TekTraining®

[CompTIA Core IT]
Detailed Program Curriculum

Program Code [xxx123]

Program Description

The IT Technician role is pivotal to the effective daily operations of any business in our modern economy. IT plays a significant role in deploying payment systems, computer networks, accounting software, and more. IT responsibilities revolve around providing secure and redundant computer systems for the efficient and continuous operation of a business.

CompTIA A+ is the first IT certification a candidate should earn. It establishes the core knowledge required of any IT role and provides a springboard to entry-level IT jobs. A+ incorporates best practices in hands-on troubleshooting, ensuring candidates have practical computer problem-solving skills. Combined with the CompTIA Network+ certification a candidate will have a robust understanding of complex computer infrastructure including how internetworks operate. Together these individual certifications form the CompTIA IT Operations Specialist certification. Over 2.3 million CompTIA IS/ANSI-accredited exams have been delivered since January 1, 2011.

The program content will introduce the student to computer components, networking devices, software management and deployment, and more. The program will expose and support the student to an understanding and appreciation of IT infrastructure. Consideration and study of time management skills and the importance of being a detail-oriented problem solver will be discussed. The student will apply the skills learned in this program to manage IT infrastructure. The student will be able to explain the importance of maintaining records. This program will prepare the student by educating them IT problems. The course will also support the student with resume writing and interview skills.

The knowledge and training obtained throughout the program will ensure that the student is equipped with professional and ethical qualities and the skillset of an IT Technician.

Career Occupation

This program is intended to prepare a student for the following occupations:
- IT Technician
- Technical Support Specialist
- Help Desk Technician
- Project Technician
- PC Technician
- Network Technician
- Server Administrator
- Systems Administrator
- Systems Analyst

Admission Requirements

- Grade 12 diploma or be a mature student (aged 19 at the start of the course). A copy of the student's high school diploma is required if they are under the age of 19. If an applicant is under 19, a parent or guardian must sign on behalf of the applicant.
- A copy of a government issued piece of photo identification, such as a driver's license, passport or other, which shows the student's date of birth.

- Distance Learning students must have a PC (Mac or Windows based) with minimum computer requirements and Internet access (high speed is recommended) as highlighted under Computer Requirements section.
- If English is not the student's native language, the student must provide confirmation that they have achieved the minimum test score from one of the following:
    1. IELTS 6 or higher with no module less than 5.5
    2. TOEFL with a minimum score of 60
    3. 5 Star English with a minimum grade of 70%

Instructors and Educational Assistants

All instructors and educational assistants employed by Tektraining Career College are highly qualified and bring a wealth of knowledge and experience. They are dedicated to assisting every student through the program. Students will complete the program individually, self-paced, and online. Students will be provided with support from our instructor, student services, and IT departments.

Program Learning Objectives

Upon successful completion of the CompTIA Core IT program, the student will be able to:
- Assemble and repair desktop computers
- Manage and troubleshoot Windows in a domain environment
- Harden endpoint security
- Understand current IT security best practices
- Understand IT operational procedures in both field and remote work
- Configure SOHO networks
- Configure virtual machines
- Manage Cloud and Software as a Service
- Troubleshoot Linux, MacOS, and mobile devices
- Understand backups and disaster recovery
- Deploy ethernet and wifi networks
    - Support IPv4 and IPv6
- Deploy and maintain network services
- Understand the OSI model
- Analyse network traffic
- Understand network security and firewalls
- Understand the use of scripting in IT

Method of Evaluation

1. **Course Tests**   **(__%)**
   Students are encouraged to meet the benchmark score of 60% on all chapter tests. Chapter tests are weighted equally, combined, and averaged for a final grade.

2. **Midterm Examination**   **(__%)**
   The midterm exam is cumulative from the beginning of the courseware and includes questions relating to all courses before the midterm. Students are encouraged to meet the benchmark score of 90% on the midterm exam.

3. **Assigned Activities**   **(__%)**
   Students will be directed to _____ activities throughout the program. Students will work through activities that apply to the content of the courses. Specific assignments will be identified as graded at the end of each course before the course test.

4. **Simulated Employment Interview**   **(__%)**
   The exit interview is comprised of a cover letter and resume submission for a fictional job, and a virtual interview based on the same job. Students must submit an edited version of their cover letter and resume and then make an appointment with an instructor for the virtual interview. The cover letter and resume submission are worth 40% of the grade, and the interview is worth 60% of the grade.

5. **Practicum**   **(__%)**
   This grade is derived from the completion of the Practicum. Students must complete this to graduate.

