting Document: Career Progression (Mandatory - Public view)	Available at Annexure-VIII: Career Progression
10.	Supporting Document: Occupational Map (Mandatory)	NA
11.	Supporting Document: Assessment SOP (Mandatory)	Available at Annexure-C: Examination SoP
12.	Any other document you wish to submit:	NA

## Annexure I: Evidence of Level

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
<b>Professional Theoretical Knowledge/Process</b>	1. Gain the understanding and learn the power of embedded system and its ecosystem 2. Students are able to understand the concept of IoT devices and its applications. 3. Students learn the code and build simple IoT applications/use cases	1. Possesses specialized operational knowledge and understanding of the work. 2. Have complete knowledge of the concept of time required for delivery; and Quality for a range of issues	4
<b>Professional and Technical Skills/ Expertise/ Professional Knowledge</b>	1. Work in embedded C language 2. Read data from sensors and perform operations 3. Display the processed data on LCD output and/or control actuators accordingly. 4. Understand the uses of wireless ecosystem and build applications using wi-fi	1. Possesses specialized professional and technical skills; displays clarity of professional knowledge and technical skills in a broad range of activities/ tasks. 2. Have knowledge of collecting and interpreting the available information, drawing conclusions & communicating the same	4
<b>Employment Readiness &amp; Entrepreneurship Skills &amp; Mind-set/Professional Skill</b>	1. Introduction to Employability Skills 2. Career Development & Goal Setting 3. Becoming a Professional in the 21st Century 4. Constitutional values - Citizenship 5. Basic English Skills 6. Communication Skills 7. Essential Digital Skills 8. Financial and Legal Literacy 9. Customer Service 10. Entrepreneurship	1. Can explain Entrepreneurial Mindset and describe the importance of it in the context of opportunity creation for future jobs. 2. Can comfortably use most of the basic software with proficiency. 3. Have the ability to relate to the 5 pillars of Social Emotional Skills and describe the similarities between SES and Emotional Intelligence.	4

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	11. Diversity & Inclusion 12. Getting Ready for Apprenticeship & Jobs		
<b>Broad Learning Outcomes/Core Skill</b>	1. Build and test prototype for IoT based use cases	1. Students are able to code and build IoT based system using sensors and actuators	4
<b>Responsibility</b>	1. Code embedded programs in C language to interface sensors. 2. Read input from sensors and display on LCD output. 3. Build system using wi-fi and interface sensors and actuators	1. Takes complete responsibility for delivery and quality of own work and output.	4

## Annexure II: Tools and Equipment (Lab Set-Up)

## List of Tools and Equipment

## Batch Size:

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1.	Desktop computer with accessories	Installed with Arduino IDE	30
2.	Sensors and actuators (DHT11, ultrasonic sensor, LDR, MQ3, MQ135, water level sensor, soil moisture sensor, Motor driver, Relay, Displays)	As per requirement	15
3.	Arduino Uno		15
4.	NodeMCU, HC05, RFID		15
4.	Classroom	1 (30 Sq.m)	30
5.	Student Chair	30	30
6.	Student Table	30	30

## Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Classroom-1, 30 Sq. m/ area, whiteboard, LCD projector-1
2. Study Chair – 30, Study table – 30

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Annexure III: Industry Validations Summary

Provide the summary information of all the industry validations in table. This is not required for OEM qualifications

