# Cecil College and Wilmington University

## Associate of Applied Science in Cybersecurity to Bachelor of Science in Cybersecurity or Computer Science Articulation Pathways

**EARLY ADMISSIONS BENEFITS:**

(For Cecil students and alumni that meet the requirements outlined under Student Eligibility Requirements for Early Admissions Benefits)

- Guaranteed admissions to WilmU
- WilmU Application fee waiver
- Early access to a WilmU recruiter, admissions associate, and/or academic advisor 100% online or at a WilmU location
- Program-to-program course maps from a Cecil associate degree through the eligible WilmU bachelor degree
- Ability to enroll at both Cecil and WilmU concurrently
- Opportunity to complete select graduate courses as part of an undergraduate degree at the undergraduate per credit tuition

**STUDENT ELIGIBILITY REQUIREMENTS FOR EARLY ADMISSIONS BENEFITS**

- Students currently enrolled or have already completed any of the following Cecil College associate degree programs:
    - Associate of Applied Science in Cybersecurity
    - Associate of Applied Science in Computer Science – Programming
    - Associate of Science in Computer Science
- Submit a WilmU Early Admissions Intent to Enroll Form.
- Enroll in one of the following eligible bachelor degrees at WilmU:
    - Bachelor of Science in Cybersecurity – no concentration
    - Bachelor of Science in Cybersecurity – Digital Forensics concentration
    - Bachelor of Science in Computer Science – no concentration
    - Bachelor of Science in Computer Science – Artificial Intelligence concentration
    - Bachelor of Science in Computer Science – Data Analytics concentration
- Submit an official Cecil transcript with degree conferral to WilmU, and submit all official transcripts from all previously attended institutions. Completion of additional forms may be required for some majors or by enrollment status.

**Associate Degree Coursework and Transfer:**

| Cecil College | | | CR | Wilmington University Course Equivalents | | | CR |
|---|---|---|---|---|---|---|---|
| ART/HUM | | Arts and Humanities Elective | 3 | HUM | XXX | Humanities Elective | 3 |
| BIO/PHY | | Biology w/Lab or Physics w/Lab | 4 | SCI | XXX | Science Elective | 4 |
| CSC | 104 | Computer Science Fundamentals | 3 | CSC | 200 | Computer Science Fundamentals | 3 |
| CSC | 109 | Introduction to Programming | 3 | SEC | 290 | Introduction to Programming with Python | 3 |
| CSC | 110 | Ethics in Information Technology | 3 | ELE | 1XX | Free Elective | 3 |
| CSC | 140 | Introduction to Networking | 3 | SEC | 235 | Networks and Telecommunications | 3 |
| CSC | 141 | Computer Network Security Fundamentals | 3 | SEC | 250 | Operating System & Computer Systems Security | 3 |
| CSC | 151 | Introduction to Computer Forensics & Investigations | 3 | SEC | 350 | Introduction to Computer Forensics | 3 |
| CSC | 225 | Tactical Perimeter Defense | 3 | SEC | 2XX | Security Elective | 3 |
| CSC | 235 | Strategic Infrastructure Security | 3 | SEC | 2XX | Security Elective | 3 |
| CSC | 266 | Routing and Switching I | 4 | SEC | 2XX | Security Elective | 4 |
| EGL | 101 | Freshman Composition | 3 | EGL | 121 | English Composition I | 3 |
| EGL | 102 | Composition and Literature | 3 | EGL | 122 | English Composition II | 3 |
| MAT | | Math Elective* | 4 | MAT | 1XX | Math Elective | 4 |
| CSC | | Computer Science Elective | 3 | CSC | 1/2XX | COT Elective | 3 |
| CSC | | Computer Science Elective | 3 | CSC | 1/2XX | COT Elective | 3 |
| CSC | | Computer Science Elective | 3 | CSC | 1/2XX | COT Elective | 3 |
| PSY | 101 | Introduction to Psychology | 3 | PSY | 101 | Introduction to Psychology | 3 |
| SOC SCI | | Social Science Elective | 3 | SOC | XXX | Behavioral Science Elective | 3 |
| Total | | | 60 | Total | | | 60 |

