



# Model Curriculum

Computer Applications and Business Accounting Associate

QP Code: NIE/ELE/Q15012

Version: 1.0

NSQF Level: 4

### Training Parameters

Sector	Information Technology
Sub-Sector	IT Support and Services
Occupation	IT Support
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/ 3512.0200
Minimum Educational Qualification and Experience	12th grade pass OR Completed 2nd year of 3-year diploma (after 10th) and pursuing regular diploma in relevant field OR 10th grade pass plus 2-year NTC OR 10th grade pass plus 1-year NTC and 1-year NAC OR 10th grade pass and pursuing continuous schooling OR 10th Grade Pass with 2-year relevant experience OR Previous NSQF Level 3 in the relevant sector with minimum education as 8th Grade pass with 3 years' relevant experience OR Previous NSQF Level 3.5 in relevant field with 1.5 year relevant experience
Pre-Requisite License or Training	-
Minimum Job Entry Age	-
Last Reviewed On	<b>29.03.2023</b>
Next Review Date	<b>29.03.2026</b>
NSQC Approval Date	<b>29.03.2023</b>
QP Version	1.0
Model Curriculum Creation Date	<b>29.03.2023</b>
Model Curriculum Valid Up to Date	<b>29.03.2026</b>
Model Curriculum Version	1.0
Duration of the Course	<b>990 Hours</b>

## Program Overview

This section summarizes the end objectives of the program along with its duration

### Training Outcomes:

1. Develop the ability to effectively use IT tools such as word processors, spreadsheets, and presentation software, along with an understanding of business systems to enhance operational efficiency.
2. Gain expertise in managing financial transactions, creating reports, and analyzing data using Tally, while also improving communication, interpersonal, and professional skills through personality development training.
3. Learn to use Information and Communication Technology (ICT) resources efficiently for data management, communication, and business operations.
4. Acquire foundational skills in web design and internet technologies, enabling them to create and manage websites and understand e-commerce and online communication systems.
5. Able to create visually appealing publications using Desktop Publishing (DTP) tools and solve real-world problems through programming, with a solid foundation in Python.

### Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the Qualification file.

S. No	NOS/Module Name	Training Duration (Hours)		
		Theory	Practical	Total
1.	NOS1: IT Tools and Business Systems NOS Code: NIE/ELE/N14054 NSQF Level- 4	60	90	150
2.	NOS2: Financial Accounting using Tally and Personality Development NOS Code: NIE/ELE/N14055 NSQF Level- 4	60	90	150
3.	NOS3: Introduction to ICT Resources NOS Code: NIE/ELE/N14056 NOS Version- 1.0 NSQF Level- 4	60	90	150
4.	NOS4: INTERNET TECHNOLOGY AND WEB DESIGN NOS Code: NIE/ELE/N14057 NOS Version- 1.0 NSQF Level- 4	60	90	150
5.	NOS5: DTP NOS Code: NIE/ELE/N14058 NOS Version- 1.0 NSQF Level- 4	60	90	150
6.	NOS6: Programming and Problem Solving Through Python Language NOS Code: NIE/ELE/N14059	60	90	150

S. No	NOS/Module Name	Training Duration (Hours)		
		Theory	Practical	Total
	NOS Version- 1.0 NSQF Level- 4			
	<b>Sub Total = 900 hours</b>	360	540	
7.	Employability Skills NOS Code: DGT/VSQ/N0102	60		60
8.	OJT OJT-(C) NOS Code:N/A	30		30
<b>Total Duration:</b>		<b>990 hours</b>		

## Module Details

### Module 1/NOS 1: IT Tools and Business Systems

NOS Code: NIE/ELE/N14054

#### Terminal Outcomes:

After completion of the module, the students shall be able to:

- Demonstrate proficiency in using word processors, spreadsheets, and presentation software for creating professional documents, analyzing data, and delivering impactful presentations.
- Acquire knowledge of various business systems and their integration with IT tools to improve organizational efficiency and streamline workflows.
- Develop skills in managing, storing, and organizing data effectively using IT tools such as databases and spreadsheets.
- Apply IT tools to solve real-world business problems, optimize processes, and support decision-making through data-driven insights.
- Build confidence in navigating and using a variety of IT tools and platforms, laying a strong foundation for further technological and business-oriented learning.