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID
1	Jan Samridhi Dumka	Gobind Nath Maji	Secretary	Mahesh Munda Road, Nutandh, Near Sido Kanhu Model School Nutandh, Nala, Jamtara, Jharkhand-815355	8789620133	gobind107@gmail.com
2	Jay Enterprise	Gagandeep Singh	CEO	Plot No 181/31, Industrial Area Phase 1 Chandigarh 160052	6284385976	gagandeepsingh@jayerprises.in
3	Jagan Electronic Circuits	Jagan Singh	Proprietor	Plot no. 539, Industrial Area, Phase B, SAS Nagar, Mohali, Punjab-160062	9417621856	jaganpcts@gmail.com
4	Ekam Mechatronics Systems	Manjit Singh	Proprietor	Plot no. EL-641-A, Industrial Area, Phase B, SAS Nagar, Mohali, Punjab	7087296011	mechopra@hotmail.com
5	Filipert Technologies Pvt. Ltd	Ekampreet Kaur	Director	Reg Office: 3174 Sector 48C, Chandigarh 160047	7067273174	Ekam01kaur@gmail.com
6	United Computer	Subhasis Choudhury	Chief Executive	Chotonipur (Patala), P.O. Sripally, Burdwan-713103	9641820965	United-computer97@rediffmail.com
7	Buanel Studio Pvt. Ltd	Lalrinzuala	CEO	Buanel Studio Pvt. Ltd.	8732856261	psalrinzuala@gmail.com

Annexure IV : Training & Employment Details

Training and Employment Projections:

Year	Total Candidates	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Women Estimated Employment Opportunities	People with Disability Estimated Training #	Estimated Employment Opportunities
2023	1000	100	200	20	10	1	1
2024	1000	100	200	20	10	1	1

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2025	1000	100	200	20	10	1
------	------	-----	-----	----	----	---

Data to be provided year-wise for next 3 years

Annexure V: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools:

Refer NCVET "Guidelines for Blended Learning for Vocational Education, Training & Skilling" available on:

<https://ncvet.gov.in/sites/default/files/Guidelines%20for%20Blended%20Learning%20for%20Vocational%20Education%20Training%20&%20Skilling.pdf>

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline : Online Ratio
1	Theory/ Lectures - Imparting theoretical and conceptual knowledge	Online interaction platforms like Jitsi Meet, Bharat VC, Google Meet, MS Teams, etc.	60:40
2	Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	Online interaction platforms like Jitsi Meet, Bharat VC, Google Meet, MS Teams, etc.	60:40
3	Showing Practical Demonstrations to the learners	Online interaction platforms like Jitsi Meet, Bharat VC, Google Meet, MS Teams, etc.	60:40
4	Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	NA	100:0
5	Tutorials/ Assignments/ Drill Practice	Online interaction platforms like Jitsi Meet, Bharat VC, Google Meet, MS Teams, etc.	50:50
6	Proctored Monitoring/ Assessment/ Evaluation/ Examinations	NIELIT Remote Proctored Software	Online: 100% Theory Offline: 100% Practical
7	On the Job Training (OJT) Project Work Internship/ Apprenticeship Training	Simulated Platform	Either 100% online on virtual environment Or 100% offline in the Industry.

Annexure VI: Detailed Assessment Criteria

Detailed assessment criteria for each NSQF Module are as follows:

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NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks
NOS1: Identification and troubleshooting of Basic Electronics components.	1. Identification of electronics components 2. Understanding the Fundamentals of basic electronics 3. Troubleshooting of electronics components 4. Understanding the operation of measurement devices.	40	16
NOS 2: Conceptualising IoT Platform - Arduino	1. Introduction to microprocessor and micro controller 2. Introduction to Internet of Things(IoT) – applications, protocols, use-cases 3. Introduction to Arduino 4. Embedded C Language 5. Interfacing of sensors and actuators with Arduino Boards	67	33
NOS 3 : Conceptualising IoT based use-cases	1. Smart Street Light control 2. Home automation using Arduino 3. Password enabled Digital Lock using Arduino	33	18
NOS 4 : Fundamentals of wireless IoT using NodeMCU	1. Fundamentals and architecture of wireless IoT 2. TCP/IP modelling for IoT 3. NodeMCU as an IoT Platform 4. Fundamentals of cloud Platforms 5. Implementation of cloud based IoT use cases	60	25
Employability skill			30
OJT/Project			30
<b>Total</b>			<b>350</b>

## Annexure VII : Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program.

Mention the detailed assessment strategy in the provided template.

