The Cisco Networking Academy Information Guide

Cisco Networking Academy

CompTIA
A+ Certified Professional

Erie Community College
State University of New York

Start Here. Go Anywhere!
Janurary 1, 2017

This information packet was created as a guide for individuals interested in learning more about computers and computer networking, and what’s offered through the Cisco Networking Academy at Erie Community College.

Cisco Networking Academy courses are recommended for potential students who show an interest in working with computers and/or network devices like routers and switches. Academy courses are ideal for someone who would like to learn how to repair or upgrade PC’s, or design and configure a wireless or wired network in a business, or even a home.

Our courses also teach students how to enable security measures that protect PC’s and the network, and how to troubleshoot them when problems occur. More information about the type of person who might be interested in our courses can be found in the FAQ section of this document starting on page 6.

The Cisco Networking Academy provides courses for several different degrees and certificates, most notably, the Network Support Technology Certificate Program. Many students also take our courses as résumé enhancers and/or to satisfy open college electives when working towards a General Studies degree.

Finally, the courses are designed to prepare students to pass the Cisco CCENT and CCNA, and the CompTIA A+ industry-standard certification exams. It’s a well-known fact that a degree or certificate that is enhanced with industry-standard certifications makes an individual more employable in today’s competitive job market.

This document includes a catalog of the courses that are offered by the academy, along with the Fall 2017 course schedule, course descriptions, and answers to frequently asked questions. If there are any questions not answered in this packet, please feel free to contact me.

Thank you very much for your interest in the Cisco Networking Academy!

Best Regards!

James Stranz, Program Coordinator
The Cisco Networking Academy at ECC
Erie Community College - South, Room 5113
Phone: (716) 851.1737 Email: stranz@ecc.edu
The Cisco Networking Academy at Erie Community College offers PC Support and entry-level and advanced Network Support courses. All of the courses listed below are also preparation courses for Cisco and CompTIA industry-standard certification exams.

Course Catalog

<table>
<thead>
<tr>
<th>Certification Track</th>
<th>Preparation Courses</th>
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<tbody>
<tr>
<td>CompTIA A+ Computer Support Technician</td>
<td>*TE-180 IT Essentials 1</td>
</tr>
<tr>
<td>*TE180 and TE181 are entry level courses</td>
<td>*TE-181 IT Essentials 2</td>
</tr>
<tr>
<td>CCENT and CCNA Certification</td>
<td>*TE-185 CCNA 1 – Introduction to Networks</td>
</tr>
<tr>
<td>*TE185 and TE270 are entry level courses</td>
<td>*TE-270 CCNA 2 - Routing and Switching</td>
</tr>
<tr>
<td>*TE271 and TE272 are intermediate level</td>
<td>Essentials</td>
</tr>
<tr>
<td>courses requiring TE185 and TE270 as</td>
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</tr>
<tr>
<td>prerequisites, unless special permission is</td>
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<tr>
<td>obtained</td>
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<td>TE-271 CCNA 3 - Scaling Networks</td>
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<td>CCNA Security</td>
<td>**TE-275 CCNA Security</td>
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<tr>
<td>CCNA Voice</td>
<td>**TE-279 CCNA Voice</td>
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<tr>
<td>CCNP</td>
<td>**TE-276 CCNP 1 - Implementing IP Switching</td>
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<td></td>
<td>**TE-277 CCNP 2 - Implementing IP Routing</td>
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<td>**TE-278 CCNP 3 - Maintaining and</td>
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<td>Troubleshooting IP Networks</td>
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</table>

**CCNA Security, CCNA Voice, and CCNP are advanced level courses that are only offered when there’s a demand. CCNA Security is consistently offered each spring semester.**

A+, CCENT, and CCNA course descriptions can be found on page 4

The Fall 2017 Course Schedule can be found on page 5
Course Descriptions

TE180 IT Essentials I
This course will introduce practical skills required to install, configure, upgrade, and maintain PC workstations, and small office and home office (SOHO) networks. This course also introduces the fundamentals of computer technology, networking, and security, and will teach the skills required to identify hardware, peripherals, networking, and security components through lecture and hands-on learning. Prerequisites: None

TE181 IT Essentials II
This course builds on the knowledge and skills gained in IT Essentials I with more of an emphasis on scenarios in which troubleshooting and tools must be applied to resolve problems. By the end of this course, students will have a better understanding of the operating system and basic troubleshooting methodology. IT Essentials I and II also prepare students for the CompTIA A+ certification which is required by most companies that employ PC and network technicians, and support specialists. Prerequisites: TE180 or Permission of the Instructor

TE185 Network Fundamentals
This course introduces students to the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for the curriculum. By the end of the course, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes. Prerequisites: None