6. **Final Examination**   **(__%)**
   The final exam is cumulative from the beginning of the course. The final exam will be comprised of questions from every chapter in the course. Students are encouraged to surpass the 90% benchmark to ensure they receive an overall passing grade.

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TOTAL   100%

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Graduation Requirements

To meet the **graduation requirement** for the program, the student must have achieved a grade of C (60% or higher) to pass. The following table denotes Tektraining's Final Grade Percentages:

A+	95 – 100%	Dean's List
A	90 – 94%	High Honors
A-	85 - 89%	Honors
B+	80 – 84%	Merit
B	75 – 79%	
B-	70 – 74%	
C+	65 – 69%	
C	60 – 64%	
C-	55 – 59%	
D	50 – 54%	
F	Below 50%	

Students have access to an online grade book in their online course platform. This tool is for the student to access grades throughout the program.

Program Duration

Upon registration, each student is provided with a personalized timeline, including completion dates, to guide and assist with the program's time management. Students proceed in a cohort setting, and along with their classmates, are required to complete the program in 18 weeks(87 days). An example of the basic timeline is as follows:

CompTIA Core IT Program Timeline		
Course	**Estimated # of hours to complete**	**Estimated # of days to complete (5-day study week)**
Introduction	4	1
IT Fundamentals	36	9
A+ Part 1	80	20
Study Break	20	5
A+ Part 2	80	20
Study Break	20	5
Network+	80	20
Career & Professional Development	20	5
Final Exam	8	2
Total	**348**	**87**

Homework Hours

There are 2 designated study breaks where students will review the content they have learned to date. All other homework hours are integrated into the program curriculum with an online delivery model; however, a student can expect to review and study materials outside of class time to successfully graduate from the program.

Delivery Methods

This program is online delivery for both in-class and distance methods. This can delivered synchronously in an instructor-led cohort setting.

Milestones

Milestones occur between each major section of the course throughout the program and are triggered when the student reaches a specific point in the program. Students are encouraged to complete a short milestone survey, which an instructional team member then reviews. The instructor initiates contact to see how the student is doing, answers any questions or concerns, and ensures the student is making satisfactory progress through the program. If the student does not complete the survey, contact with the student is still made by the instructors. Students are encouraged to contact the instructors at any time during regular business hours for assistance throughout the program.

Course Surveys

Upon completion of each course, the student is encouraged to fill out a short course survey. It will ask for your experience with basic directions, activities, materials and resources, visual and audio elements, and instructor assistance for that course. There is room for comments, and all comments are welcomed. As many concerns can be resolved directly, we encourage you to leave your email contact information on the survey. Constructive feedback is welcomed and viewed as an excellent opportunity for us to enhance the program.

Required Textbooks, Reference Materials, and Industry Platforms

The following textbooks and reference material are required for the program and will be used for all courses, activities, and tests, except where referenced separately. Comparable replacements may be substituted at Tektraining's discretion.

Students are responsible for and must purchase Integrated Certmaster Learn+Labs for A+ Core 1 and Core 2 and Integrated Certmaster Learn+Labs for Network+. These are mandatory supplemental resources to the course. They are supportive study tools that include the e-textbook, flashcards, quizzes, and assignments. Some assignments will be graded and applied to a percentage of the student's final grade. Students may be tested on assigned labs and questions from activities in these environments, whether graded or not.

Computer Requirements

A computer is required for the entire program. Computer requirements are as follows:
- Access to high-speed internet
  - Minimum download speed of 15 mbps
  - Minimum upload speed of 10 mbps
- A minimum of 8 gigabytes of RAM (Random Access Memory)
- For Windows Operating Systems:
  - Windows 10 or newer
  - Google Chrome or Firefox
- For Mac:
  - Mac OS X Yosemite or newer
  - Google Chrome, Firefox, or Safari

Academic Honesty

Tektraining Career College is committed to the highest standards of academic integrity and honesty. Students are urged to avoid any behaviour which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or dismissal from the program. Please see further details under the **Appropriate Conduct/Dismissal Policy** section in the Tektraining Student Handbook.

Program Outline

IT Fundamentals
Course Code: xxx
Prerequisites: see program prerequisites
Learning Objective: If you are getting ready for a career in IT, IT Fundamentals is the first step in your preparation. This course assumes zero prior knowledge of Windows systems and gets the student ready for a more office and work-focused perspective of computers. This course is designed to overcome the limitations of a mobile-first, mobile-centric view of computers by introducing the idea of a power user and how to get the most out of your computer systems. The course then expands upon that to introduce networking and general security basics.