## 1. Assessment System Overview

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- Batches assigned to the assessment agencies for conducting the assessment on SIP or email
  - Assessment agencies send the assessment confirmation to VTPTTC looping SSC
  - Assessment agency deploys the ToA certified Assessor for executing the assessment
  - SSC monitors the assessment process & records
2. Testing Environment:
- Check the Assessment location, date and time
  - If the batch size is more than 30, then there should be 2 Assessors.
  - Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct
3. Assessment Quality Assurance levels/Framework:
- Question bank is created by the Subject Matter Experts (SME) are verified by the other SME
  - Questions are mapped to the specified assessment criteria
  - Assessor must be ToA certified & trainer must be ToT Certified
4. Types of evidence or evidence-gathering protocol:
- Time-stamped & geo-tagged reporting of the assessor from assessment location
  - Centre photographs with signboards and scheme specific branding
5. Method of verification or validation:
- Surprise visit to the assessment location
6. Method for assessment documentation, archiving, and access:
- Hard copies of the documents are stored
- On the Job:**
1. Each module (which covers the job profile of Automotive Service Assistant Technician) will be assessed separately.
  2. The candidate must score 60% in each module to successfully complete the OJT.
  3. Tools of Assessment that will be used for assessing whether the candidate is having desired skills and etiquette of dealing with customers, understanding needs & requirements, assessing the customer and perform Soft Skills effectively:
    - Videos of Trainees during OJT
  4. Assessment of each Module will ensure that the candidate is able to:
    - Effective engagement with the customers

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- Understand the working of various tools and equipment

Annexure VIII: Career Progression

**Academic:**

**Vertical:**

Level 4.5: Internet of things (IoT) Developer

Level 5: IoT Data Analyst

Level 6: Certificate course on Internet of Things (IoT) Applications

**Professional:**

IoT Data Analyst → Team Lead (IoT Analyst) → IoT Developer → Project Manager (IoT Analyst)

Annexure X: Acronym and Glossary

**Acronym**

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrf	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework

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OJT On the Job Training

**Glossary**

Term	Description
National Occupational Standards (NOS)	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. <a href="https://ncvrt.gov.in/sites/default/files/NCVLT.pdf">https://ncvrt.gov.in/sites/default/files/NCVLT.pdf</a>

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## **Annexure -XVI**

(NSQF Course Qualification File Details)

**Course Name: Assembly & Maintenance of Personal Computer**

Also available at:-

<https://nqr.gov.in/qualifications/2690>

**NSQF QUALIFICATION FILE**

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

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

National Institute of Electronics and Information Technology (NIELIT)  
NIELIT Bhawan, Plot No. 3, PSP Pocket, Sector-II,  
Dwarka, New Delhi-110077

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

<b>Name:</b>	H. Ghananjoy Singh
<b>Position in the organisation:</b>	Scientist -C
<b>Address if different from above:</b>	NIELIT Imphal Akampat P.O. Box-104, Imphal Manipur -795001
<b>Tel number(s):</b>	8787583403 / (0385) 2454109
<b>E-mail address:</b>	dir-imphal@nielit.gov.in / ghananjoy@gmail.com

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

1. Talent Demand Supply Analysis Report
2. PC Market Report
3. Occupations and Career Opportunities
4. Industry Validation (Attached at Annexure I)
5. Detailed Curriculum (Attached at Annexure II)

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

- **Indicative list of tools/equipment to conduct the training**
  - Available in Annexure II
- **Trainers qualification**
  - Available in Annexure II
- **Lesson Plan**
  - Available in Annexure II
- **Distribution of training duration into theory/practical/OJT component**
  - Available in Annexure II



