

1. **App Development with Swift – Associate**

- Fundamental concepts of computing, programming logic, and the impact of mobile apps on society.
- App design lifecycle principles including brainstorming, planning, wireframing, and prototyping.
- Core Swift programming basics like constants, variables, operators, functions, and data structures.
- User interface development using declarative layout components and modifiers in Swift UI.
- Basic project asset management, interface configuration, and foundational app creation workflows.

2. **App Development with Swift - Certified User**

- Professional Xcode developer tools usage, Interface Builder setup, and debugging using breakpoints.
- Advanced Swift language features including optional, custom structs, Enums, protocols, and extensions.
- Building multi-view app navigation using Swift UI Stacks, Lists, Sheets, and view composition.
- Application state management, data modelling, and binding with @State, @Binding, and @Environment.
- Working with Apple software development kits (SDKs) and standard iOS design patterns for full app building.

1. Databases

- Relational database concepts, structure, and database object design.
- Writing DDL and DML statements using Structured Query Language (SQL).
- Data manipulation, selecting, inserting, updating, and deleting records.
- Data normalization rules, primary/foreign keys, and data integrity.
- Querying data across multiple tables using JOIN operations and aggregations.

2. Software Development

- Core software development life cycle (SDLC) and design principles.
- Fundamentals of Object-Oriented Programming (OOP) and algorithms.
- Understanding data structures, control flow, and memory allocation.
- Application debugging, error handling, and testing strategies.
- Overview of web applications, desktop apps, and database integrations.

3. Networking

- Core networking architecture, topologies, and OSI model layers.
- IP addressing schemes, subnetting, IPv4, and IPv6 fundamentals.
- Network protocols (TCP/IP, UDP, DNS, DHCP, HTTP/HTTPS).
- Hardware devices including routers, switches, access points, and firewalls.
- Basic network troubleshooting, monitoring tools, and connectivity commands.

4. Network Security

- Key concepts of defense-in-depth security architecture and policies.
- Wireless security protocols, encryption mechanisms, and authentication.
- Identifying network vulnerabilities, threat vectors, and common attacks.
- Implementing firewalls, Intrusion Detection/Prevention Systems (IDS/IPS).
- Secure access control, VPNs, and user identity verification methods.

INFORMATION TECHNOLOGY SPECIALIST

5. JavaScript

- JavaScript core syntax, data types, variables, and operators.
- Writing functions, understanding scope, control structures, and loops.
- Document Object Model (DOM) manipulation and event handling.
- Working with arrays, objects, JSON structures, and built-in methods.
- Basic debugging, code execution flow, and form input validation.

6. Java

- Fundamental Java syntax, control structures, and data types.
- Object-Oriented Programming principles: Encapsulation, Inheritance, and Polymorphism.
- Exception handling, try-catch blocks, and debugging Java programs.
- Working with Java collections, array structures, and string parsing.
- Basic input/output streams, file operations, and class library usage.

7. Python

- Python basic syntax, dynamic typing, variables, and primitive data types.
- Program execution control using conditionals, loops, and functions.
- Data collection structures including lists, tuples, dictionaries, and sets.
- Input/output handling, reading/writing files, and error handling.
- Importing standard modules, packages, and applying clean coding practices.

8. HTML and CSS

- HTML document structuring using tags, metadata, and body content.
- Implementing text, hyperlinks, lists, tables, and media elements.
- Designing and styling web layouts using CSS selectors and properties.
- Managing colour, typography, spacing, margins, padding, and box models.
- Page layout techniques using flexbox, positioning, and responsive design.

9. HTML5 Application Development

- Constructing modern, accessible web apps using HTML5 semantic elements.
- Implementing client-side interactivity and event handling with JavaScript.
- CSS3 styling, animations, transitions, and responsive layout grids.
- Touch input management, mobile device optimization, and viewports.
- Offline web storage capabilities, local Storage, and web application lifecycle.

10. Device Configuration and Management

- Operating system setup, configuration, and system settings management.
- Managing user accounts, permissions, and device access controls.
- Hardware setup, driver installations, peripheral connectivity, and storage.
- Network profile configuration, remote access, and device security.
- Software updating, system backup, recovery, and troubleshooting devices.

11. Artificial Intelligence

- Fundamental principles, applications, and ethical considerations of AI.
- Key concepts of Machine Learning, supervised vs. unsupervised models.
- Basics of Natural Language Processing (NLP) and Computer Vision.
- Data preparation, feature identification, and training workflow concepts.
- Overview of neural networks, deep learning models, and modern AI tools.

INFORMATION TECHNOLOGY SPECIALIST

12. Cloud Computing

- Essential cloud characteristics, cloud deployment models, and services.
- Difference between Infrastructure (IaaS), Platform (PaaS), and Software (SaaS).
- Fundamentals of cloud storage, virtual computing, and network architecture.
- Cloud security concepts, shared responsibility model, and access management.
- Business value, cloud scalability, cost management, and cloud migration.