#### Key Learning Outcomes:

Duration: 60 hours	Duration: 90 hours
Theory	Practical
-Develop a conceptual understanding of how IT tools like word processors, spreadsheets, and presentation software support various business functions.	-Gain hands-on experience in creating professional documents with advanced formatting using word processors.
-Learn the structure and components of business systems, including Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM).	-Learn to create and manage spreadsheets, use formulas and functions, and analyze data for business insights.
-Gain knowledge about file systems, databases, and data organization techniques to ensure efficient information management	-Develop practical skills in designing engaging and impactful presentations with appropriate use of visual aids and transitions.
-Understand the importance of cybersecurity, data protection, and ethical practices in using IT tools for business operations.	-Practice using software tools for inventory management, customer data tracking, and other simulated business scenarios.
Classroom Aid	
LCD Projector, Pin-up Board, White Board and Projector Pointer	
Tools, Equipment and Other Requirements	
Classroom, Student Chair, Student Table, Desktop Computer and Accessories (Installed with: Office/Libra Office, Python, Anaconda, Jupyter Notebook, Tally Prime, Google Chroma, Adobe Photoshop, Adobe In Design, Akruti, India Typing, Coreldraw, Adobe Flash, Notepad ++ or Free open-source alternative available Software	

## Module 2/NOS 2: Financial Accounting using Tally and Personality Development

**NOS Code: NIE/ELE/N14055**

### Terminal Outcomes:

After completion of the module, the students shall be able to:

- Demonstrate the ability to use Tally for recording financial transactions, preparing financial statements, managing inventories, and generating reports for decision-making.
- Gain expertise in managing payroll systems and applying taxation rules within Tally, ensuring compliance with financial regulations.
- Effectively analyze financial data and create insightful reports to support organizational strategies and decision-making processes.
- Personality development training, learners will enhance their verbal and non-verbal communication skills, presentation abilities, and professional demeanour for workplace success.
- Theoretical accounting concepts to real-world scenarios using Tally, bridging the gap between academic knowledge and practical application.

### Key Learning Outcomes:

<b>Duration: 60 hours</b>	<b>Duration: 90 hours</b>
<b>Theory</b>	<b>Practical</b>
- Understanding basic accounting concepts, principles, and terminologies such as journal entries, ledgers, trial balance, and financial statements.	- Proficiency in creating and managing company accounts, recording transactions, and generating financial reports using Tally software
- Analyzing and interpreting financial data for decision-making, including budgeting, forecasting, and financial reporting.	- Skills to manage inventory, reconcile bank statements, and calculate GST and other taxes within the Tally environment
- Familiarity with accounting laws, tax regulations, and compliance standards relevant to businesses.	- Applying personality development strategies in case studies and real-world scenarios to enhance decision-making and teamwork capabilities.
<b>Classroom Aid</b>	
LCD Projector, Pin-up Board, White Board and Projector Pointer	
<b>Tools, Equipment, and Other Requirements</b>	
Classroom, Student Chair, Student Table, Desktop Computer and Accessories (Installed with: Office/Libra Office, Python, Anaconda, Jupyter Notebook, Tally Prime, Google Chroma, Adobe Photoshop, Adobe In Design, Akruti, India Typing, Coreldraw, Adobe Flash, Notepad ++ or Free open-source alternative available Software	

### Module 3/NOS 3: Introduction to ICT Resources

NOS Code: NIE/ELE/N14056

#### Terminal Outcomes:

After completion of the module, the students shall be:

- Understand the fundamental concepts, components, and significance of Information and Communication Technology (ICT) in modern business and education environments.
- Operate and manage essential ICT tools, including hardware, software, and networking systems, to support organizational tasks and communication.
- Develop the ability to utilize various ICT resources for efficient data storage, retrieval, and management, ensuring secure and organized handling of information.
- Leverage ICT to enhance business operations, facilitate effective communication, and optimize processes in diverse professional settings.
- Appreciate the broader impact of ICT on society, including its role in bridging the digital divide, supporting sustainable development, and enabling innovation.

