Computer Networking

Program Options:
AAS – Computer Networking
  Integrated Technologies Track (LAN / WAN focus)
  Infrastructure Track (Cisco focus)
  Systems Track (Microsoft focus)
Occupational Skills Award – Entry Level Network Support Technician (Shared by all tracks)

Integrated Technologies Track (LAN / WAN focus)
Certificate Level 1 – Integrated Technologies: Integrated Services Technician
Certificate Level 1 – Integrated Technologies: Enterprise Services Professional
Certificate Level 2 – Integrated Technologies: Enterprise Services Professional
Certificate Level 3 – ESC - Enhanced Network Professional (Shared by Integrated Technologies and Systems Tracks)

Infrastructure Track (Cisco focus)
Certificate Level 1 – Infrastructure: Computer Networking Support Technician (CCNA)
Certificate Level 1 – Infrastructure: Enterprise Network Field-Support Technician
Certificate Level 2 – Infrastructure: Enterprise Network Professional

Systems Track (Microsoft focus)
Certificate Level 1 – Systems: Computer Networking Software (MCSA)
Certificate Level 1 – Systems: Enterprise Systems Technician
Certificate Level 2 – Systems: Enterprise Systems Professional
Certificate Level 3 – ESC – Enhanced Network Professional (Shared by Integrated Technologies and Systems Tracks)

The Computer Networking program prepares graduates who will be able to design and install secure network systems based on customer requirements, monitor and maintain network traffic and security, and maintain network hardware and software. Courses and hands-on labs in this program will assist the graduate in preparing to take a variety of Cisco, Microsoft, and CompTIA certification examinations.

The Computer Networking – Integrated Technologies track prepares graduates to design and secure network systems with a focus on late breaking networking technologies. Courses and hands-on labs in this track prepare students for the broad spectrum of networking technologies and help prepare students for the Cisco Certified Entry-level Technician (CCENT) as well as Information Storage Management (EMC), and VmWare vSphere certification among others.

The Computer Networking – Infrastructure track prepares graduates to design and install secure network systems with a focus on managing network devices. Courses and hands-on labs in this track specifically prepare students for the Cisco Certified Network Associate (CCNA) the Cisco Certified Network Professional (CCNP) professional certification exams.

The Computer Networking – Systems track prepares graduates to design and install secure network systems with a focus on managing servers. Courses and hands-on labs in this track prepare students for the Microsoft Certified Solutions Associate – Server 2016, and the Cisco Certified Entry-level Technician (CCENT).

Students planning to transfer to a college or university should check with a Collin academic advisor prior to beginning the program.

Many of the CPMT, ITCC, ITMT, ITNW, ITSC, and ITSY courses are offered in eight-week express sessions.

AAS – Computer Networking
Integrated Technologies Track (LAN / WAN focus)
60 Credit Hours

FIRST YEAR
First Semester
ITNW 1358  Network+
ITCC 1314  CCNA 1: Introduction to Networks
ITCC 1340  CCNA 2: Routing and Switching Essentials
ITSC 1316  Linux Installation and Configuration
ITNW 1370  Cloud+ Computing Essentials
GEN ED  Mathematics course

Second Semester
ITNW 1351  Fundamentals of Wireless LANS
ITCC 2312  CCNA 3: Scaling Networks
ITSC 1316  Linux Installation and Configuration
ITCC* 2313  CCNA 4: Connecting Networks
ITCC 2341  CCNA Security
ITSY 1300  Fundamentals of Information Security (Security +)

Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
# AAS – Computer Networking

**Infrastructure Track (Cisco focus)**

60 Credit Hours

## FIRST YEAR

### First Semester
- **ITNW** 1358 Network+
- **ITCC** 1314 CCNA 1: Introduction to Networks
- **ITCC** 1340 CCNA 2: Routing and Switching Essentials
- **ITNW** 1351 Fundamentals of Wireless LANS

### Second Semester
- **ENGL** 1301 Composition I
- **ITCC** 2341 CCNA Security
- **ITCC** 2312 CCNA 3: Scaling Networks
- **ITCC** 2313 CCNA 4: Connecting Networks

### Elective *

### Summer Semester
- **GEN ED** Social / Behavioral Sciences course
- **GEN ED** Humanities / Fine Arts course

## SECOND YEAR

### First Semester
- **ITCC** 2354 CCNP R&S ROUTE
- **ITCC** 2355 CCNP R&S SWITCH
- **ITMT** 1372 Installation, Storage and Computing with Windows Server 2016
- **ITSY** 2300 Operating System Security

