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**Program**

**Course Curriculum**

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| **Semester 01**   (Tuition: $2,420  Books: $640-$1,190) |
| **Course #** | **Course Title** | **Credits** |
| 10-103-106 | Beginning Microsoft Excel | 1 |
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| Credits: 1 Lecture Hours: 18This course is an introduction to Microsoft Excel. Students will learn the basic features to produce basic worksheets and charts. Other topic areas covered include formatting, formulas, built-in functions used to design functional worksheets to solve business problems. Basic experience with Windows is assumed. |
| 10-103-111 | Beginning Microsoft Access | 1 |
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| Credits: 1 Lecture Hours: 18This course is an introduction to Microsoft Access. In the four assigned units, you will learn the purpose and business use for a database, database terminology, and how to create and work with Access tables, queries, forms, and reports. Basic experience with Windows is assumed. |
| 10-103-118 | Intermediate Microsoft Excel | 1 |
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| Credits: 1 Lecture Hours: 18This course is introduces intermediate level features of Microsoft Excel. Students will learn to use relative & absolute reference formulas and functions, manage workbooks using multiple worksheets, create custom templates and use pivot tables effectively. |
| 10-107-191 | IT Concepts | 2 |
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| Credits: 2 Lecture Hours: 18 Lab Hours: 36Learners will utilize a Raspberry Pi, an inexpensive credit card-sized single-board computer, to explore information systems, operating system management, GUI, and command-line interfaces, hardware components, and use of file systems, files and file attributes and data communications. Learners will also be introduced to the many career opportunities in the Information Technology profession which employs over 6 million individuals across a range of industries, from manufacturing, banking and finance, transportation, healthcare and education. |
| 10-150-130 | Linux Essentials | 2 |
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| Credits: 2 Lecture Hours: 18 Lab Hours: 36The learner will practice the fundamentals of the Linux operating system and command line, and basic open source concepts. Learners will be able to comprehend how Linux is used and the basics of the command line. The learner will also apply troubleshooting skills using the built-in Linux command line help. This course builds the foundational knowledge for progressively mastering the manipulation of Linux file systems, scripting, and security. The learner will be introduced to all of the objectives of the LPI Linux Essentials industry certification exam. |
| 10-154-101 | Comp TIA A+ Essentials | 2 |
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| Credits: 2 Lecture Hours: 18 Lab Hours: 36Students will develop required skills and techniques that meet the competencies in the six domains required to pass the industry certification exam. Students will learn a technical understanding of computer technology and hardware, troubleshooting/repair/maintenance, operating systems, networking, security, and operational procedures including communication skills and professionalism required of all entry-level IT professionals. |
| 10-620-156 | Fiber Optic Cabling Technician | 1 |
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| Credits: 1 Lecture Hours: 9 Lab Hours: 18This course will introduce the learner to the essential knowledge, skills, and abilities required to install and configure fiber optic networking infrastructure in an industrial plant setting. Major topics of study include: using light to transmit information, fiber types, fiber preparation, fiber termination, fiber splicing, fiber inspection and testing, and safety issues and procedures unique to the fiber optic industry. Learners will practice the skills necessary to select, install, terminate, splice, inspect, and test fiber optical cables to EIA/TIA standards using industry standard tools and procedures. This course is a recommended preparation activity for those interested in pursuing the Fiber Optics Association (FOA) Certified Fiber Optic Technician (CFOT) written and hands-on certification exam. |
| 10-801-136 | English Composition 1 | 3 |
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| Credits: 3 Lecture Hours: 54This course is designed for learners to develop knowledge and skills in all aspects of the writing process. Planning, organizing, writing, editing and revising are applied through a variety of activities. Students will analyze audience and purpose, use elements of research and format documents using standard guidelines. Individuals will develop critical reading skills through analysis of various written documents. |
| 10-804-133 | Math & Logic | 3 |
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| Credits: 3 Lecture Hours: 54Students will apply mathematical problem solving techniques. Topics will include symbolic logic, sets, algebra, Boolean algebra, and number bases. |
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| **Semester 02**   (Tuition: $2,400  Books: $360-$370) |
| **Course #** | **Course Title** | **Credits** |
| 10-107-189 | IT Career Development | 1 |
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| Credits: 1 Lecture Hours: 18Students will learn job seeking skills and practice appropriate work environment attitudes while projecting a professional image. Students will build a job interview portfolio, participate in mock interviews, and be required to research a particular job and company. Final versions of resumes, cover letters, and follow-up letters will be required. Common interviewing and communication skills required for the IT professional will also be addressed. This is a second-year class for IT students. |