13. Computational Thinking

- Decomposing complex problems into manageable sub-components.
- Identifying patterns, trends, and abstractions within data structures.
- Designing step-by-step algorithmic solutions and logic workflows.
- Evaluating and optimizing algorithms for efficiency and correctness.
- Applying computational logic to real-world software and engineering problems.

14. Cybersecurity

- Core concepts of CIA triad (Confidentiality, Integrity, Availability).
- Recognizing security threats, malware types, and social engineering.
- Password policies, multi-factor authentication, and access control models.
- Data protection methods, encryption basics, and privacy safeguards.
- Incident response procedures, risk management, and compliance standards.

15. Data Analytics

- Fundamental data lifecycle stages: ingestion, cleaning, analysis, and visualization.
- Statistical analysis concepts, summary metrics, and trend analysis.
- Structuring, filtering, and transforming raw data into tabular models.
- Data visualization techniques using charts, graphs, and visual dashboards.
- Formulating business insights and data-driven decision-making strategies.

1. Tally Essential Level 1 Certification

- Fundamentals of accounting principles, double-entry bookkeeping, and ledger creation.
- Navigation, installation, company creation, and setting up Chart of Accounts in TallyPrime.
- Recording day-to-day transactions via receipts, payments, sales, purchases, and journal vouchers.
- Core banking functions, cheque printing, and automated bank reconciliation statements (BRS).
- Generating primary financial reports, Daybook, Profit & Loss accounts, and Balance Sheets.

2. Tally Essential Level 2 Certification

- Storage and classification of inventory using stock groups, categories, warehouses, and batches.
- Managing Accounts Receivable and Payable with bill-wise details and credit limit controls.
- End-to-end Purchase and Sales Order Management workflows and stock tracking.
- Cost and Profit Centre management for allocating project-wise incomes and expenses.
- Setting up business budgets, variance analysis, scenario management, and custom reporting.

3. Tally Essential Level 3 Certification

- Advanced Goods and Services Tax (GST) compliance, return filing, e-Way bills, and e-Invoicing.
- Tax Deducted at Source (TDS) setup, voucher recording, challan generation, and statutory reports.
- Enterprise data management including data security, export/import formats, and ODBC connectivity.
- Financial year-end processes, company data splitting, and opening balance transfers.
- Practical GST simulation tools to handle real-time tax processing and adjustments.

Tally

POWER OF SIMPLICITY

4. Tally Comprehensive Certification

- Complete integration of all concepts covered across Tally Essential Levels 1, 2, and 3.
- End-to-end operational mastery from basic bookkeeping to advanced inventory and tax management.
- Real-world scenario training using the latest Tally Prime computerized accounting software.
- Full compliance capabilities covering GST, TDS, banking, and statutory return preparations.
- Advanced company data administration, multi-currency operations, and strategic MIS reporting.

1. AutoCAD

- Fundamental 2D drafting, drawing creation, geometry editing, and annotation tools.
- Working with layers, line types, object properties, and blocks for efficient design.
- Precision drawing techniques using object snaps, coordinates, and constraint tools.
- Basic 3D modeling concepts, surface editing, and model views.
- Plotting, layout setup, printing configurations, and exporting technical drawings.



2. Inventor - Imperial or Metric

- Parametric 3D part modeling, sketch geometry, and dimensioning standards.
- Assembly modeling using constraints, joints, and component relations.
- Creating technical drawing views, detailed annotations, and bill of materials (BOM).
- Sheet metal design techniques, frame generation, and dynamic stress analysis.
- Managing unit systems (Imperial/Metric), design features, and file structures.

3. Revit - Imperial or Metric

- Building Information Modeling (BIM) principles and architectural design setups.
- Creating structural building components like walls, floors, roofs, doors, and windows.
- Managing project views, levels, grids, sections, and elevation details.
- Generating component schedules, material takeoffs, and project documentation.
- Managing unit systems (Imperial/Metric), family creation, and rendering project views.

4. 3ds Max

- 3D modelling fundamentals including polygon modelling, splines, and modifier stacks.
- Applying realistic materials, textures, UV mapping, and surface shaders.
- Scene lighting techniques using standard, photometric, and Arnold lights.
- Keyframe animation, camera controls, object transformations, and path constraints.
- Rendering static scenes and animations using production-quality render engines.

AUTODESK
Certified User

5. Maya

- 3D polygonal and NURBS surface modeling workflows for characters and assets.
- UV unwrapping, texturing techniques, and node-based material creation.
- Rigging fundamentals including joints, inverse kinematics (IK), and skinning.
- Keyframe animation, graph editor manipulations, and motion mechanics.
- Lighting setups, camera placements, and Arnold rendering pipeline execution.