**Option 1:**

**B.S. in Cybersecurity- no concentration (Remaining Course Requirements)**

| # | Course ID | Course Name | GR Req. | CR | Notes |
|---|-----------|-------------|---------|-----|-------|
| 1 | CTA 206 | Computer Applications | | 3 | See Note: 1 |
| 2 | SEC 100 | Introduction to Computer Hardware & Operation | | 3 | See Note: 1 |
| 3 | SEC 210 | Principles and Practice of Information Security | | 3 | |
| 4 | SEC 230 | Introduction to Linux | | 3 | See Note: 1 |
| 5 | CSC 345 | Database Foundations | | 3 | |
| 6 | MAT 308 | Inferential Statistics | | 3 | See Note: 1 |
| 7 | PHI 314 | Ethics for Computer Professionals | | 3 | |
| 8 | SEC 310 | Cryptography: Algorithms & Applications | | 3 | |
| 9 | SEC 335 | Linux for Systems Administrators | | 3 | |
| 10 | SEC 340 | Windows Operating Systems & System Administration | | 3 | See Note: 1 |
| 11 | SEC 410 | Web and Data Security | | 3 | |
| 12 | SEC 450 | Protecting Your Network: Firewall and Perimeter Security | | 3 | |
| 13 | SEC 480 or SEC 490 | Experiential Learning in Cybersecurity or Computer and Net. Sec. Intern. | | 3 | |
| 14 | | College of Technology Elective (Any WilmU course with a CSC, CTA, GMD, ISM, MIS, SDD, SEC, or TEC prefix) | | 3 | |
| Security Electives (15 credits) complete 5 courses from the following options: | | | | | |
| 15-19 | LES 330, Cyber Law LES 331, Electronic Discovery SEC 240, Foundations in Cyber Investigations; SEC 305, Psychology of a Cyber Attacker; SEC 325, Breaking Down Cloud Security; SEC 355, Mobile Device Security & Forensics; SEC 360 Advanced Mobile and loT Forensics SEC 370, Computer Incident Response Course; SEC 375 Malware Analysis Techniques | SEC 420, Data Integrity and Disaster Recovery; SEC 425, Ethical Hacking; SEC 435, Advanced Network Management; SEC 440, Network Forensics; SEC 465, Cyber Security and loT; SEC 490, Computer & Network Security Internship; UAV 100, Introduction to Drone Operations; UAV 102, Drone Design and Maintenance; UAV 200, Security of UAV and UAS Systems | | 15 | |
| 20 | | Free Elective | | 3 | See Note: 1 |

Notes:

1. WilmU has a credit residency policy of 30 credits. Therefore, additional credits beyond the associate degree requirements can be completed at Cecil College. However, certificate and accelerated options are available at Wilmington University for students with elective space. The following courses can be completed at Cecil College to maximize transfer credit:
   a. CSC 130, Introduction to Linux for SEC 230, Introduction to Linux
   b. CSC 135, Client Systems for SEC 100, Computer Hardware & Operation
   c. CSC 154, Introduction to Windows 10 for SEC 340, Windows Operating Systems and System Administration
   d. CIS 101, Introduction to Computer Concepts for CTA 206, Computer Applications
   e. MAT 127, Introduction to Statistics for MAT 308, Inferential Statistics

**Option 2:**

**B.S. in Cybersecurity- Digital Forensics concentration (Remaining Course Requirements)**

| # | Course ID | Course Name | GR Req. | CR | Notes |
|---|-----------|-------------|---------|----|-------|
| 1 | CTA 206 | Computer Applications | | 3 | See Note: 1 |
| 2 | SEC 100 | Introduction to Computer Hardware & Operation | | 3 | See Note: 1 |
| 3 | SEC 210 | Principles and Practice of Information Security | | 3 | |
| 4 | SEC 230 | Introduction to Linux | | 3 | See Note: 1 |
| 5 | CSC 345 | Database Foundations | | 3 | |
| 6 | MAT 308 | Inferential Statistics | | 3 | See Note: 1 |
| 7 | PHI 314 | Ethics for Computer Professionals | | 3 | |
| 8 | SEC 310 | Cryptography: Algorithms & Applications | | 3 | |
| 9 | SEC 335 | Linux for Systems Administrators | | 3 | |
| 10 | SEC 340 | Windows Operating Systems & System Administration | | 3 | See Note: 1 |
| 11 | SEC 410 | Web and Data Security | | 3 | |
| 12 | SEC 450 | Protecting Your Network: Firewall and Perimeter Security | | 3 | |
| 13 | SEC 480 OR SEC 490 | Experiential Learning in Cybersecurity or Computer and Net. Sec. Intern. | | 3 | |
| Digital Forensics Concentration (18 Credits) | | | | | |
| 14-19 | | Select 6 courses from the following options:<br>• LES 331 Electronic Discovery<br>• SEC 240 Foundations in Cyber Investigations<br>• SEC 350 Introduction Computer Forensics<br>• SEC 355 Mobile Device Security and Forensics<br>• SEC 360 Advanced Mobile and IoT Forensics<br>• SEC 370 Computer Incident Response Course<br>• SEC 375 Malware Analysis Techniques<br>• SEC 440 Network Forensics | | 18 | |
| 20 | | Free Elective | | 3 | See Note: 1 |