**NSQF QUALIFICATION FILE**

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

**SUMMARY**

1	Qualification Title	Assembly & Maintenance of Personal Computer
2	Qualification Code, if any	—
3	NCO code and occupation	3512 0101, Domestic IT Helpdesk Attendant
4	Nature and purpose of the qualification (Please specify whether qualification is short term or long term)	Short Term course and this course will enable the students to understand the fundamentals of Computer and enabling them to assemble, troubleshoot and installation of hardware, software & peripherals devices of Computer.
5	Body/bodies which will award the qualification	National Institute of Electronics and Information Technology (NIELIT) NIELIT Bhawan, Plot No. 3, PSP Pocket, Sector-8, Dwarka, New Delhi-110077
6	Body which will accredit providers to offer courses leading to the qualification	Examination Wing, National Institute of Electronics and Information Technology (NIELIT) NIELIT Bhawan, Plot No. 3, PSP Pocket, Sector-8, Dwarka, New Delhi-110077
7	Whether accreditation/affiliation norms are already in place or not, if applicable (if yes, attach a copy)	NA
8	Occupation(s) to which the qualification gives access	Computer Technician, Technical Support (Desktop)
9	Job description of the occupation	Computer Technician are responsible for setting up of new computer systems, install new operating system, configure software & drivers and perform routine maintenance like software update, disk clean-up etc. They are also responsible for repairing the computer hardware when required.
10	Licensing requirements	NA
11	Statutory and Regulatory	NA



# NSQF QUALIFICATION FILE

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

	requirement of the relevant sector (documentary evidence to be provided)	
12	Level of the qualification in the NSQF	3
13	Anticipated volume of training/learning required to complete the qualification	240 hours
14	Indicative list of training tools required to deliver this qualification	Available in Annexure II
15	Entry requirements and/or recommendations and minimum age	10 <sup>th</sup> Pass
16	Progression from the qualification (Please show Professional and academic progression)	<p><b>Academic progression:</b></p> <p>Assembly &amp; Maintenance of PCs (NLS-2019) (Level 3)</p> <p>↓</p> <p>Diploma in Computer Hardware Maintenance (CTM - D) (Level 4)</p> <p>↓</p> <p>Advanced Diploma in Hardware Networking &amp; Software Security (X2850) (Level 5)</p> <p>↓</p> <p>Advanced Diploma in Computer Hardware Maintenance &amp; Networking (CTM - A) (Level 5)</p> <p>After completion of this course, students who has completed 12<sup>th</sup> standard can go for Diploma in Computer Application and Network Administration and can also undergo advanced networking qualification "Networking Specialist (NS)"</p> <p><b>Professional progression:</b></p> <p>Junior Technician</p> <p>↓</p> <p>Senior Technician</p>
17	Arrangements for the Recognition of Prior learning (RPL)	Presently, only candidates who undergo training shall be assessed and it will be incorporated once RPL strategy is finalized.
18	International comparability where known (research evidence to be provided)	<p>- Muhimbili University of Health and Allied Sciences is offering similar kind of Qualification on "Computer Hardware &amp; Software Maintenance" having similar course structure.</p> <p>(Source: <a href="http://dict.muhas.ac.tz/index.php/ict-trainings/short-courses/computer-">http://dict.muhas.ac.tz/index.php/ict-trainings/short-courses/computer-</a></p>

# NSQF QUALIFICATION FILE

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

		<p><a href="#">maintenance</a> )</p> <p>- The University of the West Indies, Open Campus is also offering similar kind of Qualification on "PC Support/Maintenance" having similar course structure. (Source: <a href="http://www.open.uwi.edu/sites/default/files/country_sites/PC_Support_Maintenance.pdf">http://www.open.uwi.edu/sites/default/files/country_sites/PC_Support_Maintenance.pdf</a> )</p> <p>- Pennfoster career school International is also offering similar kind of Qualification on "PC Maintenance and Repair" having similar course structure (Source: <a href="http://www.pennfosterglobal.com/pcrepair/ProgramOutline.html">http://www.pennfosterglobal.com/pcrepair/ProgramOutline.html</a> )</p>	
19	Date of planned review of the qualification.	4 Years	
20	Formal structure of the qualification		
	<b>Mandatory components</b>		
	<b>Title of component and identification code/NOSs/Learning outcomes</b>	<b>Estimated size (learning hours)</b>	<b>Level</b>
(i)	Understanding the basic of computer, its components, different I/O devices	40	3
(ii)	Acquiring skills to setup Computer BIOS, windows command prompt commands, formatting of Hard Disk, Installation of Operating System (Windows & Linux) and data recovery	30	3
(iii)	Develop skills to install different types of application software, and Hard disk utility.	40	3