6. Fusion

- Integrated CAD/CAM workflows combining parametric, freeform, and direct modelling.
- Creating assemblies, defining motion joints, and inspecting physical properties.
- Generative design, stress analysis, and simulation setups for engineering parts.
- Generating toolpaths, CNC machining code, and 2D manufacturing drawings.
- Cloud-based collaboration, version control, and preparing 3D printing outputs.

7. Tinkercad 3D Design

- Introduction to constructive solid geometry using basic 3D shapes and solids.
- Manipulating, scaling, rotating, aligning, and grouping 3D objects.
- Creating complex hollow models using hole cuts and boolean combinations.
- Precise dimensioning, workspace navigation, and workplane adjustments.
- Preparing, exporting, and slicing 3D models for additive manufacturing (3D printing).

1. Generative AI Foundations

- Fundamental concepts, history, and core capabilities of modern Generative AI models.
- Practical applications of text, image, and multi-modal AI generation tools in business.
- Principles of prompt engineering, structuring effective AI inputs, and refining outputs.
- Identifying limitations, hallucinations, bias mitigation, and data privacy considerations.
- Ethical guidelines, copyright management, and responsible AI governance practices.

2. Professional Communication

- Core verbal, non-verbal, and written communication strategies for diverse workplace environments.
- Crafting clear, structured, professional emails, reports, and business documentation.
- Active listening techniques, conflict resolution, and collaborative team communication.
- Interpersonal presentation skills, public speaking structure, and audience engagement.
- Adapting communication styles across digital channels, remote setups, and professional etiquette.

1. Visual Design Using Adobe Photoshop

- Working with raster graphics, layers, selection tools, and photo compositing.
- Performing digital image retouching, colour correction, and tonal adjustments.
- Understanding key design principles, image resolutions, and colour modes (RGB, CMYK).
- Utilizing non-destructive editing techniques, masks, Smart Objects, and vector shapes.
- Preparing, exporting, and optimizing visual assets for print and digital publishing.

2. Graphic Design & Illustration Using Adobe Illustrator

- Creating and editing vector graphics, paths, anchor points, and custom shapes.
- Working with typography, precise alignment, transformation tools, and layer hierarchies.
- Applying fill types, stroke profiles, gradient meshes, color swatches, and blending modes.
- Utilizing advanced vector tools like the Pen tool, Shape Builder, and Image Trace.
- Exporting resolution-independent graphics, logos, icons, and vector artwork for various media.

3. Print & Digital Media Publication Using Adobe InDesign

- Building multi-page document layouts, page grids, margins, and master page templates.
- Managing advanced typography, paragraph styles, character styles, and text thread flows.
- Importing and framing external images, vector illustrations, and text files efficiently.
- Creating interactive digital publications containing links, forms, and multimedia elements.
- Preparing print-ready documents with bleed settings, crop marks, swatches, and PDF preflights.
-

4. Digital Video Using Adobe Premiere Pro

- Setting up video editing projects, organizing media bins, and structuring s
- Assembling, trimming, and editing audio-video footage on non-linear mu
- Applying transitions, video effects, speed adjustments, and motion keyfra
- Performing color correction, Lumetri color grading, and audio mixing/clea
- Exporting rendered video projects across web, broadcast, and social med

5. Web Authoring Using Adobe Dreamweaver

- Structuring web pages using HTML5 elements, semantic markup, and pag
- Designing and styling responsive web layouts using CSS3 and modern layo
- Managing live web development projects, local file directories, and remot
- Integrating visual layout design with direct source code editing and live pr
- Ensuring web accessibility standards, cross-browser compatibility, and mo

6. Multiplatform Animation Using Adobe Animate

- Creating vector animations using keyframes, frame-by-frame methods, and motion tweens.
- Designing animated vector characters, symbols, graphic elements, and interactive buttons.
- Utilizing timeline controls, layer depth, camera movements, and classic/shape tweens.
- Incorporating sound effects, background audio tracks, and basic ActionScript/JavaScript code.
- Exporting interactive animations across HTML5 Canvas, WebGL, video, and animated GIF formats.

7. Visual Effects & Motion Graphics Using Adobe After Effects

- Creating motion graphics, dynamic typography, and 2D/3D visual animation compositions.
- Utilizing timeline layers, keyframe spatial/temporal interpolation, and graph curve editors.
- Applying visual effects, green screen keying, particle systems, and tracking masks.
- Working with 3D camera tracking, null objects, nesting pre-compositions, and expressions.
- Rendering and exporting high-quality video, motion templates, and dynamic visual assets.