#### Key Learning Outcomes:

Duration: 60 hours	Duration: 90 hours
- Learn about hardware, software, networking basics, and digital communication systems.	- Practical experience with operating systems, basic software tools, and file management.
- Understand the impact of ICT in transforming business processes and enhancing efficiency	- Learn to set up and troubleshoot simple networks, including Wi-Fi and LAN connections.
- Learn the basics of data storage, retrieval, and management using ICT tools.	- Perform data backups, use encryption tools, and secure digital communications.
- Familiarize with emerging technologies like cloud computing, artificial intelligence, and IoT (Internet of Things) as they relate to ICT..	- Practice efficient utilization of ICT tools for business operations, presentations, and collaborative projects.
- Understand data security, privacy, and ethical use of ICT resources.	- Use cloud-based platforms for sharing and managing files.
<b>Classroom Aid</b>	
LCD Projector, Pin-up Board, White Board and Projector Pointer	
<b>Tools, Equipment, and Other Requirements</b>	
Classroom, Student Chair, Student Table, Desktop Computer and Accessories (Installed with: Office/Libra Office, Python, Anaconda, JupyterNotebook, Tally Prime, Google Chroma, Adobe Photoshop, Adobe in Design, Akruti, India Typing, Coreldraw, Adobe Flash, Notepad ++ or Free open-source alternative available Software	

## Module 4/NOS 4: Internet Technology and Web Design

**NOS Code: NIE/ELE/N14057**

### Terminal Outcomes:

After completion of the module, the students shall:

- Demonstrate a thorough understanding of internet concepts, protocols, and technologies, including web hosting, domain management, and network architecture.
- Develop the ability to design responsive and visually appealing websites using HTML, CSS, and basic JavaScript, ensuring compatibility across devices and platforms.
- Gain hands-on experience with modern web development tools and frameworks, enabling efficient website creation and maintenance.
- Learn to leverage internet technologies for e-commerce, digital marketing, and online collaboration, enhancing business operations and outreach.
- Understand the importance of web security, implement secure coding practices, and address common vulnerabilities to protect websites and user data.

### Key Learning Outcomes:

<b>Duration: 60 hours</b>	<b>Practical: 90 hours</b>
<b>Theory</b>	<b>Practical</b>
- Explain the core concepts of internet architecture, protocols (HTTP, HTTPS, FTP), and domain name systems (DNS).	- Design and create a fully functional static website using HTML and CSS.
- Learn essential web design concepts such as responsive design, user experience (UX), and user interface (UI).	- Add interactivity to web pages using basic JavaScript functions and event handling.
- Study the structure and syntax of HTML and CSS for designing static web pages.	- Create web pages that adapt seamlessly to different devices and screen sizes using CSS media queries and frameworks like Bootstrap.
- Understand the concepts of e-commerce platforms, payment gateways, and digital marketing strategies.	- Learn to host websites on local servers or web-hosting platforms and understand domain registration processes.
- Learn best practices for safeguarding websites against common vulnerabilities like phishing and malware.	- Practice debugging common errors in web code and ensure proper maintenance of hosted websites.
<b>Classroom aids</b>	
LCD Projector, Pin-up Board, White Board and Projector Pointer	
<b>Tools, Equipment and Other Requirements</b>	
Classroom, Student Chair, Student Table, Desktop Computer and Accessories (Installed with: Office/Libra Office, Python, Anaconda, JupyterNotebook, Tally Prime, Google Chroma, Adobe Photoshop, Adobe in Design, Akruti, India Typing, Coreldraw, Adobe Flash, Notepad ++ or Free open-source alternative available Software	



## Module 5/NOS 5: DTP

**NOS Code: NIE/ELE/N14058**

### Terminal Outcomes:

After completion of the module, the students shall:

- Acquire the ability to use industry-standard DTP software like Adobe InDesign, CorelDRAW, and Microsoft Publisher to design and produce professional-quality layouts.
- Develop skills to create visually engaging content, including brochures, flyers, newsletters, and other printed materials, with a strong understanding of typography, color theory, and layout design principles.
- Master techniques in image editing and enhancement using tools like Adobe Photoshop, enabling them to prepare images for integration into various publishing projects.
- Manage DTP projects effectively, collaborate with clients or team members, and deliver results within specified timelines and requirements.

