

COMPUTER TECHNOLOGY, A.A.S.

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 Computer Technology program offers concentrations in Cybersecurity, Networking, and Programming.

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.

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.

The Programming concentration includes elective courses in Visual Basic, C++, Java and database platforms. Students will also gain knowledge in the use of computer operating systems, applications and network maintenance.

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 | | |
| 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 207 | Complex Computer Applications | 3 |
| CPT 232 | C++ Programming I | 3 |
| CPT 242 | Database | 3 |
| CPT 247 | UNIX Operating System | 3 |
| CPT 257 | Operating Systems | 3 |
| CPT 264 | Systems and Procedures | 3 |
| | Subtotal | 18 |
| Other Courses Required for Graduation | | |
| CPT 209 | Computer Systems Management | 3 |
| CPT 267 | Technical Support Concepts | 3 |
| CPT 282 | Information Systems Security | 3 |

| | | |
|--|--|-----------|
| IST 220 | Data Communications | 3 |
| | Subtotal | 12 |
| Select a Concentration option below | | 18 |
| Cybersecurity - CTC3 | | |
| IST 256 | LAN Desktop Technologies | |
| IST 257 | LAN Network Server Technologies | |
| IST 268 | Computer Forensics | |
| IST 269 | Digital Forensics | |
| IST 293 | IT and Data Assurance I | |
| IST 294 | IT and Data Assurance II | |
| Network - CTN3 | | |
| IST 150 | Project Management Essentials for IT Professionals | |
| IST 241 | Network Architecture I | |
| IST 253 | LAN Service and Support | |
| IST 256 | LAN Desktop Technologies | |
| IST 257 | LAN Network Server Technologies | |
| IST 270 | Client/Server Systems | |
| Programming - CTP3 | | |
| CPT 186 | Visual Basic.NET 1 | |
| CPT 188 | Mobile App Development | |
| CPT 236 | Introduction to Java Programming | |
| CPT 237 | Advanced JAVA Programming | |
| CPT 286 | Visual Basic.NET II | |
| IST 226 | Internet Programming | |
| Total Hours | | 63 |

Graduation Plans

Computer Technology - Cybersecurity Concentration

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 232 | C++ Programming I | 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 232 | C++ Programming I | 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 232 | C++ Programming I | 3 |
| CPT 264 | Systems and Procedures | 3 |
| ENG 101 | English Composition I | 3 |

Hours **9**

Fall Semester

| | | |
|---|------------------------------|---|
| CPT 247 | UNIX Operating System | 3 |
| CPT 282 | Information Systems Security | 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 | 15 |
| Total Hours | 63 |

Computer Technology - Networking Concentration

Fall Start

| Course | Title | Hours |
|----------------------|--------------------------|-----------|
| First Year | | |
| Fall Semester | | |
| 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 (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/) | | 3 |
| Hours | | 12 |

Summer Semester

| | | |
|--------------|------------------------------|-----------|
| CPT 232 | C++ Programming I | 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 (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/) | | 3 |
| Hours | | 15 |
| Total Hours | | 63 |

Spring Start

| Course | Title | Hours |
|------------------------|--------------------------|-----------|
| First Year | | |
| Spring Semester | | |
| 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 (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/) | | 3 |
| Hours | | 9 |

Fall Semester

| | | |
|---|------------------------------|-----------|
| CPT 232 | C++ Programming I | 3 |
| CPT 282 | Information Systems Security | 3 |
| IST 253 | LAN Service and Support | 3 |
| Elective Behavioral Science (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 257 | Operating Systems | 3 |
| IST 220 | Data Communications | 3 |
| Hours | | 6 |


Fall Semester

| | | |
|--------------|-------------------------------|-----------|
| 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 232 | C++ Programming I | 3 |
| CPT 242 | Database | 3 |
| MAT 155 | Contemporary Mathematics | 3 |
| Elective Humanities/Fine Arts (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/) | | 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 (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/) | | 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**

Computer Technology - Programming Concentration

Fall Start

| Course | Title | Hours |
|---|--------------------------|-----------|
| First Year | | |
| Fall Semester | | |
| ENG 101 | English Composition I | 3 |
| IST 220 | Data Communications | 3 |
| MAT 155 | Contemporary Mathematics | 3 |
| Elective Humanities/Fine Arts (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/) | | 3 |
| Hours | | 12 |