8. Content Creation & Marketing Using Adobe Express

- Designing social media posts, promotional graphics, banners, flyers, and marketing assets.
- Utilizing pre-designed templates, brand kits, logos, custom fonts, and color themes.
- Performing quick photo and video edits, background removals, and quick-action conversions.
- Creating short animated social clips, video reels, and multi-page promotional PDFs.
- Scheduling, managing, and publishing content across integrated social media platforms.

9. Document Creation & Management (Adobe Acrobat Pro)

- Creating, converting, combining, and organizing multi-format files into secure PDFs.
- Editing text content, replacing images, formatting pages, and managing document structure.
- Designing interactive PDF forms with fillable text fields, checkboxes, and buttons.
- Implementing document security, password protection, redaction, and e-signature workflows.
- Applying accessibility tools, optical character recognition (OCR), and PDF preflight checks.

1. Intuit QuickBooks Certified User Online

- Navigation and core setup of the QuickBooks Online accounting dashboard.
- Managing sales processes, customer accounts, invoicing, and receiving payments.
- Tracking company expenses, managing vendor bills, and handling purchase orders.
- Performing bank reconciliations, inventory tracking, and journal entry management.
- Generating financial reports, profit & loss statements, and balance sheets.

2. Intuit Design for Delight Innovator

- Mastering customer empathy through direct observation and deep user insight.
- Applying design thinking frameworks to identify root pain points and unmet needs.
- Driving creative broad-to-narrow brainstorming and rapid solution generation.
- Developing low-fidelity prototypes for rapid user testing and validation.
- Running rapid experiments and gathering actionable feedback to refine solutions.

3. Intuit Certified Bookkeeping Professional

- Fundamental accounting concepts, dual-entry accounting, and the accounting equation.
- Recording financial transactions, ledger postings, and trial balance preparation.
- Reconciling accounts, managing accounts payable (AP), and accounts receivable (AR).
- Handling payroll processing, tax compliance considerations, and asset depreciation.
- Preparing essential financial statements, month-end closing, and audit preparation.



4. Intuit Personal Finance

- Core principles of personal budgeting, expense tracking, and cash flow planning.
- Managing bank accounts, savings strategies, and interest rate mechanics.
- Understanding credit usage, credit scores, debt management, and loan structures.
- Fundamentals of personal income taxes, deductions, and tax planning strategies.
- Basic concepts of personal investments, retirement planning, and financial security.



1. **Cisco Certified Support Technician (CCST) IT Support**

- End-user support fundamentals, service management, ticketing systems, and help desk workflows.
- Computer hardware components, mobile device setups, and peripheral device management.
- Operating system installation, configuration, driver updates, and system maintenance.
- Step-by-step diagnostic workflows for software application crashes and connectivity issues.
- Endpoint security practices, malware prevention, software patching, and user security awareness.

2. **Cisco Certified Support Technician (CCST) Networking**

- Core networking models, network topologies, architecture types, and media standards.
- Fundamental IP addressing principles, IPv4/IPv6 subnetting, and protocol operations.
- LAN, WAN, and wireless (Wi-Fi) setup, configuration, and small office (SOHO) networking.
- Network diagnostic tools, command-line utilities (ping, traceroute), and packet analysis.
- Basic network security controls, router configuration, access management, and threat prevention.

3. **Cisco Certified Support Technician (CCST) Cybersecurity**

- Fundamental security principles (CIA triad), defense-in-depth strategies, and threat models.
- Network security architecture, firewalls, network segmentation, and secure wireless access.
- Identity access management, strong authentication controls, hashing, and encryption basics.
- Vulnerability detection, risk classification, patch prioritizing, and endpoint protection.
- Security event monitoring, suspicious activity logging, incident handling, and escalation.

1. Python Programming

- Core syntax, control structures, loops, functions, and data types.
- Object-oriented programming principles and modular code design.
- Standard libraries and built-in modules for practical script execution.
- Exception handling, error debugging, and file read/write operations.
- Best practices for writing readable, efficient, and structured code.

2. Python for Data Science

- Basics of Python data structures including lists, tuples, and dictionaries.
- Fundamental usage of NumPy arrays for numerical and array calculations.
- Data manipulation, cleaning, and filtering using the Pandas library.
- Introduction to plotting graphs and trends with Matplotlib and Seaborn.
- Importing, parsing, and exporting external data formats into Python environment.

3. Generative AI Essentials

- Fundamentals of generative models, LLMs, and foundation architectures.
- Mechanics of prompt engineering, fine-tuning, and prompt optimization.
- Text, image, and multi-modal generation tools and application platforms.
- Ethical considerations, bias mitigation, and responsible deployment practices.
- Real-world use cases, integrations, and capabilities of modern generative AI.

4. Data Analysis with Python

- In-depth exploratory data analysis (EDA) techniques and statistical summarization.
- Data wrangling, handling missing values, and normalization techniques.
- Model development using linear and polynomial regression algorithms.
- Model evaluation using cross-validation, grid search, and performance metrics.
- Building predictive data pipelines using Python packages like Pandas and SciPy.