### Second Semester
- **ITCC** 2356 CCNP R&S TSHOOT (Capstone)
- **SPCH** 1321 Business and Professional Communication
- **ITMT** 1373 Networking with Windows Server 2016

### Elective *

### Notes:
- **ITCC 2312 (CCNA 3) and ITCC 2313 (CCNA 4)** – or the CCNA professional certification – are prerequisites for the CCNP courses in the concurrent or postgraduate Enhanced Skills Certificate, but are not part of the Integrated Technologies degree track unless they are selected as electives.
AAS – Computer Networking Systems Track (Microsoft focus)
60 Credit Hours

**FIRST YEAR**

**First Semester**

- ITNW 1358  Network+
- ITMT 1371  Configuring and Supporting Microsoft Windows 10 (70-698)
- ITMT 1372  Installation, Storage and Computing with Windows Server 2016
- ITCC 1314  CCNA 1: Introduction to Networks
- ITCC 1340  CCNA 2: Routing and Switching Essentials

**Second Semester**

- ITMT 1373  Networking with Windows Server 2016
- ITMT 1374  Identity with Windows Server 2016
- ITCC* 2312  CCNA 3: Scaling Networks
- ITSY 1300  Fundamentals of Information Security (Security+)
- ITCC* 2313  CCNA 4: Connecting Networks

**Summer Semester**

- GEN ED  Social / Behavioral Sciences course
- ENGL 1301  Composition I

**SECOND YEAR**

**First Semester**

- GEN ED  Mathematics course
- ITSC 1316  Linux Installation and Configuration
- ITSY 2300  Operating System Security
- SPCH 1321  Business and Professional Communication

**Second Semester**

- ITMT 2305  Designing and Implementing a Server Infrastructure
- ITMT 2304  Implementing and Advanced Server Infrastructure (Capstone)
- GEN ED  Humanities / Fine Arts course
- ELECTIVE *
- ELECTIVE *
- ELECTIVE *

* **Electives** (9 credit hours)
- CPMT 1305  IT Essentials I: PC Hardware and Software  Recommended for students with limited IT
- ITCC 2312  CCNA 3: Scaling Networks  Recommended with ITCC 2313
- ITCC 2313  CCNA 4: Connecting Networks  Recommended with ITCC 2312
- ITSC 1342  Shell Programming – Scripting  New course to meet industry demand
- ITNW 1351  Fundamentals of Wireless LANS  Highly Recommended
- ITCC 2341  CCNA Security  Highly Recommended

Any ITCC, ITMT, ITNW, or ITSY course not listed above.

Note: ITCC 2312 (CCNA 3) and ITCC 2313 (CCNA 4) – or the CCNA professional certification – are prerequisites for the CCNP.

**OSA**

– Entry Level Network Support Technician
9 credit hours

- CPMT 1305  IT Essentials I: PC Hardware and Software
- ITNW 1358  Network+
- ITSY 1300  Fundamentals of Information Security (Security+)
Integrated Technologies Track  
(LAN / WAN focus)

Certificate Level 1  
– Integrated Technologies Track  
Integrated Services Technician  
18 Credit Hours

FIRST YEAR  
First Semester  
ITNW 1358 Network+  
ITCC 1314 CCNA 1: Introduction to Networks  
ITCC 1340 CCNA 2: Routing and Switching Essentials

Second Semester  
ITSY 2300 Operating System Security  
ITNW 1351 Fundamentals of Wireless LANS (Capstone)  
ITNW 1370 Cloud+ Computing Essentials

Certificate Level 1  
– Integrated Technologies Track  
Integrated Services Professional  
18 Credit Hours

FIRST YEAR  
First Semester  
ITNW 1358 Network+  
ITCC 1314 CCNA 1: Introduction to Networks  
ITCC 1340 CCNA 2: Routing and Switching Essentials  
ITNW 1370 Cloud+ Computing Essentials

Second Semester  
ITSY 2300 Operating System Security  
ITNW 1351 Fundamentals of Wireless LANS (Capstone)  
ITNW 1370 Cloud+ Computing Essentials

Certificate Level 2  
– Integrated Technologies Track  
Enterprise Services Professional  
45 Credit Hours