TE270 Routing and Switching I (pending name change)
This course describes the architecture, components, and operations of routers and switches in a small network. Students learn how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing in both IPv4 and IPv6 networks. TE185 and TE270 also prepare students for the Cisco CCENT exam. Prerequisites: TE 185 or Permission of the Instructor

TE271 Routing and Switching I I (pending name change)
This course describes the architecture, components, and operations of routers and switches in medium and more complex networks. Students learn how to configure routers and switches for advanced functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, STP, and VTP in both IPv4 and IPv6 networks. Students will also develop the knowledge and skills needed to implement DHCP and DNS operations in a network. Prerequisites: TE185 and TE270 or Permission of the Instructor

TE272 Accessing the WAN
This course discusses the WAN technologies and network services required by converged applications in a complex network. The course enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Students learn how to configure and troubleshoot network devices and resolve common issues with data link protocols. Students also develop the knowledge and skills needed to implement IPSec and virtual private network (VPN) operations in a complex network. TE271 and TE272 also prepare students for the Cisco CCNA exam. Prerequisites: TE271 or Permission of the Instructor
Fall classes begin the Week of September 4, 2017

<table>
<thead>
<tr>
<th>Call#</th>
<th>Catalog#</th>
<th>Section</th>
<th>Course Title</th>
<th>Credit</th>
<th>Building</th>
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<th>Days</th>
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<th>Instructor(s)</th>
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Students are required to enroll in both courses. TE180 runs in weeks 1-8; TE181 runs in weeks 9-15. Class meets once each week:

<table>
<thead>
<tr>
<th>Call#</th>
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Students are required to enroll in both courses. TE185 runs in weeks 1-8; TE270 runs in weeks 9-15. Class meets once each week:

<table>
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Students are required to enroll in both courses. TE185 runs in weeks 1-8; TE270 runs in weeks 9-15. Class meets once each week:

<table>
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<tr>
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Students are required to enroll in both courses. TE185 runs in weeks 1-8; TE270 runs in weeks 9-15. Class meets once each week:

<table>
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<tr>
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<td>6:00-10:00</td>
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Students are required to enroll in both courses. TE271 runs in weeks 1-8; TE272 runs in weeks 9-15. Class meets once each week:

<table>
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<th>Credit</th>
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<td>South</td>
<td>Wednesday</td>
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For help getting registered, email Jim Stranz at stranz@ecc.edu or call 716-851-1737

Notes

Students take the above courses in pairs (Ex TE180 with TE181). Course-pairs run back-to-back (or first-half, second-half) during the semester.

Students taking academy courses for the first time should enroll in the entry-level courses TE180/181 and/or TE185/270. Students may elect to be enrolled in both of these course-pairs at the same time.

* Classes at ECC North Campus are in Room B-204a

** Off-Site classes are held at Ingram Micro Inc. on Wehrle Drive near ECC North
Frequently Asked Questions

What type of student enrolls in the Cisco Networking Academy?

There are many types of students who take our classes, including:

- Students interested in a two-year degree in Information Technology or Networking and Telecommunications Technology
- Students interested in our new one-year certificate program: Network Support Technology (see below)
- IT workers looking to improve their career by upgrading their skill-set and/or preparing for industry-standard professional certification exams. This type of student doesn’t want to obtain a degree, so they enroll as a non-matriculated student.

I need to get trained and get into the job market as quickly as possible. What is my best course of action?

Your best course of action would be to enroll in the Network Support Technology Certificate Program. The certificate program can be completed either full-time or part-time. The full-time sequence can be completed in just two semesters (a little more than 8 months).

Here is the suggested course sequence for completing the certificate program two semesters:

**Semester 1**
- TE180 IT Essentials I (3 credits)
- TE181 IT Essentials II (3 credits)
- TE185 Network Fundamentals (3 credits)
- TE270 Routing and Switching Essentials (3 credits)

**Semester 2**
- TE271 Scaling Networks (3 credits)
- TE272 Connecting Networks (3 credits)
- _____ *Approved Technical Elective (3-4 credits)
- _____ *Approved General Education Elective (3-4 credits)

Students can begin taking classes for the certificate degree in the fall or spring semesters, however a fall/spring sequence is preferred. Students may take classes at ECC south campus, and/or ECC north campus and Ingram Micro (near north campus).

*Your advisor will go over which elective courses are acceptable

For more information on the class schedule, please see Page 5.
Which industry-standard certifications does the academy courses prepare you for?

The Cisco Networking Academy courses prepare students for industry certification exams, like:

- CompTIA’s A+ and Network+
- Cisco’s Entry-Level Certifications, CCENT and CCNA
- Cisco’s CCNA Specialty Tracks in Security and Voice
- Cisco’s Professional Level Certification, CCNP

What is the cost of tuition, and other course materials, like books?