Notes:

1. WilmU has a credit residency policy of 30 credits. Therefore, additional credits beyond the associate degree requirements can be completed at Cecil College. However, certificate and accelerated options are available at Wilmington University for students with elective space. The following courses can be completed at Cecil College to maximize transfer credit:
   a. CSC 130, Introduction to Linux for SEC 230, Introduction to Linux
   b. CSC 135, Client Systems for SEC 100, Computer Hardware & Operation
   c. CSC 154, Introduction to Windows 10 for SEC 340, Windows Operating Systems and System Administration
   d. CIS 101, Introduction to Computer Concepts for CTA 206, Computer Applications
   e. MAT 127, Introduction to Statistics for MAT 308, Inferential Statistics

**Option 3:**

**B.S. in Computer Science with no concentration (Remaining Course Requirements)**

| # | Course ID | Course Name | GR Req. | CR | Notes |
|---|-----------|-------------|---------|----|----|
| 1 | CTA 326 | Integ. Excel into Business Problem | | 3 | |
| 2 | CSC 100 | Web Design & Development | | 3 | See Note: 1 |
| 3 | SEC 100 | Intro to Comp Hardware & Operation | | 3 | See Note: 1 |
| 4 | SEC 205 | Fundamentals of Cybersecurity | | 3 | |
| 5 | PHI 314 | Ethics for Computer Professionals | | 3 | |
| 6 | BBA 430 | Big Data and Visualization | | 3 | |
| 7 | CSC 305 | Computer Architecture | | 3 | |
| 8 | CSC 315 | Fund. of 0-0 Programming | | 3 | See Note: 1 |
| 9 | | CSC325 Java Programming I or CSC310 Microsoft .NET I | | 3 | |
| 10 | | CSC335 Java Programming II or CSC311 Microsoft .NET I | | 3 | |
| 11 | | CSC240 JavaScript or CSC340 JavaScript I | | 3 | See Note: 1 |
| 12 | CSC 345 | Database Foundations | | 3 | |
| 13 | CSC 350 | Mobile App | | 3 | |
| 14 | CSC 370 | User-Centered Design | | 3 | |
| 15 | CSC 400 | 0-0 Sys Anlys and Design | | 3 | |
| 16 | ISM 420 | Data Modeling and Warehousing | | 3 | |
| 17 | | CSC489 Experiential Learning in CS or CSC490 CSC Internship | | 3 | |
| 18 | | Science Elective | | 3 | |
| 19 | | Elective | | 3 | |
| 20 | | Elective | | 3 | |

Notes:

1. WilmU has a credit residency policy of 30 credits. Therefore, additional credits beyond the associate degree requirements can be completed at Cecil College. However, certificate and accelerated options are available at Wilmington University for students with elective space. The following courses can be completed at Cecil College to maximize transfer credit:
   a. CSC 135, Client Systems for SEC 100, Computer Hardware & Operation
   b. Either VCP 144, Web Design I - Design Fundamentals OR CSC 182, Web Applications Development will satisfy the requirement for CSC 100, Web Design & Development
   c. CSC 205, Computer Science I for CSC 240 JavaScript
   d. CSC 218, Computer Science II for CSC 315 Fund. of 0-0 Programming