FIRST YEAR  
First Semester  
ITNW 1358 Network+  
ITCC 1314 CCNA 1: Introduction to Networks  
ITCC 1340 CCNA 2: Routing and Switching Essentials  
ITNW 1370 Cloud+ Computing Essentials

Second Semester  
ITSY 2300 Operating System Security  
ITMT 1372 Installation, Storage and Computing with Windows Server 2016  
ITCC* 2312 CCNA 3: Scaling Networks  
Preferred elective; see other options*  
ITCC* 2313 CCNA 4: Connecting Networks  
Preferred elective; see other options*

SECOND YEAR  
First Semester  
ITNW 1351 Fundamentals of Wireless LANS  
ITSC 1316 Linux Installation and Configuration  
ITMT 1373 Networking with Windows Server 2016  
ITCC 2341 CCNA Security  
or  
ITSY 1300 Fundamentals of Information Security (Security +)

Second Semester  
ITNW 2373 Information Storage Management (EMC)  
ITNW 2375 VmWare vSphere: Installation, Configuration and Management  
ITNW 2376 Advanced Topics in Computer Systems Networking and Collaborative Technologies (Capstone)

*Electives (6 credit hours)  
CPMT 1305 IT Essentials I: PC Hardware And Software Recommended for students with limited IT  
ITCC 2312 CCNA 3: Scaling Networks Recommended with ITCC 2313

Please refer to http://www.collin.edu/academics/programs/index.html for the most current information.
Certificate Level 2
– Integrated Technologies Track
Enterprise Services Professional

* Electives (continued)
ITCC 2313 CCNA 4: Connecting Networks

ITSC 1342 Shell Programming – Scripting
New option to meet industry demand

ITCC 2341 CCNA Security
Highly Recommended

Any ITCC, ITMT, ITNW, or ITSY course not listed above.

Note: ITCC 2312 (CCNA 3) and ITCC 2313 (CCNA 4)
—or the CCNA professional certification — are prerequisites for
the CCNP courses in the concurrent or postgraduate Enhanced
Skills Certificate, but are not part of the Integrated Technologies
degree track unless they are selected as electives.

Certificate Level 3
– Shared by Integrated Technologies Track and
Systems Track Enhanced Network Professional

9 Credit Hours

FIRST YEAR
First Semester
ITNW 1358 Network+
ITCC 2354 CCNP R&S ROUTE
ITCC 2355 CCNP R&S SWITCH
ITCC 2356 CCNP R&S TSHOOT

Second Semester
ITNW 1351 Fundamentals of Wireless LANS
ITCC 2341 CCNA Security
ITSY 2300 Operating System Security

Note: CCNA 3 and CCNA 4 — or the professional certification —
are prerequisites for the CCNP courses but are not part of the
degree tracks unless they are selected as electives.

Infrastructure Track (Cisco focus)

Certificate Level 1
– Infrastructure Track Computer Networking Support Technician (CCNA)

18 Credit Hours

FIRST YEAR
First Semester
ITNW 1358 Network+
ITCC 1314 CCNA 1: Introduction to Networks
ITCC 1340 CCNA 2: Routing and Switching Essentials

Second Semester
ITCC 2341 CCNA Security
ITCC 2312 CCNA 3: Scaling Networks (Capstone)
ITCC 2313 CCNA 4: Connecting Networks

Certificate Level 1
– Infrastructure Track Enterprise Network Field-Support Technician

18 Credit Hours

FIRST YEAR
First Semester
ITNW 1358 Network+
ITCC 1314 CCNA 1: Introduction to Networks
ITCC 1340 CCNA 2: Routing and Switching Essentials

Second Semester
ITNW 1351 Fundamentals of Wireless LANS
ITCC 2341 CCNA Security
ITSY 2300 Operating System Security
Certificate Level 2
– Infrastructure Track Enterprise Network Professional
45 Credit Hours

FIRST YEAR
First Semester
ITNW 1358 Network+
ITCC 1314 CCNA 1: Introduction to Networks
ITCC 1340 CCNA 2: Routing and Switching Essentials
ITNW 1351 Fundamentals of Wireless LANS

Second Semester
ITCC 2341 CCNA Security
ITCC 2312 CCNA 3: Scaling Networks
ITCC 2313 CCNA 4: Connecting Networks
ELECTIVE *

SECOND YEAR
First Semester
ITCC 2354 CCNP R&S ROUTE (Capstone)
ITCC 2355 CCNP R&S SWITCH
ITMT 1372 Installation, Storage and Computing with Windows Server 2016
ITSY 2300 Operating System Security

Second Semester
ITCC 2356 CCNP R&S TSHOOT (Capstone)
ITMT 1373 Networking with Windows Server 2016
ELECTIVE *

* Electives (6 credit hours)
CPMT 1305 IT Essentials I: PC Hardware and Software Recommended for students with limited IT
ITSC 1342 Shell Programming – Scripting New option to meet industry demand
ITCC 2341 CCNA Security Highly Recommended
Any ITCC, ITMT, ITNW, or ITSY course not listed above.