5. Cybersecurity Fundamentals

- Core concepts of network security, system vulnerabilities, and threat vectors.
- Defensive security operations, incident handling, and risk management strategies.
- Overview of cryptography, encryption protocols, and secure network channels.
- Security frameworks, regulatory standards, and compliance governance.
- Fundamentals of threat intelligence, identity verification, and asset protection.

6. Internet of Things (IoT)

- Core architecture of IoT systems, smart sensors, and edge actuators.
- IoT network protocols, communication standards, and connectivity methods.
- Data collection, processing, and stream analytics from IoT devices.
- Cloud integration platforms for IoT device monitoring and management.
- Security risks, hardware vulnerabilities, and privacy controls in IoT ecosystems.

7. Cloud Essentials

- Fundamentals of cloud computing models: IaaS, PaaS, and SaaS.
- Comparison of public, private, hybrid, and multi-cloud environments.
- Basic cloud architecture, storage, virtual machine deployment, and networking.
- Overview of cloud security, identity governance, and compliance.
- Cost management, scalability benefits, and cloud operational workflows.

8. Block Chain Foundation

- Fundamentals of blockchain technology, distributed ledgers, and consensus mechanisms.
- Architecture of smart contracts and decentralized business applications.
- Cryptographic security principles, hashing, and transaction verification.
- Differences between public, private, and permissioned blockchain networks.
- Practical enterprise supply chain, financial, and digital identity use cases.

9. AI Fundamentals

- Basic principles, history, and core capabilities of Artificial Intelligence.
- Differentiating Machine Learning, Deep Learning, and Rule-Based Systems.
- Key concepts in Computer Vision, Natural Language Processing, and Robotics.
- Ethical AI guidelines, bias management, and societal impacts.
- Overview of practical enterprise AI deployment strategies and tools.

10. IBM Cloud Fundamentals

- Introduction to IBM Cloud architecture, global region infrastructure, and services.
- Deployment models including Bare Metal, Virtual Servers, and Containers.
- Cloud storage options including Object, Block, and File storage.
- Network configuration, security, virtual private clouds (VPC), and access controls.
- Integration options for cloud-native apps, databases, and AI microservices.

11. Simplifying Data Pipelines

- Fundamentals of high-throughput data ingestion and processing workflows.
- Event-streaming concepts and real-time messaging with Apache Kafka.
- Designing scalable ETL (Extract, Transform, Load) architecture models.
- Handling batch vs. stream data pipelines across enterprise systems.
- Monitoring, logging, and optimizing pipeline reliability and latency.

12. Web Development using HTML

- Structure and markup principles of HTML and modern HTML5 elements.
- Building web pages with text formatting, links, media, and lists.
- Constructing accessible HTML forms, tables, and input fields.
- Best practices for web document structure and semantic tags.
- Fundamentals of embedding styling, scripts, and media resources.

13. Machine Learning

- Core supervised, unsupervised, and reinforcement learning concepts.
- Implementing regression, classification, and clustering algorithms.
- Feature engineering, feature scaling, and data pre-processing workflows.
- Model selection, hyperparameter tuning, and cross-validation techniques.
- Evaluating model performance metrics using precision, recall, and accuracy.

14. SQL and Relational DB 101

- Basic relational database concepts, primary keys, and foreign keys.
- Writing DDL and DML statements to create, modify, and query tables.
- Filtering, grouping, aggregating, and ordering dataset query outputs.
- Combining multi-table records using INNER, LEFT, RIGHT, and FULL JOINs.
- Subqueries, indexing fundamentals, and transaction management principles.

15. Gen AI for Business

- Strategic applications of generative AI across sales, operations, and HR.
- Assessing business ROI, feasibility, and risk factors for AI projects.
- Enterprise implementation strategies and AI policy implementation.
- Enhancing workforce productivity using workplace AI assistant tools.
- Managing ethical governance, copyright compliance, and data privacy.

16. Agile Methodologies

- Core principles and values outlined in the Agile Manifesto.
- Framework mechanics of Scrum, Kanban, and iterative sprints.
- Roles and responsibilities including Product Owner, Scrum Master, and Team.
- Conducting effective sprint planning, daily standups, and retrospectives.
- Backlog refinement, story point estimation, and continuous improvement.

17. DevOps Fundamentals

- Concepts of continuous integration and continuous delivery (CI/CD).
- Collaboration strategies between development, operations, and QA teams.
- Infrastructure as Code (IaC) principles and automated configuration tools.
- Automated testing, build systems, deployment strategies, and rollbacks.
- Continuous monitoring, logging, and incident response operations.



