

COMPUTER TECHNOLOGY, CYBERSECURITY CONCENTRATION, A.A.S. - CTC3

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 Cybersecurity concentration will provide students with the concepts and skills of the fast growing field of cybersecurity, including security of systems and infrastructure in business and industry. Students will learn how to protect networks and defend information systems from attack.

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

Requirements

| Courses | Course Title | Credit Hours |
|--|---|--------------|
| General Education Courses | | |
| ENG 101 | English Composition I | 3 |
| ENG 102 | English Composition II | 3 |
| MAT 155 | Contemporary Mathematics | 3 |
| | Elective Behavioral Science (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/) | 3 |
| | Elective Humanities/Fine Arts (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/) | 3 |
| | Subtotal | 15 |
| Required Core Subject Areas | | |
| 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 |
| Other Courses Required for Graduation | | |
| CPT 209 | Computer Systems Management | 3 |
| CPT 247 | UNIX Operating System | 3 |
| CPT 282 | Information Systems Security | 3 |
| IST 220 | Data Communications | 3 |
| IST 256 | LAN Desktop Technologies | 3 |
| IST 257 | LAN Network Server Technologies | 3 |
| IST 268 | Computer Forensics | 3 |
| IST 269 | Digital Forensics | 3 |
| IST 293 | IT and Data Assurance I | 3 |
| IST 294 | IT and Data Assurance II | 3 |

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

Graduation Plan

Our semester-by-semester graduation plans will show you when required courses in your major are offered. Following this plan will help you stay on track and graduate on time.

Fall Start

| Course | Title | Hours |
|----------------------|-----------------------------|-------|
| First Year | | |
| Fall Semester | | |
| CPT 209 | Computer Systems Management | 3 |
| CPT 257 | Operating Systems | 3 |
| ENG 101 | English Composition I | 3 |
| IST 220 | Data Communications | 3 |
| MAT 155 | Contemporary Mathematics | 3 |
| | Hours | 15 |

Spring Semester

| | | |
|---------|-------------------------------|----|
| CPT 207 | Complex Computer Applications | 3 |
| CPT 242 | Database | 3 |
| CPT 267 | Technical Support Concepts | 3 |
| ENG 102 | English Composition II | 3 |
| | Hours | 12 |

Summer Semester

| | | |
|---------|---|----|
| CPT 186 | Visual Basic.NET 1 | 3 |
| CPT 247 | UNIX Operating System | 3 |
| CPT 282 | Information Systems Security | 3 |
| | Elective Humanities/Fine Arts (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/) | 3 |
| | Hours | 12 |

Second Year

Fall Semester

| | | |
|---------|---------------------------------|----|
| IST 256 | LAN Desktop Technologies | 3 |
| IST 257 | LAN Network Server Technologies | 3 |
| IST 268 | Computer Forensics | 3 |
| IST 293 | IT and Data Assurance I | 3 |
| | Hours | 12 |

Spring Semester

| | | |
|---------|---|----|
| CPT 264 | Systems and Procedures | 3 |
| IST 269 | Digital Forensics | 3 |
| IST 294 | IT and Data Assurance II | 3 |
| | Elective Behavioral Science (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/) | 3 |
| | Hours | 12 |
| | Total Hours | 63 |



Spring Start

| Course | Title | Hours |
|---|---------------------------------|-------|
| First Year | | |
| Spring Semester | | |
| CPT 209 | Computer Systems Management | 3 |
| CPT 257 | Operating Systems | 3 |
| ENG 101 | English Composition I | 3 |
| IST 220 | Data Communications | 3 |
| MAT 155 | Contemporary Mathematics | 3 |
| Hours | | 15 |
| Summer Semester | | |
| CPT 207 | Complex Computer Applications | 3 |
| CPT 242 | Database | 3 |
| CPT 267 | Technical Support Concepts | 3 |
| CPT 282 | Information Systems Security | 3 |
| Hours | | 12 |
| Fall Semester | | |
| IST 256 | LAN Desktop Technologies | 3 |
| IST 257 | LAN Network Server Technologies | 3 |
| IST 268 | Computer Forensics | 3 |
| IST 293 | IT and Data Assurance I | 3 |
| Hours | | 12 |
| Second Year | | |
| Spring Semester | | |
| CPT 186 | Visual Basic.NET 1 | 3 |
| CPT 264 | Systems and Procedures | 3 |
| IST 269 | Digital Forensics | 3 |
| IST 294 | IT and Data Assurance II | 3 |
| Hours | | 12 |
| Summer Semester | | |
| CPT 247 | UNIX Operating System | 3 |
| ENG 102 | English Composition II | 3 |
| Elective Behavioral Science (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/) | | 3 |
| Elective Humanities/Fine Arts (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/) | | 3 |
| Hours | | 12 |
| Total Hours | | 63 |

Summer Start

| Course | Title | Hours |
|------------------------|-----------------------------|-------|
| First Year | | |
| Summer Semester | | |
| CPT 209 | Computer Systems Management | 3 |
| CPT 257 | Operating Systems | 3 |
| IST 220 | Data Communications | 3 |
| Hours | | 9 |
| Fall Semester | | |
| IST 256 | LAN Desktop Technologies | 3 |

| | | |
|---|---------------------------------|----|
| IST 257 | LAN Network Server Technologies | 3 |
| IST 268 | Computer Forensics | 3 |
| IST 293 | IT and Data Assurance I | 3 |
| MAT 155 | Contemporary Mathematics | 3 |
| Hours | | 15 |
| Spring Semester | | |
| CPT 207 | Complex Computer Applications | 3 |
| CPT 242 | Database | 3 |
| CPT 267 | Technical Support Concepts | 3 |
| IST 269 | Digital Forensics | 3 |
| IST 294 | IT and Data Assurance II | 3 |
| Hours | | 15 |
| Second Year | | |
| Summer Semester | | |
| CPT 186 | Visual Basic.NET 1 | 3 |
| CPT 264 | Systems and Procedures | 3 |
| ENG 101 | English Composition I | 3 |
| Hours | | 9 |
| Fall Semester | | |
| ENG 102 | English Composition II | 3 |
| CPT 247 | UNIX Operating System | 3 |
| CPT 282 | Information Systems Security | 3 |
| Elective Behavioral Science (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/) | | 3 |
| Elective Humanities/Fine Arts (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/) | | 3 |
| Hours | | 15 |
| 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.

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. Design, develop, and evaluate secure software.
9. Evaluate and communicate the human role in security systems with an emphasis on ethics, social engineering vulnerabilities, and training.
10. Interpret and forensically investigate security incidents.