### Key Learning Outcomes:

<b>Duration: 60 hours</b>	<b>Practical: 90 hours</b>
<b>Theory</b>	<b>Practical</b>
- Grasp the principles of desktop publishing, including design elements, typography, and layout composition	- Master the use of software tools for creating and editing layouts, graphics, and text elements.
- Learn the features and applications of popular DTP software like Adobe InDesign, CorelDRAW, and QuarkXPress	- Apply theoretical knowledge to produce polished and visually appealing publications
- Learn the features and applications of popular DTP software like Adobe InDesign, CorelDRAW, and QuarkXPress	- Learn to manage DTP projects, including time estimation, version control, and proofing processes
- Learn the features and applications of popular DTP software like Adobe InDesign, CorelDRAW, and QuarkXPress	- Compile a portfolio showcasing diverse DTP projects, demonstrating creativity and technical expertise
<b>Classroom aids</b>	
LCD Projector, Pin-up Board, White Board and Projector Pointer	
<b>Tools, Equipment and Other Requirements</b>	
Classroom, Student Chair, Student Table, Desktop Computer and Accessories (Installed with: Office/Libra Office, Python, Anaconda, JupyterNotebook, Tally Prime, Google Chroma, Adobe Photoshop, Adobe in Design, Akruti, India Typing, Coreldraw, Adobe Flash, Notepad ++ or Free open-source alternative available Software	

## Module 6/NOS6: Programming and Problem Solving Through Python Language

**NOS Code: NIE/ELE/N14059**

### Terminal Outcomes:

After completion of the module, the students shall be able to:

- Demonstrate a strong grasp of Python syntax, data types, and control structures, enabling them to write efficient and readable code
- Develop the ability to analyze real-world problems and implement logical solutions using Python programming techniques.
- Acquire the skills to manipulate, process, and analyze data using Python libraries such as Pandas and NumPy.
- Skilled in identifying, debugging, and optimizing Python code for improved performance and scalability.

### Key Learning Outcomes:

Duration: 60 hours	Practical: 90 hours
Theory	Practical
Grasp the core concepts of programming such as variables, data types, control structures (loops, conditionals), and functions	<ul style="list-style-type: none"><li>- Writing Python Programs</li><li>- Algorithm Implementation</li><li>- Optimizing Code</li><li>- Debugging and Testing</li><li>- Collaborative Problem Solving</li><li>- Interfacing with External Data</li></ul>
Develop skills in analyzing problems and breaking them down into smaller, manageable parts.	
Learn the syntax and semantics of the Python language, including variables, data types, operators, and expressions	
Learn how to read from and write to files in Python, enabling interaction with external data	
<b>Classroom aids</b>	
LCD Projector, Pin-up Board, White Board and Projector Pointer	
<b>Tools, Equipment and Other Requirements</b>	
Classroom, Student Chair, Student Table, Desktop Computer and Accessories (Installed with: Office/Libra Office, Python, Anaconda, JupyterNotebook, Tally Prime, Google Chroma, Adobe Photoshop, Adobe in Design, Akruti, India Typing, Coreldraw, Adobe Flash, Notepad ++ or Free open-source alternative available Software	

## Module 7/NOS7: Employability Skills

NOS Code: DGT/VSQ/N0102

### Terminal Outcomes:

After completing this program, participants will be able to:

- Outline the importance of Employability Skills for the current job market and future of work.
- List different learning and employability-related GOI and private portals and their usage.
- Research and prepare a note on different industries, trends, required skills, and the available opportunities.