18. Java Fundamentals

- Object-oriented programming principles: Inheritance, Encapsulation, Polymorphism.
- Java syntax, variable scope, control structures, and methods.
- Java Collection Framework handling lists, sets, and key-value maps.
- Exception handling, debugging techniques, and file handling operations.

Memory management concepts, garbage collection, and JVM execution.

19. JavaScript

- Core syntax, variable declarations, operations, and dynamic typing.
- Functions, scope, closures, array manipulation, and DOM execution.
- Event-driven programming and DOM manipulation methods.
- Asynchronous execution model using Promises and Async/Await statements.
- Object-oriented features, classes, prototypes, and ES6+ modern features.

20. NodeJS

- Fundamentals of Node.js asynchronous event-driven server runtime.
- Managing external packages, modules, and dependencies via NPM.
- Building RESTful web servers and handling HTTP web requests.
- Working with file systems, event emitters, and data stream buffers.
- Connecting Node applications to backend relational and NoSQL databases.

21. No SQL – MongoDB

- Key non-relational database concepts and JSON/BSON document formats.
- Creating, reading, updating, and deleting (CRUD) operations in MongoDB.
- Designing document schemas, embedding data, and referencing models.
- Aggregation pipelines for complex data query transformation and filtering.
- Indexing strategies, replication mechanisms, and sharding concepts.

22. RDBMS - Database Fundamentals

- Core concepts of relational database models and schema designs.
- Understanding database normalization rules up to Third Normal Form (3NF).
- ACID properties for reliable data processing and transaction management.
- Structured Query Language (SQL) basics for table generation and query execution.
- Data integrity, key constraints, triggers, and view management.

23. REST API

- Principles of Representation State Transfer (REST) web service architecture.
- HTTP methods (GET, POST, PUT, DELETE) and HTTP status codes.
- Designing API endpoints, request structures, and JSON payload handling.
- API security methods including token authorization and OAuth.
- API documentation, testing methods, rate-limiting, and error handling.

24. Scala 101

- Core syntax, dynamic expressions, and static typing in Scala.
- Blending Functional Programming (FP) with Object-Oriented Programming (OOP).
- Working with immutable collections, pattern matching, and high-order functions.
- Concurrency, trait inheritance, and execution on the Java Virtual Machine (JVM).
- Basic modular code construction and Scala application development.

25. Introduction to Containers, Kubernetes

- Fundamentals of application containerization using lightweight runtime images.
- Building, packaging, and deploying container images to registries.
- Overview of container orchestration benefits using Kubernetes.
- Core Kubernetes objects including Pods, Deployments, and Services.
- Basic container networking, storage volumes, and environment scaling.



26. Deep Learning with TensorFlow

- Fundamentals of neural networks, backpropagation, and activation functions.
- Building and training deep learning models using the TensorFlow library.
- Constructing Convolutional Neural Networks (CNNs) for image processing.
- Building Recurrent Neural Networks (RNNs) for sequential and text data.
- Model evaluation, regularization, and performance optimization techniques.

27. Data Science Methodology

- Problem formulation and translating business needs into data problems.
- Data requirement identification, collection strategies, and quality assessment.
- Data understanding, preparation, cleaning, and transformation processes.
- Model training, evaluation, validation, and iteration steps.
- Deployment, feedback collection, and model performance monitoring.

28. Spring Framework

- Fundamentals of Java enterprise application development using Spring.
- Core concepts of Dependency Injection (DI) and Inversion of Control (IoC).
- Building web services and REST endpoints using Spring Boot.
- Database integration and object-relational mapping using Spring Data JPA.
- Application security configurations and Spring MVC routing architecture.

29. Spark & Scala Fundamentals

- Large-scale distributed data processing using Apache Spark.
- Scala language foundations tailored for Spark processing pipelines.
- Working with Resilient Distributed Datasets (RDDs) and DataFrames.
- Executing SQL transformations, transformations, and actions on distributed clusters.
- Optimizing job performance, caching strategies, and batch operations.

30. Docker & Kubernetes

- Creating and managing containerized applications with Docker.
- Writing custom Dockerfiles, images, and container composition scripts.
- Managing container clusters using Kubernetes orchestration components.
- Deploying service discovery, load balancing, and automated scaling.
- Storage provisioning, secret configuration, and container rolling updates.

31. Data Visualization

- Core principles of effective visual communication and data storytelling.
- Selecting appropriate charts, graphs, and plots based on data attributes.
- Customizing visual attributes like color, scale, labels, and layouts.
- Generating static and interactive plots using visualization libraries.
- Identifying trends, outliers, and patterns in complex numerical datasets.

32. Software Foundation Course – C

- Core syntax, variable definitions, and basic data types in C.
- Control flow structures using loops, branching, and logical conditions.
- Functions, parameter passing, and variable execution scope.
- Array manipulations, string processing, and custom structure definitions.
- Understanding pointers, direct memory addressing, and memory allocation.

