

# COMPUTER TECHNOLOGY, NETWORK CONCENTRATION, A.A.S. - CTN3

Computer Technology students will explore many different topics relating to computers. The course study includes computer maintenance, local and wide area networks, as well as popular programming languages.

The Network coursework focuses on elective courses in administration of both Microsoft and UNIX based operating systems. PC repair and wide area network courses are also examined. Students gain experience in Visual Basic and internet programming as well as today's popular desktop applications.

To complete the student's preparation for entry-level positions, some general studies courses are also required.

## Requirements

| Courses                                      | Course Title  | Credit Hours |
|--|---|--------------|
| <b>General Education Courses</b>             |   |              |
| ENG 101                                      | English Composition I   | 3            |
| ENG 102                                      | English Composition II  | 3            |
| MAT 155                                      | Contemporary Mathematics  | 3            |
|  | Elective Behavioral Science ( <a href="https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/">https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/</a> )   | 3            |
|  | Elective Humanities/Fine Arts ( <a href="https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/">https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/</a> ) | 3            |
|  | Subtotal  | 15           |
| <b>Required Core Subject Areas</b>           |   |              |
| CPT 186                                      | Visual Basic.NET 1  | 3            |
| CPT 207                                      | Complex Computer Applications   | 3            |
| CPT 242                                      | Database  | 3            |
| CPT 257                                      | Operating Systems   | 3            |
| CPT 264                                      | Systems and Procedures  | 3            |
| CPT 267                                      | Technical Support Concepts  | 3            |
|  | Subtotal  | 18           |
| <b>Other Courses Required for Graduation</b> |   |              |
| CPT 209                                      | Computer Systems Management   | 3            |
| CPT 247                                      | UNIX Operating System   | 3            |
| CPT 282                                      | Information Systems Security  | 3            |
| IST 150                                      | Project Management Essentials for IT Professionals  | 3            |
| IST 220                                      | Data Communications   | 3            |
| IST 241                                      | Network Architecture I  | 3            |
| IST 253                                      | LAN Service and Support   | 3            |
| IST 256                                      | LAN Desktop Technologies  | 3            |
| IST 257                                      | LAN Network Server Technologies   | 3            |
| IST 270                                      | Client/Server Systems   | 3            |

|             |    |
|-------------|----|
| Subtotal    | 30 |
| Total Hours | 63 |

## Graduation Plans

### Fall Start

| Course               | Title                    | Hours |
|----------------------|--------------------------|-------|
| <b>First Year</b>    |                          |       |
| <b>Fall Semester</b> |                          |       |
| CPT 257              | Operating Systems        | 3     |
| ENG 101              | English Composition I    | 3     |
| IST 220              | Data Communications      | 3     |
| MAT 155              | Contemporary Mathematics | 3     |
|                      | Hours                    | 12    |

### Spring Semester

|         |   |    |
|---------|---|----|
| CPT 207 | Complex Computer Applications   | 3  |
| CPT 209 | Computer Systems Management   | 3  |
| IST 150 | Project Management Essentials for IT Professionals  | 3  |
|         | Elective Behavioral Science ( <a href="https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/">https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/</a> ) | 3  |
|         | Hours   | 12 |

### Summer Semester

|         |                              |    |
|---------|------------------------------|----|
| CPT 186 | Visual Basic.NET 1           | 3  |
| CPT 247 | UNIX Operating System        | 3  |
| CPT 267 | Technical Support Concepts   | 3  |
| CPT 282 | Information Systems Security | 3  |
|         | Hours                        | 12 |

### Second Year

#### Fall Semester

|         |                                 |    |
|---------|---------------------------------|----|
| ENG 102 | English Composition II          | 3  |
| IST 253 | LAN Service and Support         | 3  |
| IST 256 | LAN Desktop Technologies        | 3  |
| IST 257 | LAN Network Server Technologies | 3  |
|         | Hours                           | 12 |

#### Spring Semester

|         |   |    |
|---------|---|----|
| CPT 242 | Database  | 3  |
| CPT 264 | Systems and Procedures  | 3  |
| IST 241 | Network Architecture I  | 3  |
| IST 270 | Client/Server Systems   | 3  |
|         | Elective Humanities/Fine Arts ( <a href="https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/">https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/</a> ) | 3  |
|         | Hours   | 15 |
|         | Total Hours   | 63 |

### Spring Start

| Course                 | Title             | Hours |
|------------------------|-------------------|-------|
| <b>First Year</b>      |                   |       |
| <b>Spring Semester</b> |                   |       |
| CPT 257                | Operating Systems | 3     |



|         |                          |    |
|---------|--------------------------|----|
| ENG 101 | English Composition I    | 3  |
| IST 220 | Data Communications      | 3  |
| MAT 155 | Contemporary Mathematics | 3  |
| Hours   |                          | 12 |

#### Summer Semester

|         |                               |   |
|---------|-------------------------------|---|
| CPT 207 | Complex Computer Applications | 3 |
| CPT 209 | Computer Systems Management   | 3 |
| Hours   |                               | 6 |

#### Fall Semester

|         |  |    |
|---------|--|----|
| CPT 247 | UNIX Operating System                              | 3  |
| IST 150 | Project Management Essentials for IT Professionals | 3  |
| IST 256 | LAN Desktop Technologies                           | 3  |
| IST 257 | LAN Network Server Technologies                    | 3  |
| Hours   |  | 12 |