Systems Track (Microsoft focus)

Certificate Level 1
– Systems Track Computer Networking Software (MCSA)
18 Credit Hours

FIRST YEAR
First Semester
ITNW 1358 Network+
ITMT 1371 Configuring and Supporting Microsoft Windows 10 (70-698)
ITMT 1372 Installation, Storage and Computing with Windows Server 2016

Second Semester
ITMT 1373 Networking with Windows Server 2016
ITMT 1374 Identity with Windows Server 2016 (Capstone)
ITSY 1300 Fundamentals of Information Security (Security +)

Certificate Level 1
– Systems Track Enterprise Systems Technician
24 Credit Hours

FIRST YEAR
First Semester
ITNW 1358 Network+
ITMT 1371 Configuring and Supporting Microsoft Windows 10 (70-698)
ITMT 1372 Installation, Storage and Computing with Windows Server 2016
ITCC 1314 CCNA 1: Introduction to Networks

Second Semester
ITCC 1340 CCNA 2: Routing and Switching Essentials
ITMT 1373 Networking with Windows Server 2016
ITMT 1374 Identity with Windows Server 2016 (Capstone)
ITSY 1300 Fundamentals of Information Security (Security +)
Certificate Level 2  
– Systems Track Enterprise Systems  
Professional  
45 Credit Hours

**FIRST YEAR**  
First Semester  
ITNW 1358 Network+  
ITMT 1371 Configuring and Supporting Microsoft Windows 10 (70-698)  
ITMT 1372 Installation, Storage and Computing with Windows Server 2016  
ITCC 1314 CCNA 1: Introduction to Networks

Second Semester  
ITCC 1340 CCNA 2: Routing and Switching Essentials  
ITCC* 2312 CCNA 3: Scaling Networks  
Preferred elective; see other options*  
ITMT 1373 Networking with Windows Server 2016  
ITSY 1300 Fundamentals of Information Security (Security +)

**SECOND YEAR**  
First Semester  
ITCC* 2313 CCNA 4: Connecting Networks  
Preferred elective; see other options*  
ITMT 1374 Identity with Windows Server 2016  
ITSC 1316 Linux Installation and Configuration

Second Semester  
ITSY 2300 Operating System Security  
ITMT 2305 Designing and Implementing a Server Infrastructure  
ITMT 2304 Implementing and Advanced Server Infrastructure (Capstone)  
ELECTIVE *

* Electives (6 credit hours)  
CPMT 1305 IT Essentials I: PC Hardware and Software  
Recommended for students with limited IT  
ITCC 2312 CCNA 3: Scaling Networks  
Recommended with ITCC 2313  
ITCC 2313 CCNA 4: Connecting Networks  
Recommended with ITCC 2312  
ITSC 1342 Shell Programming – Scripting

New option to meet industry demand  
ITNW 1351 Fundamentals of Wireless LANS  
Highly Recommended  
ITCC 2341 CCNA Security  
Highly Recommended

Any ITCC, ITMT, ITNW, or ITSY course not listed above.

Note: ITCC 2312 (CCNA 3) and ITCC 2313 (CCNA 4) – or the CCNA professional certification – are prerequisites for the CCNP courses in the concurrent or postgraduate Enhanced Skills Certificate, but are not part of the Systems degree track unless they are selected as electives.

Certificate Level 3  
– Shared by Integrated Technologies Track and Systems Track Enhanced Network Professional  
9 Credit Hours

**FIRST YEAR**  
First Semester  
ITCC 2354 CCNP R&S ROUTE  
ITCC 2355 CCNP R&S SWITCH  
ITCC 2356 CCNP R&S TSHOOT

Note: CCNA 3 and CCNA 4 – or the professional certification – are prerequisites for the CCNP courses but are not part of the Systems degree track unless they are selected as electives.