| 10-150-115 | Principles of Information Security | 3 |
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| Credits: 3 Lecture Hours: 36 Lab Hours: 36The learner will have the working knowledge and skills required to identify risk and participate in risk mitigation activities, provide infrastructure, application, operational and information security, apply security controls to maintain confidentiality, integrity and availability. They will also identify appropriate technologies, products, and operate with an awareness of applicable policies, laws and regulations. These skills will prepare the learner for the CompTIA Security+ Certification examination, which is approved by the Department of Defense to meet IAT Level II and IAM Level I requirements as defined in DoD 8570.01-M. Prerequisites: Comp TIA A+ Essentials (10-154-101) |
| 10-150-126 | Premises Cabling Technician | 2 |
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| Credits: 2 Lecture Hours: 18 Lab Hours: 36This course will introduce the learner to the knowledge and skills required in the installation of copper, fiber and wireless networks. An exploration of cabling types, termination techniques, design and testing will be conducted. Learners will practice using the tools and the skills required to terminate copper, fiber and wireless. At the completion of this course, the learner will complete the requirements for the CPCT certification with a written and hands-on examination. |
| 10-150-129 | Introduction to Networks | 2 |
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| Credits: 2 Lecture Hours: 18 Lab Hours: 36In this course learners will install, operate, configure, secure and troubleshoot networks. This is an entry-level networking course that learners will explore the fundamentals of LAN and WAN technologies including routing, switching and wireless. Learners will work directly with Cisco routers and switches configuring IPv4 and IPv6 by implementing switched networks using VLANs, Access Control Lists (ACLs) and routing technologies. |
| 10-150-131 | Mac OS Essentials | 1 |
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| Credits: 1 Lecture Hours: 9 Lab Hours: 18The learner will be introduced to the skills, knowledge, and tools to support and maintain the users of a Mac Operating System connected to a network. The learner will explore Mac OS features and functionality, including how to find more information about the Mac OS. Troubleshooting the Mac OS will also be a skill introduced in this course. |
| 10-154-106 | Comp TIA A+ Practical Applications | 2 |
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| Credits: 2 Lecture Hours: 18 Lab Hours: 36Students will increase their skills and knowledge in which troubleshooting and tools must be applied to resolve problems. Students will develop a working understanding of hardware, operating systems, networking, and security concepts and apply it to problem-solving situations. |
| 10-154-108 | IT Help Desk Practicum | 2 |
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| Credits: 2 Lecture Hours: 18 Lab Hours: 36Students will demonstrate acquired skills by participating in the student-run help desk. Students will be required to schedule jobs, document steps taken and services performed, and open and close tickets under the supervision of an IT instructor Prerequisites: CompTIA A+ Essentials (10-154-101)OR Corequisite: CompTIA A+ Practical Applications (10-154-106) |
| 10-801-196 | Oral/Interpersonal Communication | 3 |
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| Credits: 3 Lecture Hours: 54Students demonstrate competency in speaking, verbal and nonverbal communication, and listening skills through individual presentations, group activities and other projects. |
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| **Semester 03**   (Tuition: $2,390  Books: $140-$420) |
| **Course #** | **Course Title** | **Credits** |
| 10-150-102 | Cisco Networking | 4 |
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| Credits: 4 Lecture Hours: 54 Lab Hours: 36The learner will explore physical components of communication networks in great detail, including use, maintenance, and connectivity. Learners will configure TCP/IP protocols on Cisco routers and switches, as well as various testing equipment. Learners will apply advanced troubleshooting concepts on communication networks. Learners will configure routing and bridging protocols along with advanced IP configurations in order to further understand communication systems, procedures, and use policies. Learners will implement basic network security and network design with VLANs and ACLs. The learner will be introduced to all of the objectives of the Cisco CCNA industry certification exam. Prerequisite: Introduction to Networks (10-150-129) |
| 10-150-128 | Windows Server Administration | 3 |
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| Credits: 3 Lecture Hours: 18 Lab Hours: 72In this course learners will focus on the core infrastructure of a Windows Client/Server environment using the latest Windows server technology. Learners will work with Active Directory User and Group management, Network Access and Data Security, Group Policy and Remote Access services. At the completion of this course, the learner will be introduced to the objectives of the Microsoft Certified Solutions Associate industry certification exam #70-411. Prerequisites: Introduction to Networks (10-150-129) and CompTIA A+ Essentials (10-154-101) |
| 10-150-132 | Voice Over IP Administration | 2 |
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| Credits: 2 Lecture Hours: 18 Lab Hours: 36Learners will be introduced to the protocols, terms and definitions of analog phone systems as well as Voice over IP (VOIP) networks. Learners will be configuring station call features, provisioning voice trunks, and establishing voicemail accounts. The learner will use the Cisco Unified Communications Manager platform while exploring the functionality of a voice over IP network. Prerequisite: Introduction to Networks (10-150-129) |