### Key Learning Outcomes:

<b>Duration: 60 Hrs.</b>
<b>Key Learning Outcomes</b>
<p><b>Constitutional Values – Citizenship</b></p> <ul style="list-style-type: none"><li>• Explain constitutional values, including civic rights and duties, citizenship, responsibility towards society, and personal values and ethics such as honesty, integrity, caring, and respecting others that are required to become a responsible citizen.</li><li>• Demonstrate how to practice different environmentally sustainable practices.</li></ul> <p><b>Becoming a Professional in the 21st Century</b></p> <ul style="list-style-type: none"><li>• Discuss relevant 21st-century skills required for employment.</li><li>• Highlight the importance of practicing 21st-century skills like Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn, etc., in personal or professional life.</li><li>• Create a pathway for adopting a continuous learning mindset for personal and professional development.</li></ul> <p><b>Basic English Skills</b></p> <ul style="list-style-type: none"><li>• Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone.</li><li>• Read and understand text written in basic English.</li><li>• Write a short note/paragraph/letter/e-mail using correct basic English.</li></ul> <p><b>Career Development &amp; Goal Setting</b></p> <ul style="list-style-type: none"><li>• Create a career development plan.</li><li>• Identify well-defined short- and long-term goals.</li></ul> <p><b>Communication Skills</b></p> <ul style="list-style-type: none"><li>• Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette.</li><li>• Write a brief note/paragraph on a familiar topic.</li><li>• Explain the importance of communication etiquette, including active listening for effective communication.</li><li>• Role-play a situation on how to work collaboratively with others in a team.</li></ul> <p><b>Diversity and Inclusion</b></p> <ul style="list-style-type: none"><li>• Demonstrate how to behave, communicate, and conduct appropriately with all genders and PwD.</li><li>• Discuss the significance of escalating sexual harassment issues as per the</li></ul>

POSH act.

### **Financial and Legal Literacy**

- Discuss various financial institutions, products, and services.
- Demonstrate how to conduct offline and online financial transactions safely and securely and check passbook/statement.
- Explain the common components of salary such as Basic, PF, Allowances (HRA, TA, DA, etc.), and tax deductions.
- Calculate income and expenditure for budgeting.
- Discuss legal rights, laws, and aids.

### **Essential Digital Skills**

- Describe the role of digital technology in day-to-day life and the workplace.
- Demonstrate how to operate digital devices and use the associated applications and features safely and securely.
- Demonstrate how to connect devices securely to the internet using different means.
- Follow the dos and don'ts of cyber security to protect against cybercrimes.
- Discuss the significance of displaying responsible online behavior while using various social media platforms.
- Create an email id and follow email etiquette to exchange emails.
- Show how to create documents, spreadsheets, and presentations using appropriate applications.
- Utilize virtual collaboration tools to work effectively.

### **Entrepreneurship**

- Explain the types of entrepreneurship and enterprises.
- Discuss how to identify opportunities for potential business, sources of funding, and associated financial and legal risks with its mitigation plan.
- Describe the 4Ps of Marketing-Product, Price, Place, and Promotion and apply them as per requirement.
- Create a sample business plan for the selected business opportunity.

### **Customer Service**

- Classify different types of customers.
- Demonstrate how to identify customer needs and respond to them in a professional manner.
- Discuss various tools used to collect customer feedback.
- Discuss the significance of maintaining hygiene and dressing appropriately.

### **Getting ready for Apprenticeship & Jobs**

- Draft a professional Curriculum Vitae (CV).
- Use various offline and online job search sources to find and apply for jobs.
- Discuss the significance of maintaining hygiene and dressing appropriately for an interview.
- Role-play a mock interview.
- List the steps for searching and registering for apprenticeship opportunities.