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(iv)	Develop skills to identify different types of Mother Board, its components and configuring it.	50	3
(v)	Develop skills to identify, configure and troubleshoot different types of Printers and UPS.	30	3
(vi)	Develop skills to perform preventive maintenance, running diagnostic tool, backup files, virus protection program, IT Act 2000	50	3
	<b>Total</b>	240	3

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### SECTION 1

#### ASSESSMENT

21	<p><b>Body/Bodies which will carry out assessment:</b></p> <p>Examination Cell, National Institute of Electronics and Information Technology, 6-CGO Complex, Electronics Niketan, Lodhi Road, New Delhi.</p>
22	<p><b>How will RPL assessment be managed and who will carry it out?</b></p> <p>Presently, only candidates undergoing training shall be assessed. Later on, candidates having experience and knowledge shall be assessed. The information will be provided on finalization of such procedure.</p>
23	<p><b>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.</b></p> <p>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 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.</p> <p>Following assessment methodologies may be used:</p> <ul style="list-style-type: none"><li>A. Written Assessment (Multiple Choice Questions)</li><li>B. Practical Assessment</li><li>C. Viva Voce Assessment</li></ul> <p><b>Supporting evidences for Assessment</b></p> <p>The assessment results are backed by following evidences.</p> <ol style="list-style-type: none"><li>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.</li><li>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</li></ol>

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	attendance sheet.
	3. The assessor assigns roll number.
	4. The assessor takes photograph of all the students along with the assessor standing in the middle and with the Centre name/banner at the back as evidence.

Please attach most relevant and recent documents giving further information about assessment and/or RPL.

Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

#### ASSESSMENT EVIDENCE

Complete a grid for each component as listed in "Formal structure of the qualification" in the Summary.

*NOTE: this grid can be replaced by any part of the qualification documentation which shows the same information – ie Learning Outcomes to be assessed, assessment criteria and the means of assessment.*



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**24. Assessment evidences**

Title of Component:

Outcomes to be assessed/NOSs to be assessed	Assessment criteria for the outcome
1. Explain Computer Fundamental, its Components and the booting process	1.1 Knowledge of Computer, its working principle and difference between Hardware & Software. 1.2 Process involves during booting in DOS and Windows environment. 1.3 Identify different Input/output device. 1.4 Knowledge on different types of Motherboard and Cards. 1.5 Obtaining knowledge on primary Memory (RAM)
2. Demonstrate knowledge of BIOS setup, resetting BIOS password, Windows commands, Installation of Operating System and preventive maintenance	2.1 Skills on BIOS Set-up, Boot configuration, Boot Menu. 2.2 Executing the various windows command prompt commands 2.3 Ability to format of Hard Disk and Partitioning the drive. 2.4 Execute the Installation of Operating System i.e. DOS/Windows. 2.5 Resetting of BIOS password. 2.6 To perform Driver backup/ restore and data recovery. 2.7 Identify and troubleshoot, Sound, USB, LAN problem.
3. Understand and configure Application software, Antivirus, Utility Software and Dual booting	3.1 Identify and Install different types of Application software. 3.2 Identify, Install and Configure Antivirus. 3.3 Explain different types of Utility software and their functions. 3.4 Ability to install more than one Operating System.
4. Identify parts/ components of different types of computer and to integrate, install, troubleshoot whenever necessary	4.1 System integration of different types of computers, such as PC, PCXT, PC –AT etc. 4.2 To identify and troubleshoot different types of faults, cards. 4.3 Identify, install and troubleshoot power supply (SMPS).