Spring Semester

| | | |
|---|-------------------------------|-----------|
| CPT 207 | Complex Computer Applications | 3 |
| CPT 209 | Computer Systems Management | 3 |
| CPT 257 | Operating Systems | 3 |
| Elective Behavioral Science (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/) | | 3 |
| Hours | | 12 |

Summer Semester

| | | |
|--------------|------------------------------|-----------|
| CPT 186 | Visual Basic.NET 1 | 3 |
| CPT 242 | Database | 3 |
| CPT 247 | UNIX Operating System | 3 |
| CPT 282 | Information Systems Security | 3 |
| Hours | | 12 |

Second Year
Fall Semester

| | | |
|--------------|------------------------|-----------|
| CPT 232 | C++ Programming I | 3 |
| CPT 286 | Visual Basic.NET II | 3 |
| ENG 102 | English Composition II | 3 |
| IST 226 | Internet Programming | 3 |
| Hours | | 12 |

Spring Semester

| | | |
|--------------|----------------------------------|-----------|
| CPT 188 | Mobile App Development | 3 |
| CPT 236 | Introduction to Java Programming | 3 |
| CPT 237 | Advanced JAVA Programming | 3 |
| CPT 264 | Systems and Procedures | 3 |
| CPT 267 | Technical Support Concepts | 3 |
| Hours | | 15 |

Total Hours **63**

Spring Start

| Course | Title | Hours |
|------------------------|--------------------------|-----------|
| First Year | | |
| Spring Semester | | |
| 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 |
| Elective Humanities/Fine Arts (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/) | | 3 |
| Hours | | 6 |

Fall Semester

| | | |
|---------|-----------------------------|---|
| CPT 186 | Visual Basic.NET 1 | 3 |
| CPT 209 | Computer Systems Management | 3 |
| CPT 232 | C++ Programming I | 3 |
| CPT 247 | UNIX Operating System | 3 |



| | | |
|---|----------------------------------|-----------|
| CPT 282 | Information Systems Security | 3 |
| Hours | | 15 |
| Second Year | | |
| Spring Semester | | |
| CPT 188 | Mobile App Development | 3 |
| CPT 236 | Introduction to Java Programming | 3 |
| CPT 237 | Advanced JAVA Programming | 3 |
| CPT 242 | Database | 3 |
| Hours | | 12 |
| Summer Semester | | |
| CPT 264 | Systems and Procedures | 3 |
| CPT 267 | Technical Support Concepts | 3 |
| Hours | | 6 |
| Fall Semester | | |
| CPT 286 | Visual Basic.NET II | 3 |
| IST 226 | Internet Programming | 3 |
| ENG 102 | English Composition II | 3 |
| Elective Behavioral Science (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 257 | Operating Systems | 3 |
| IST 220 | Data Communications | 3 |
| MAT 155 | Contemporary Mathematics | 3 |
| Hours | | 9 |
| Fall Semester | | |
| CPT 207 | Complex Computer Applications | 3 |
| CPT 282 | Information Systems Security | 3 |
| ENG 101 | English Composition I | 3 |
| Elective Humanities/Fine Arts (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/) | | 3 |
| Hours | | 12 |
| Spring Semester | | |
| CPT 186 | Visual Basic.NET I | 3 |
| CPT 209 | Computer Systems Management | 3 |
| CPT 242 | Database | 3 |
| Elective Behavioral Science (https://catalog.ptc.edu/student-handbook/advising-registration/general-education-courses/) | | 3 |
| Hours | | 12 |
| Second Year | | |
| Summer Semester | | |
| CPT 247 | UNIX Operating System | 3 |
| CPT 267 | Technical Support Concepts | 3 |
| Hours | | 6 |

Fall Semester

| | | |
|------------------------|----------------------------------|-----------|
| CPT 232 | C++ Programming I | 3 |
| CPT 286 | Visual Basic.NET II | 3 |
| ENG 102 | English Composition II | 3 |
| IST 226 | Internet Programming | 3 |
| Hours | | 12 |
| Spring Semester | | |
| CPT 188 | Mobile App Development | 3 |
| CPT 236 | Introduction to Java Programming | 3 |
| CPT 237 | Advanced JAVA Programming | 3 |
| CPT 264 | Systems and Procedures | 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. Program courses are offered during the day and night for all concentrations. Most courses are offered online.

Students may only choose one concentration at a time: Cybersecurity, Networking, or Programing. Other concentrations may be completed subsequently, if desired.

Notes About Individual Classes

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

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.
9. Interpret and forensically investigate security incidents.