33. Software Foundation Course - C++

- Object-oriented features: Classes, Objects, Abstraction, and Encapsulation.
- Advanced C++ concepts: Inheritance, Operator Overloading, and Polymorphism.
- Standard Template Library (STL) usage including vectors, maps, and algorithms.
- Pointer arithmetic, references, and dynamic memory allocation (new/delete).
- Exception handling, template programming, and structured stream I/O.



34. Introduction to Big Data, Hadoop

- Core characteristics of Big Data (Volume, Velocity, Variety, Veracity).
- Distributed storage architecture of Hadoop Distributed File System (HDFS).
- Parallel data processing mechanics using MapReduce programming models.
- Overview of Hadoop ecosystem tools including Hive, Pig, and YARN.
- Ingestion strategies and cluster management for enterprise big data systems.

35. Identity & Access Management (IAM)

- Core concepts of identity governance, authentication, and authorization.
- Role-Based Access Control (RBAC) and Attribute-Based Access Control (ABAC).
- Multi-Factor Authentication (MFA), Single Sign-On (SSO), and Directory Services.
- Managing user lifecycles, privileged access management (PAM), and audit trails.
- Enterprise security standards, regulatory compliance, and access policies.

36. Deep Learning Fundamentals

- Core artificial neural network concepts, neuron nodes, and hidden layers.
- Forward propagation, loss functions, gradient descent, and backpropagation mechanics.
- Training parameters, epoch management, learning rates, and batch size configuration.
- Overfitting prevention using dropout, regularization, and validation techniques.
- Overview of deep neural network architectures for vision and language tasks.

37. NoSQL and DBaaS 101

- Comparing non-relational database models: Document, Key-Value, Columnar, and Graph.
- Characteristics and advantages of Database-as-a-Service (DBaaS) cloud offerings.
- Scaling strategies including horizontal partitioning, sharding, and replication.
- Evaluating trade-offs between consistency, availability, and partition tolerance (CAP Theorem).
- Managing cloud database instances, automated backups, and security access.

MS Office Fundamentals



1. Microsoft Azure AI Fundamentals (AI-900 / AI-901)

- Fundamental Artificial Intelligence (AI) concepts, workloads, and ethics.
- Core principles and features of Machine Learning on Azure.
- Features and capabilities of Azure Computer Vision workloads.
- Features and capabilities of Natural Language Processing (NLP) on Azure.
- Generative AI models and conversational AI services on Microsoft Azure.

2. Microsoft Azure Fundamentals (AZ-900)

- Core cloud concepts, including IaaS, PaaS, SaaS, and cloud deployment models.
- Azure architecture components such as regions, availability zones, and resource groups.
- Fundamental Azure compute, storage, networking, and database services.
- Azure management tools, governance features, cost management, and SLAs.
- Security, privacy, compliance, and identity mechanisms in Azure.

3. Microsoft Azure Data Fundamentals (DP-900)

- Core data concepts, including relational, non-relational, and streaming data.
- Relational data offerings on Azure, such as Azure SQL and relational databases.
- Non-relational data workloads using Azure Cosmos DB and Azure Blob Storage.
- Azure analytical data workloads, data warehousing, and real-time analytics.
- Modern data integration, ingestion pipelines, and visualization tools like Power BI.

4. Microsoft 365 Copilot and Agent Administrator Fundamentals (AB-900)

- Core concepts of generative AI, Copilot, and custom AI agents in Microsoft 365.
- Deploying, extending, and configuring Microsoft 365 Copilot across productivity apps.
- Building and managing custom AI agents using Copilot Studio.
- Managing data security, user privacy, compliance, and access governance for AI tools.
- Monitoring, managing usage, lifecycle maintenance, and optimizing Copilot adoption.

5. Microsoft Security, Compliance, and Identity Fundamentals (SC-900)

- Basic concepts of security, compliance, and identity (SCI) across Microsoft solutions.
- Microsoft Entra ID (formerly Azure AD) capabilities for identity and access management.
- Microsoft security solutions, threat protection, and SIEM capabilities (Microsoft Sentinel).
- Data protection, governance, and information protection capabilities in Microsoft Purview.
- Compliance management, risk assessment tools, and compliance portal features.

6. Microsoft Power Platform Fundamentals (PL-900)

- Business value and core components of the Microsoft Power Platform ecosystem.
- Building low-code custom business software applications using Power Apps.
- Automating workflows, business processes, and tasks using Power Automate.
- Creating interactive business intelligence dashboards and data visualizations with Power BI.
- Building external business websites with Power Pages and intelligent chatbots with Copilot Studio.