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	4.4 Installation of Hard Disk drive and its configuration setting, Use of CD/DVD, FDD drives.
	4.5 To Identify different types of keyboard & mouse and their installation and maintenance.
	4.6 To Identify different types of monitors and their Repairing/Maintenance.
5. Recognise and identify different types of Printers & UPS, their settings and maintenance	5.1 Identify different types of printers.
	5.2 Identify printer interface cable and dip switch setting, self-test and loading of printer drives.
	5.3 Able to troubleshoot and repair LaserJet, DMP, inkjet printer.
	5.4 Knowledge of UPS and its various types.
	5.5 Perform maintenance and servicing of UPS, battery replacement of UPS.
6. Demonstrate the skills of Assembling & Disassembling and running maintenance like taking Backup, running Diagnostics tools and Virus protection programme	6.1 Perform assembling and dismantling of PCs front panel connection.
	6.2 Running of maintenance and servicing of computer.
	6.3 Gaining knowledge on the type of Backup, taking Backup files and fine tuning the system.
	6.4 Executing maintenance using diagnostics tool.
	6.5 Running of virus protection programme.
	6.6 Understanding IT ACT 2000, its amendments and penalties.

## Means of assessment 1

Sl No	Examination Pattern	Modules Covered	Duration in	Maximum Marks
1	Theory Paper-1: Basic Computer components	1,2,3	90	100
2	Theory Paper-2: Troubleshooting & Maintenance of PC	4,5,6	90	100
3	Practical-1: Assembly and Maintenance of PC	All modules	180	90
4	Internal Assessment	All	-	30
5	Assignment	All	-	30
	<b>Total</b>			<b>350</b>

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##### Pass/Fail

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	Fail
Marks Range (in %)	$\geq 85\%$	$\geq 75\%$ - $< 84\%$	$\geq 65\%$ - $< 74\%$	$\geq 55\%$ - $< 64\%$	$\geq 50\%$ - $< 54\%$	$< 50\%$

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/ Project/Presentation/Assignment would be evaluated internally.
5. Major Project/Dissertation would be evaluated preferably by External / Subject Expert including NIELIT Officials.
6. Candidate may apply for re-examination within the validity of registration.
7. The examinations would be conducted in English Language only.

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**SECTION 2**

**25. EVIDENCE OF LEVEL**

**OPTION A**

Title/Name of qualification/component: Assembly and Maintenance of Personal Computer Level: 3			
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
Process	The individuals will be able to carry out the job to assemble, maintain and troubleshoot which are helpful in running the Computer error free.	The individuals will carries out the job of assembling, maintenance etc. which are routine and predictable.	3
Professional knowledge	The individuals will gain knowledge about the working of the computer and its various software and hardware components.	The individuals will have the basic facts, knowledge and the process on assembling, maintaining & troubleshooting the computer.	3
Professional skill	The individuals will gain skills on setting the BIOS, installation of the Operating system and configuring it as per the requirement. They will also have skills to run the utility tools, troubleshoot, identify and rectify the error of the system.	The individuals will be proficient in assembling, maintaining & troubleshooting the computer whenever required based on the theoretical and practical skills gained during the course	3
Core skill	The individuals will acquire the basic communication skills like written and Oral and will be able to interact with different stakeholders like vendors, clients and users.	The individuals will be able to communicate with the client orally or through written to understand the problem and to provide solution starting from Assembling, Configuration, Maintenance and	3

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Title/Name of qualification/component: Assembly and Maintenance of Personal Computer Level: 3			
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
		troubleshooting the Computer.	
Responsibility	The individuals are responsible for maintaining the computer from failure and to learn new technology to provide better solution.	The Individuals are responsible for keeping the computer error free and to update their knowledge for any new technology available in the market so as to provide better solution.	4

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### 26. EVIDENCE OF OF NEED

26 What evidence is there that the qualification is needed? What is the estimated uptake of this qualification and what is the basis of this estimate?