Required Course Materials: None
Length: 36 hours
Teaching Methods: Online, live or recorded instructional content, learning through LMS using written content. Instructional assistance available when required via email, phone, or live chat.
Method of Evaluation: Program Specific Course test.
Completion Requirement: View all course material, required reading, attempt course test, and complete course survey.
Course Outline:
- 1.0 Understanding Windows
- 2.0 Units of Computing
- 3.0 Files and File Explorers
- 4.0 Security Basics
- 5.0 Hardware Basics
- 6.0 Managing Windows
- 7.0 Networking Basics

A+ Part 1
Course Code: xxx
Prerequisites: IT Fundamentals
Learning Objective: This course focuses on covering material relevant to general IT as well as the CompTIA A+ industry-standard certification. Students will learn about a wide variety of IT concepts, from computer hardware such as CPUs, GPUs, RAM, motherboards, connectors to software deployment on workstations and servers, network troubleshooting and deployment fundamentals, security fundamentals, and best practices. This course forms a basis for a career in any subfield of IT.
Required Course Materials: Integrated Certmaster Learn+Labs for A+ Core 1 and Core 2
Length: 160 hours
Teaching Methods: Online, live or recorded instructional content, learning through LMS using written content. Instructional assistance available when required via email, phone, or live chat.
Method of Evaluation: Program Specific Course test.
Completion Requirement: View all course material, required reading, attempt course test, and complete course survey.
Course Outline:
- 1.0 Installing Motherboards and Connectors
- 2.0 Installing System Devices
- 3.0 Troubleshooting PC Hardware
- 4.0 Comparing Local Networking Hardware
- 5.0 Configuring Network Addressing and Internet Connections
- 6.0 Supporting Network Services
- 7.0 Summarizing Virtualization and Cloud Concepts
- 8.0 Supporting Mobile Devices
- 9.0 Supporting Print Devices
- 10.0 Configuring Windows

Designated Course Study Break 1
Prerequisites: A+ Level 1
Learning Objective: Review of content learned to date.
Required Course Materials: Integrated Certmaster Learn+Labs for A+ Core 1 and Core 2
Length: 20 hours
Teaching Methods: Online, live or recorded instructional content, learning through LMS using written content. Instructional assistance available when required via email, phone, or live chat.
Completion Requirement: View all course material covered to date and ensure all required reading is complete.

A+ Part 2
Course Code: xxx
Prerequisites: Study Break 1
Learning Objective: This course focuses on covering material relevant to general IT as well as the CompTIA A+ industry-standard certification. Students will learn about a wide variety of IT concepts, from computer hardware such as CPUs, GPUs, RAM, motherboards, connectors to software deployment on workstations and servers, network troubleshooting and deployment fundamentals, security fundamentals, and best practices. This course forms a basis for a career in any subfield of IT.
Required Course Materials: Integrated Certmaster Learn+Labs for A+ Core 1 and Core 2

Length: 160 hours

Teaching Methods: Online, live or recorded instructional content, learning through LMS using written content. Instructional assistance available when required via email, phone, or live chat.

Method of Evaluation: Program Specific Course test.

Completion Requirement: View all course material, required reading, attempt course test, and complete course survey.

Course Outline:

- 11.0 Managing Windows
- 12.0 Identifying OS Types and Features
- 13.0 Supporting Windows
- 14.0 Managing Windows Networking
- 15.0 Managing Linux and macOS
- 16.0 Configuring SOHO Network Security
- 17.0 Managing Security Settings
- 18.0 Supporting Mobile Software
- 19.0 Using Support and Scripting Tools
- 20.0 Implementing Operational Procedures
- 21.0 CompTIA Exam Overview

Designated Course Study Break 2

Prerequisites: A+ Level 2

Learning Objective: Review of content learned to date.

Required Course Materials: Integrated Certmaster Learn+Labs for A+ Core 1 and Core 2

Length: 20 hours

Teaching Methods: Online, live or recorded instructional content, learning through LMS using written content. Instructional assistance available when required via email, phone, or live chat.

Completion Requirement: View all course material covered to date and ensure all required reading is complete.

Network +

Course Code: xxx

Prerequisites: Study Break 2

Learning Objective: After completing this course, students will be able to dentify basic network theory concepts and major network communications methods, describe bounded network media, identify unbounded network media, identify the major types of network implementations, identify TCP/IP addressing and data delivery methods, implement routing technologies, identify the major services deployed on TCP/IP networks, identify the infrastructure of a WAN implementation, identify the components used in cloud computing and virtualization, describe basic concepts related to network security, prevent security breaches, respond to security incidents, identify the components of a remote network implementation, identify the tools, methods, and techniques used in managing a network.