## Annexure

### Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/ Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
B. Tech or MCA Or BCA / B.Sc. Or Attained NSQF Level-5 Or NIELIT A- Level Qualified AND knowledge of DTP, Accounting & Tally, some certification preferred	Computer Science/ IT allied branches	-	-	-	-	-

Trainer Certification	
Domain Certification	Platform Certification
Certified for ToT for Job Role: <b>NIE/ELE/Q15012: "Computer Applications and Business Accounting Associate"</b> or mapped to the Qualification Pack: equivalent as per NCrf. Minimum accepted score is 80%	Recommended that the Trainer is certified for the Job Role: "Trainer (VET and skills)", "MEP/Q2601, v2.0" or equivalent as per NCrf. Minimum accepted score is 80%

## Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/ Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
B.Tech/MCA/ BCA	Computer Science/ IT allied branches	2	Relevant field	-	-	-
BCA		4	Relevant field	-	-	-

Assessor Certification	
Domain Certification	Platform Certification
Certified for ToA for Job Role: <b>NIE/ELE/Q15012: "Computer Applications and Business Accounting Associate"</b> or equivalent as per NCrf. Minimum accepted score is 80%	Recommended that the assessor is certified for the Job Role: "Trainer (VET and skills)", mapped to the Qualification Pack: "MEP/Q2701, v2.0" or equivalent as per NCrf. Minimum accepted score is 80%

## **Assessment Strategy**

Assessment of the qualification evaluates candidates to ascertain that they can integrate knowledge, skills and values for carrying out relevant tasks as per the defined learning outcomes and assessment criteria.

The underlying principle of assessment is fairness and transparency. The evidence of the outcomes and assessment criteria. Competence acquired by the candidate can be obtained by conducting Theory (Online), Practical assessment, internal assessment, Project/Presentation/Assignment, Major Project. The emphasis is on the practical demonstration of skills & knowledge gained by the candidate through the training. Each OUTCOME is assessed & marked separately. A candidate is required to pass all OUTCOMES individually based on the passing criteria.

### **About Examination Pattern:**

1. The question papers for the theory and practical exams are set by the Examination wing (assessor) of NIELIT HQS.
2. The assessor assigns roll number.
3. The assessor carries out theory online assessments through remote proctoring methodology. Theory examination would be conducted online and the paper comprise of MCQ. Conduct of assessment are through trained proctors. Once the test begins, remote proctors have full access to candidate's video feeds and computer screens. Proctors authenticate the candidate based on registration details, pre-test image captured and I- card in possession of the candidate. Proctors can chat with candidates or give warnings to candidates. Proctors can also take screenshots, terminate a specific user's test session, or re-authenticate candidates based on video feeds.
4. An External Examiner/ Observer may be deployed including NIELIT officials for evaluation of Practical examination/ internal assessment / Project/ Presentation/. Major Project (if applicable) would be evaluated preferably by external/ subject expert including NIELIT officials.
5. Pass percentage would be 50% marks in each component.
6. Candidates may apply for re-examination within the validity of registration (only in the assessment component in which the candidate failed).
7. 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.
8. There would be no exemption for any paper/module for candidates having similar qualifications or skills.
9. The examination will be conducted in English language only.

Quality assurance activities: A pool of questions is created by a subject matter expert and moderated by other SME. Test rules are set beforehand. Random set of questions which are according to syllabus appears which may differ from candidate to candidate. Confidentiality and impartiality are maintained during all the examination and evaluation processes.

## References

### Glossary

Term	Description
<b>Declarative Knowledge</b>	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
<b>Key Learning Outcome</b>	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and Skills (practical application).
<b>OJT (M)</b>	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
<b>OJT (R)</b>	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
<b>Procedural Knowledge</b>	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying Cognitive, affective or psychomotor skills.
<b>Training Outcome</b>	Training outcome is a statement of what a learner will know, understand And be able to do upon the completion of the training.
<b>Terminal Outcome</b>	Terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.

### Acronyms and Abbreviations

Term	Description
<b>QP</b>	Qualification Pack
<b>NSQF</b>	National Skills Qualification Framework
<b>NSQC</b>	National Skills Qualification Committee
<b>NOS</b>	National Occupational Standards