Basis	In case of other Awarding Bodies (Institutes under Central Ministries and states departments)																																												
Need of the qualification	<p>NASSCOM's Projected Growth in Sector-wise Manpower Requirement for IT and IT-BPM is estimated to be 5.3 million by 2022. As this sector is dependent on Computer for their day to day activities there is strong requirement for "Computer Technician" to repair and maintain the Computers. The research documents pertaining to this sub-sector are attached as per Sl. No. 1 and 2 respectively (Occupational Analysis report for the sub-sector" and "Talent Demand Supply Analysis Report").</p> <p>Figure 17: Projected Growth in Sector-wise Manpower Requirement Growth in manpower requirement by 2022 (in million)</p> <table><thead><tr><th>Sector</th><th>Employment in 2008 (in million)</th><th>Incremental requirement by 2022 (in million)</th><th>Growth (%)</th></tr></thead><tbody><tr><td>Auto and Auto components</td><td>0.5</td><td>3.8</td><td>3.3%</td></tr><tr><td>Building and construction industry</td><td>0.3</td><td>3.6</td><td>3.3%</td></tr><tr><td>Textile and clothing</td><td>0.4</td><td>3.1</td><td>4%</td></tr><tr><td>Organised Retail</td><td>0.1</td><td>1.1</td><td>33.8%</td></tr><tr><td>Real Estate Services</td><td>0.1</td><td>0.8</td><td>6%</td></tr><tr><td>IT and IT-BPM</td><td>0.1</td><td>5.3</td><td>3.2%</td></tr><tr><td>Gems and Jewellery</td><td>0.1</td><td>0.4</td><td>3.5%</td></tr><tr><td>Leather and Leather goods</td><td>0.1</td><td>0.4</td><td>3.8%</td></tr><tr><td>BFSI</td><td>0.1</td><td>0.4</td><td>3.5%</td></tr><tr><td>Furniture and Furnishings</td><td>0.1</td><td>0.4</td><td>3.2%</td></tr></tbody></table> <p>■ Employment in 2008   ■ Incremental requirement by 2022</p> <p>Source: NASSCOM Report on Skill Development Initiatives, August 2012</p>	Sector	Employment in 2008 (in million)	Incremental requirement by 2022 (in million)	Growth (%)	Auto and Auto components	0.5	3.8	3.3%	Building and construction industry	0.3	3.6	3.3%	Textile and clothing	0.4	3.1	4%	Organised Retail	0.1	1.1	33.8%	Real Estate Services	0.1	0.8	6%	IT and IT-BPM	0.1	5.3	3.2%	Gems and Jewellery	0.1	0.4	3.5%	Leather and Leather goods	0.1	0.4	3.8%	BFSI	0.1	0.4	3.5%	Furniture and Furnishings	0.1	0.4	3.2%
Sector	Employment in 2008 (in million)	Incremental requirement by 2022 (in million)	Growth (%)																																										
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BFSI	0.1	0.4	3.5%																																										
Furniture and Furnishings	0.1	0.4	3.2%																																										
Industry Relevance	Refer Annexure I																																												
Estimated uptake	250 students/ year																																												

27 Recommendation from the concerned Line Ministry of the Government/Regulatory Body. To be supported by documentary

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	<b>evidences</b>  NA
28	<p>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</p> <ul style="list-style-type: none"><li>- The qualification Assembly &amp; Maintenance of Personal Computer does not exist as per information available in public domain ,National Qualification Register ( <a href="http://www.nqr.gov.in">www.nqr.gov.in</a>)</li></ul>
29	<p>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</p> <p>The Qualification is to be monitored and reviewed every two years. The following data will be used</p> <ol style="list-style-type: none"><li>1. Results of assessments</li><li>2. Employer feedback regarding student skill after conducting a placement drive</li><li>3. Employer feedback will be sought post-placement</li><li>4. Student feedbacks</li><li>5. Workshops and seminar for reviewing the qualifications</li><li>6. Consultation/ Tie-up with Industries or Expert for review of the Curriculum.</li></ol>

Please attach most relevant and recent documents giving further information about any of the topics above.

Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

#### SECTION 4

##### EVIDENCE OF PROGRESSION

30	<p>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?</p> <p><i>Show the career map here to reflect the clear progression</i></p>
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This qualification comprises both technical and analytic skills and can be linked to any qualification higher than this one, existing or to come. Adequate NOSs / performance criteria have been added to ensure progression to related path ways identified as per the occupational map (ITS).

After completing this course students can further undergo advanced networking qualification **\*Networking Specialist (NS)** which is having learning hours of 780 hrs and also Advance Diploma in Hardware, Networking and Information Security [ADHNS] which is having learning hr of 1220 hrs.

Please attach most relevant and recent documents giving further information about any of the topics above.

Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.