Required Course Materials: Integrated Certmaster Learn+Labs for A+ Core 1 and Core 2

Length: 80 hours

Teaching Methods: Online, live or recorded instructional content, learning through LMS using written content. Instructional assistance available when required via email, phone, or live chat.

Method of Evaluation: Program Specific Course test.

Completion Requirement: View all course material, required reading, attempt course test, and complete course survey.

Course Outline:

- 1.0 Comparing OSI Model Network Functions
- 2.0 Deploying Ethernet Cabling
- 3.0 Deploying Ethernet Switching
- 4.0 Troubleshooting Ethernet Networks
- 5.0 Explaining IPv4 Addressing
- 6.0 Supporting IPv4 and IPv6 Networks
- 7.0 Configuring and Troubleshooting Routers
- 8.0 Explaining Network Topologies and Types
- 9.0 Explaining Transport Layer Protocols
- 10.0 Explaining Network Services
- 11.0 Explaining Network Applications
- 12.0 Ensuring Network Availability

13.0	Explaining Common Security Concepts
14.0	Supporting and Troubleshooting Secure Networks
15.0	Deploying and Troubleshooting Wireless Networks
16.0	Comparing WAN Links and Remote Access Methods
17.0	Explaining Organizational and Physical Security Concepts
18.0	Explaining Disaster Recovery and High Availability Concepts
19.0	Applying Network Hardening Techniques
20.0	Summarizing Cloud and Datacenter Architecture

Career Development

Course Code: xxx

Prerequisites: Security +

Learning Objective: In this course, the student will have created a professional resume and cover letter. They will also consider and develop strategies for a targeted job search. Students will study effective interview techniques which will include answering practice interview questions. Lastly, the students will understand the importance of networking in order to advance their career goals.

Required Course Materials: No additional materials are required for this course.

Length: 20 hours

Teaching Methods: Online, live or recorded instructional content, learning through LMS using written content. Instructional assistance available when required via email, phone, or live chat.

Method of Evaluation: Completion of the student's Simulated Employment Interview, including submission of the student's Resume and Cover Letter (5% of the student's final grade).

Completion Requirement: View all course material, submit Resume and Cover Letter for grading, complete Simulated Employment interview, attempt the course test.

Course Outline:

1.0 Introduction

2.0 Resumes

3.0 Applications and Cover Letters

4.0 Resume and Cover Letter Exercise

5.0 Job Searching

6.0 Interviewing

Final Examination

Course Code: xxx

Prerequisites: Practicum

Learning Objectives: This assessment determines what level of learning outcomes the student has achieved

Required Course Materials: Students are encouraged to review all required textbook readings, course content, and course quizzes/tests.

Length: 6 hours

Teaching Method: Online, timed exam. Instructional assistance will be available, if required, before beginning the exam.

Method of Evaluation: The student must reach a minimum passing grade of 60%.

Completion Requirement: Students must attempt the Final Exam

Conclusion

The following information outlines what the student can expect after the successful completion of the program, assuming students' accounts are current and there are no other outstanding issues that would prohibit receipt of the following:

1.0 Tektraining issues the graduate their final transcript.

2.0 The graduate will receive their graduation certificate and letter.

3.0 The graduate will receive information on career opportunities.

4.0 The graduate receives lifetime support from the college.

Congratulations and good luck in all your future endeavors!

<u>Computer Build Week</u> <mark>(I would have this as a Program Add-on)</mark>

Course Code<mark>: xxx</mark>

Prerequisites: A+ Part 1

Learning Objective: Students will get hands on learning with building their own computer and installing an operating system. Students will also gain experience with setting up a network by configuring a SOHO router and creating an ethernet cable.

Required Course Materials:

Computer Parts

- Motherboard, CPU, RAM, PSU, computer case, WiFi card, Monitor, Keyboard, Mouse, Windows Pro edition license, USB stick (8GB minimum), Philips screw driver

Networking Parts

- RJ-45 ends
- Cat-5e cable spool
- RJ-45 crimper
- SOHO Router

Length: 20 hours

Teaching Methods: In person, live instructional content.

Method of Evaluation: Completion of a working computer, and network cable

Completion Requirement: Completion of a working computer, and network cable

Course Outline:

1.0 Building a desktop computer

2.0 Configuring a UEFI and installing/configuring Windows

3.0 Setting up a virtual machine

4.0 Configuration of a SOHO router and construction of a twisted pair cable.