Cisco Academy courses are very cost effective, at around $810 per 3-credit course. Most of the course materials are included with the core courses, including:

- A multimedia, interactive, online text book is free with the majority of our core courses, along with a network simulator that can be used for building, testing and troubleshooting networks
- Students are also entitled to download free software from the Microsoft Imagine website, like the latest version of Microsoft Windows
- Students can also qualify for half-price exam vouchers to take the certification exams

How much time should a student expect to spend in the classroom?

Most of the academy course offerings are delivered in a distance-learning/hybrid fashion, which means you’re in the classroom only about half the time of a normal seated class. Students can complete two courses and earn 6 college credits by **attending class only one evening (or Saturday) each week** during the 15 week semester. If you’re attending full-time (4 courses/12 credits) as a student in our Network Support Technology Certificate program, you would attend class twice per week.

What type of career does the Cisco Networking Academy prepare a student for after completion?

Cisco Academy courses prepare you for a number of careers, including:

- Network Support Specialist
- Computer User Support Specialist
- Help-Desk Technician
- Network Installer
- Computer Network Architect
- Network and Computer Systems Administrator
- Network Engineer
What is the current job market like in this field?

According to a study conducted by the New York State Department of Labor, employment in this field was/is expected to grow 18 percent from 2012 to 2022, faster than the average for all occupations. Demand for these types of workers is high and should continue to grow as firms invest in newer, faster technology and mobile networks.

What can someone entering this field expect to earn?

According to the New York State Department of Labor, the current median salary is around $70,000 per year or $34.00 per hour, depending on your educational background, possession of industry-standard certifications, and experience in the field. Entry-level salary usually ranges from $38k-$42k per year.

At what companies would someone in this field expect to find employment?

Certainly Verizon and Time Warner are the largest IT employers in the Western New York area; however 90% of all jobs in this field are not found at these two large telecom companies. Jobs can be found with all types of companies, small, medium and large, public and private, because they all have computers and networking devices that need to be maintained.

Our advice; don’t limit your search to a few large IT companies.

Is there financial assistance available for taking these classes?

That depends. If you’re full-time (12 credit hours, or more), and you’re taking classes as part of a degree or certificate program, you have a good chance of obtaining financial aid. However, if you are taking just a few classes in order to work towards obtaining your industry-standard certification, or for career advancement, financial assistance is usually not available.

That being said, all students are eligible for ECC’s Tuition Installment Plan (TIP) where tuition payments can be spread out over a whole semester (4 monthly payments).

For more information on financial aid, make an appointment to talk to a counselor at (716) 851-1677.

How can I get started?

For more information on getting admitted to ECC and enrolled in our academy courses, email stranz@ecc.edu or call (716) 851-1737 and ask for Jim Stranz. Mr. Stranz is the program coordinator of the Cisco Networking Academy and the facilitator of the Network Support Technology Certificate program.

What’s the first step for getting accepted into the Academy or the certificate program?

The first step would be to fill out an online application. Once you are accepted into the program you will be contacted by someone at the school about meeting with an advisor who will assist you on getting enrolled in classes. Instructions for filling out an online application can be found on page 8 of this document.
Here are the instructions for applying online for acceptance into the Cisco Networking Academy Partnership Program or Certificate Program:

- Go to [https://www.ecc.edu/admissions/](https://www.ecc.edu/admissions/) and click the Create New Application link under the Getting Started heading.
- Next, click the Create An Account link.
- Once you finish creating your account you will be asked if you would like to Start a New Erie Community College Application. Click this link to get started.
- You can navigate through the pages of the application by clicking the links on the left side of the form. Make sure that you answer all questions that have a red asterisk next to them.
- On the Academic Plans page under the heading of I am interested in pursuing…, choose either:
  1. A Partnership Program (if you only want to take a few classes – no degree)
  2. A Certificate (if you want to pursue our one year certificate degree program)
- Next, under Select a Major: choose either:
  1. Cisco Networking Academy Partnership (if you chose A Partnership Program)
  2. Network Support Technology Certificate (if you chose A Certificate)
- Once you have finished filling in all of the pages on the application, click Submit Application. If any errors pop up, please go back and correct them.

Finally, after submitting your application please let our department know by emailing Jim Stranz at stranz@ecc.edu or by calling (716) 851-1737 and we will follow up and track your application in order to provide you with the best service possible.

Other information about Cisco Networking Academy Partnership Program at ECC can be found at: [https://www.ecc.edu/cisco-academy/](https://www.ecc.edu/cisco-academy/)

You may also visit our certificate web page at [https://www.ecc.edu/degrees/](https://www.ecc.edu/degrees/) and choose Network Support Technology off the list.

General information about Erie Community College can be found in our online catalog at: [http://catalog.ecc.edu/](http://catalog.ecc.edu/)

James Stranz
Program Coordinator
The Cisco Networking Academy
Erie Community College
Phone: 716.851.1737