| 10-196-156 | Project Management 1 | 1 |
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| Credits: 1 Lecture Hours: 18In this first Project Management course students will examine the role of a project manager. In addition, the students will look at the different aspects of project planning, including software for managing a project and the different planning phases required for a successful implementation. |
| 10-801-197 | Technical Reporting | 3 |
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| Credits: 3 Lecture Hours: 54Students prepare and present oral and written technical reports. Students create, but are not limited to the following reports: lab and field reports, proposals, technical letters and memos, technical research reports, case studies, and oral technical presentations. Students enroll in this advanced communication course after having completed at least the prerequisite introductory writing course. Prerequisite: Written Communication (10-801-195) or English Composition (10-801-136) |
| 10-809-195 | Economics | 3 |
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| Credits: 3 Lecture Hours: 54Students will develop analytical skills central to how a market-oriented system operates and the factors that influence national economic policy. Students will apply basic concepts and analyses to a variety of contemporary problems and public policy issues. These concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment, and global economic issues. |
|  |  | **16** |
| **Semester 04**   (Tuition: $2,540  Books: $150-$210) |
| **Course #** | **Course Title** | **Credits** |
| 10-150-103 | Firewall/VPN | 3 |
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| Credits: 3 Lecture Hours: 36 Lab Hours: 36The Learner will be provided an in-depth, theoretical, and hands-on introduction to network security, in a logical sequence driven by technologies. Learners will develop an in-depth, theoretical understanding of net- work security principles as well as the tools and configurations available. The learner will emphasize on the practical application of skills needed to design, implement, and support a secure Cisco network. The learner will be introduced to all of the objectives of the Cisco CCNA Security industry certification exam. Prerequisite: Cisco Networking (10-150-102) |
| 10-150-105 | Advanced Communication Networks | 3 |
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| Credits: 3 Lecture Hours: 18 Lab Hours: 72Learners will work with advanced communication networks implementing various wireless and Wide Area Networks (WANs). Learners will also implement multiple collaboration systems, including email and instant messaging systems as well as Intra/Internet web services on both Windows and Linux operating systems. Prerequisite: Cisco Networking (10-150-102) |
| 10-150-107 | Internship/Field Study *\* OR \** |  |
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| Credits: 3 Lecture Hours: 0 Occupational Hours: 216Students will obtain on-the-job experience in an information technology department. The individual student will work in an area of information systems that parallels the student's area of concentration. Prerequisites: Cisco Networking (10-150-102) Windows Server Administration (10-150-128) |
| 10-150-108 | Advanced IT Help Desk Practicum | 3 |
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| Credits: 3 Lecture Hours: 54Students will demonstrate acquired skills by participating in the student-run help desk at SWTC. Students will be required to mentor support technicians, schedule jobs, document steps taken and services performed, open tickets as well as review closed tickets under the supervision of an IT instructor. Students will work with the public and other students four (4) hours per week for the entire semester. Prerequisites: Windows Networking (10-150-117) Comp TIA A+ Essentials (10-154-101) Help Desk Practicum (10-154-108) |
| 10-150-121 | VMWare VCP Essentials | 3 |
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| Credits: 3 Lecture Hours: 36 Lab Hours: 36This hands-on training course allows the learner to explore installation, configuration, and management of VMware® vSphere, which consists of VMware ESXi/ESX and VMware vCenter Server. Students are introduced to virtualization and storage management concepts using VMware server virtualization products. The learner will be introduced to all the objectives for the VMware VCP industry certification exam. Prerequisite: Cisco Networking (10-150-102) |
| 10-150-133 | Wireless Networking | 2 |
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| Credits: 2 Lecture Hours: 18 Lab Hours: 36The learner will be introduced to the design, planning, implementation, operation and troubleshooting of Wireless Networking. The course will provide a comprehensive overview of technologies, security, and design best practices. The learner will conduct hands-on installations and configurations of Wireless Client Adapters, Routers, Access Points, Repeaters, Bridges and other wireless devices using multiple-vendor equipment. Prerequisites: Cisco Networking (10-150-102) |
| 10-809-199 | Psychology of Human Relations | 3 |
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| Credits: 3 Lecture Hours: 54Students explore the relationship between the general principles of psychology and our everyday lives. Students are given the opportunity to achieve a deepened sense of awareness of themselves and others. This understanding enables students to improve their relationship with others at work, in the family, and in society. |
|  |  | **17** |
| **Total Credits: 65** |
| **Estimated Total Tuition: $9,750** |
| *Additional industry credentialing certification fees may apply.* |