#### Second Year

##### Spring Semester

|         |                            |    |
|---------|----------------------------|----|
| CPT 242 | Database                   | 3  |
| CPT 267 | Technical Support Concepts | 3  |
| IST 241 | Network Architecture I     | 3  |
| IST 270 | Client/Server Systems      | 3  |
| Hours   |                            | 12 |

##### Summer Semester

|   |                        |   |
|---|------------------------|---|
| CPT 264   | Systems and Procedures | 3 |
| ENG 102   | English Composition II | 3 |
| Elective Humanities/Fine Arts ( <a href="https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/">https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/</a> ) |                        | 3 |
| Hours   |                        | 9 |

##### Fall Semester

|   |                              |    |
|---|------------------------------|----|
| CPT 186   | Visual Basic.NET 1           | 3  |
| CPT 282   | Information Systems Security | 3  |
| IST 253   | LAN Service and Support      | 3  |
| Elective Behavioral Science ( <a href="https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/">https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/</a> ) |                              | 3  |
| Hours   |                              | 12 |
| Total Hours   |                              | 63 |

#### Summer Start

| Course                 | Title                         | Hours |
|------------------------|-------------------------------|-------|
| <b>First Year</b>      |                               |       |
| <b>Summer Semester</b> |                               |       |
| CPT 257                | Operating Systems             | 3     |
| IST 220                | Data Communications           | 3     |
| Hours                  |                               | 6     |
| <b>Fall Semester</b>   |                               |       |
| CPT 207                | Complex Computer Applications | 3     |
| CPT 209                | Computer Systems Management   | 3     |
| ENG 101                | English Composition I         | 3     |

|         |                         |    |
|---------|-------------------------|----|
| IST 253 | LAN Service and Support | 3  |
| Hours   |                         | 12 |

#### Spring Semester

|   |                          |    |
|---|--------------------------|----|
| CPT 186   | Visual Basic.NET 1       | 3  |
| CPT 242   | Database                 | 3  |
| MAT 155   | Contemporary Mathematics | 3  |
| Elective Humanities/Fine Arts ( <a href="https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/">https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/</a> ) |                          | 3  |
| Hours   |                          | 12 |

#### Second Year

##### Summer Semester

|         |                              |   |
|---------|------------------------------|---|
| CPT 247 | UNIX Operating System        | 3 |
| CPT 267 | Technical Support Concepts   | 3 |
| CPT 282 | Information Systems Security | 3 |
| Hours   |                              | 9 |

##### Fall Semester

|   |                                 |    |
|---|---------------------------------|----|
| ENG 102   | English Composition II          | 3  |
| IST 256   | LAN Desktop Technologies        | 3  |
| IST 257   | LAN Network Server Technologies | 3  |
| Elective Behavioral Science ( <a href="https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/">https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/</a> ) |                                 | 3  |
| Hours   |                                 | 12 |

##### Spring Semester

|             |  |    |
|-------------|--|----|
| CPT 264     | Systems and Procedures                             | 3  |
| IST 150     | Project Management Essentials for IT Professionals | 3  |
| IST 241     | Network Architecture I                             | 3  |
| IST 270     | Client/Server Systems                              | 3  |
| Hours       |  | 12 |
| Total Hours |  | 63 |

## Application and Advising

If you are ready to start your education, there are a few simple steps involved in enrolling at Piedmont Technical College.

Get Started Today (<https://www.ptc.edu/admissions/new-students/>)

## Advising Information

The following information provides a guide for advisors who are helping students enroll in this program.

### Program Notes

Students may start this program in any term, and this program can be completed on a part-time or full-time basis. Most courses are offered online.

Program courses are offered during the day and night for all concentrations.

Students majoring in the Network concentration will also receive the PC Technician certificate (PCS7).

College policy states that computer coursework is valid for eight years.

### **Notes About Individual Classes**

The first English required for this program is ENG 101. Students will follow this progression, with their starting point being determined by their placement test scores: ENG 032/012 and/or RDG 032/012 (or RWR 032/012) > ENG 100 and/or RDG 100 (or RWR 100) > ENG 101.

The math required for this program is MAT 155. Students will follow this progression, with their starting point being determined by their placement test scores: MAT 032/012 > MAT 155.

If students need developmental or transitional classes, they should be taken first.

## **Program Student Learning Outcomes**

### **Purpose Statement**

The Computer Technology program prepares students for a variety of positions within the technology field. Computer Technology students will explore many different topics relating to computers. The course study includes computer maintenance, local and wide area networks, as well as popular programming languages. There are 3 A.A.S. areas of concentration: Programming, Network, and Cybersecurity. Certificates include PC Technician, Cybersecurity, and Certified IT professional.

### **Program Student Learning Outcomes**

1. Demonstrate the ability to use logical design techniques in creating programs and systems.
2. Recognize and describe the personal computer hardware components.
3. Install, configure and upgrade personal computer operating systems.
4. Apply basic computer literacy concepts.
5. Plan, design, and construct a working computer network including appropriate Local Area Network (LAN) and Wide Area Network (WAN) connections and protocols.
6. Demonstrate the ability to organize data using current computer technology.
7. Analyze and resolve security issues in networks and computer systems to secure an IT infrastructure.
8. Evaluate and communicate the human role in security systems with an emphasis on ethics, social engineering vulnerabilities, and training.