MS Office Specialist



1. Word Associate

- Managing documents, page setups, and saving formats.
- Inserting and formatting text, paragraphs, and sections.
- Creating and formatting tables and multi-level lists.
- Creating and managing references, citations, and endnotes.
- Inserting graphic elements like pictures, shapes, and SmartArt.

2. Excel Associate

- Managing worksheets, workbooks, and custom window views.
- Managing data cells, ranges, styles, and AutoFill operations.
- Creating, formatting, and filtering structured Excel tables.
- Performing operations with formulas and basic functions (SUM, IF, COUNT).
- Creating and customizing charts and Sparklines for data visualization.

3. PowerPoint Associate

- Creating and managing slides, slide masters, and layouts.
- Formatting slide content, text boxes, and multi-column lists.
- Inserting visual elements such as shapes, images, tables, and SmartArt.
- Applying custom slide transitions and object animations.
- Configuring slide show timing, speaker notes, and presentation options.

4. Word Expert

- Managing custom document templates, options, and advanced settings.
- Utilizing advanced editing features, styles, and hyphenation settings.
- Creating custom building blocks, Quick Parts, and custom style sets.
- Managing indexes, tables of figures, and automated captions.
- Designing custom forms, fields, content controls, and running simple macros.

5. Excel Expert

- Managing advanced workbook options, structure protection, and settings.
- Applying custom formatting, data validation rules, and grouping data.
- Creating complex logical/lookup formulas and recording simple macros.
- Building advanced charts, PivotTables, and Pivot Charts with slicers.
- Conducting data analysis, what-if scenarios, and formula auditing.

MS Office Specialist

1. Technology Literacy for Educators

- Aligning classroom teaching with the UNESCO ICT Competency Framework for Teachers.
- Integrating digital technology and ICT tools into learning and assessment activities.
- Facilitating 21st-century skills like student collaboration, problem-solving, and communication.
- Managing ICT resources across classroom, laboratory, and remote learning environments.
- Utilizing digital tools for teacher productivity, continuous learning, and student data management.

2. Microsoft Power BI Data Analyst (PL-300)

- Preparing, cleaning, and transforming raw business data from various sources.
- Designing and modelling efficient data structures with DAX calculations.
- Creating interactive data visualizations, dashboards, and detailed reporting layouts.
- Analysing trends, insights, and key performance metrics to drive business decisions.
- Managing, sharing, and securing assets within the Power BI service workspace.

3. Microsoft Azure Administrator (AZ-104)

- Managing Azure identities, governance, role-based access, and active subscriptions.
- Configuring and managing cloud storage infrastructure, Blob accounts, and file shares.
- Deploying and administering virtual machines, containers, and compute resources.
- Configuring virtual networking, IP addressing, load balancing, and DNS settings.
- Monitoring, auditing, backing up, and troubleshooting hybrid and cloud workloads.

4. AI Apps & Agents on Azure (AI-103)

- Designing and building scalable AI applications using Microsoft Azure AI services.
- Developing autonomous, multi-agent conversational AI solutions and workflows.
- Integrating Azure OpenAI models, cognitive services, and generative tools.
- Implementing natural language, vision, and contextual reasoning capabilities.
- Managing data pipelines, access security, and responsible AI governance.

5. Microsoft Cybersecurity Architect (SC-100)

- Designing Zero Trust security strategies and enterprise reference architectures.
- Planning identity, endpoint, and privilege management across hybrid and cloud environments.
- Architecting Security Operations (SecOps), threat intelligence, and incident response.
- Securing infrastructure, containerized applications, data storage, and AI workloads.
- Defining governance, risk evaluation, regulatory compliance, and data protection policies.

6. Azure Database Administrator (DP-300)

- Planning, deploying, and managing relational database resources across Azure SQL.
- Configuring database security, data masking, encryption, and role-based permissions.
- Monitoring, tuning, and optimizing query performance and database index strategy.
- Automating database maintenance tasks, health alerts, and administrative routines.
- Implementing business continuity, high availability, backup, and disaster recovery plans.

7. GitHub Certified: Agentic AI Systems (GH-600)

- Constructing and orchestrating autonomous agentic workflows using GitHub and Azure tools.
- Integrating Copilot agents and LLM APIs into existing development environments.
- Automating software engineering tasks, code generation, and repository management.
- Implementing agent memory, tool execution, safety guardrails, and context windows.
- Monitoring, testing, and scaling enterprise-grade agentic system deployments.

Meta Certified Digital Marketing Associate

- Understanding the value proposition of Meta technologies, including Facebook, Instagram, Messenger, and WhatsApp.
- Establishing a business presence through Business Pages, Accounts, and essential tools like Meta Business Suite.
- Learning advertising fundamentals, campaign objectives, target audience selection, and budget settings.
- Creating, configuring, and managing ad formats, placements, and creative assets across platforms.
- Measuring performance through ad reporting, analysing metrics, and applying data insights to optimize campaign success.