**Option 4:**

**B.S. in Computer Science with Artificial Intelligence concentration (Remaining Course Requirements)**

| # | Course ID | Course Name | GR Req. | CR | Notes |
|---|-----------|-------------|---------|----|----|
| 1 | CTA 326 | Integ. Excel into Business Problem | | 3 | |
| 2 | CSC 100 | Web Design & Development | | 3 | See Note: 1 |
| 3 | SEC 100 | Intro to Comp Hardware & Operation | | 3 | See Note: 1 |
| 4 | SEC 205 | Fundamentals of Cybersecurity | | 3 | |
| 5 | CSC 305 | Computer Architecture | | 3 | |
| 6 | CSC 315 | Fund. of 0-0 Programming | | 3 | See Note: 1 |
| 7 | | CSC325 Java Programming I or CSC310 Microsoft .NET I | | 3 | |
| 8 | | CSC335 Java Programming II or CSC311 Microsoft .NET I | | 3 | |
| 9 | | CSC240 JavaScript or CSC340 JavaScript I | | 3 | See Note: 1 |
| 10 | CSC 345 | Database Foundations | | 3 | |
| 11 | CSC 350 | Mobile App | | 3 | |
| 12 | CSC 370 | User-Centered Design | | 3 | |
| 13 | CSC 400 | 0-0 Sys Anlys and Design | | 3 | |
| 14 | CSC 414 | Ethics for AI and Data Analytics | | 3 | |
| 15 | CSC 419 | Python for Data Science | | 3 | |
| 16 | CSC 420 | Intro to Artificial Intelligence | | 3 | |
| 17 | CSC 430 | Machine Learning Principles | | 3 | |
| 18 | CSC 470 | Computer Vision and Image Analysis | | 3 | |
| 19 | | CSC480 Experiential Learning in CS or CSC490 CSC Internship | | 3 | |
| 20 | | Elective | | 3 | |

Notes:

1. Wilm U has a credit residency policy of 3 0 credits. Therefore, additional credits beyond the associate degree requirements can be completed at Cecil College. However, certificate and accelerated options are available at Wilmington University for students with elective space. The following courses can be completed at Cecil College to maximize transfer credit:
   a. CSC 135, Client Systems for SEC 100, Computer Hardware & Operation
   b. Either VCP 144, Web Design I - Design Fundamentals OR CSC 182, Web Applications Development will satisfy the requirement for CSC 100, Web Design & Development
   c. CSC 205, Computer Science I for CSC 240 JavaScript
   d. CSC 218, Computer Science II for CSC 315 Fund. of 0-0 Programming

**Option 5:**

**B.S. in Computer Science with Data Analytics concentration (Remaining Course Requirements)**

| # | Course ID | Course Name | GR Req. | CR | Notes |
|---|-----------|-------------|---------|----|-------|
| 1 | CTA 326 | Integ. Excel into Business Problem | | 3 | |
| 2 | CSC 100 | Web Design & Development | | 3 | See Note: 1 |
| 3 | SEC 100 | Intro to Comp Hardware & Operation | | 3 | See Note: 1 |
| 4 | SEC 205 | Fundamentals of Cybersecurity | | 3 | |
| 5 | BBA 430 | Big Data and Visualization | | 3 | |
| 6 | CSC 305 | Computer Architecture | | 3 | |
| 7 | CSC 315 | Fund. of 0-0 Programming | | 3 | See Note: 1 |
| 8 | | CSC325 Java Programming I or CSC310 Microsoft .NET I | | 3 | |
| 9 | | CSC335 Java Programming II or CSC311 Microsoft .NET I | | 3 | |
| 10 | | CSC240 JavaScript or CSC340 JavaScript I | | 3 | See Note: 1 |
| 11 | CSC 345 | Database Foundations | | 3 | |
| 12 | CSC 350 | Mobile App | | 3 | |
| 13 | CSC 400 | 0-0 Sys Anlys and Design | | 3 | |
| 14 | CSC 402 | Data Analysis Storytelling | | 3 | |
| 15 | CSC 407 | Data Analysis for Organizations | | 3 | |
| 16 | CSC 414 | Ethics for AI and Data Analytics | | 3 | |
| 17 | CSC 419 | Python for Data Science | | 3 | |
| 18 | ISM 420 | Data Modeling and Warehousing | | 3 | |
| 19 | | CSC480 Experiential Learning in CS or CSC490 CSC Internship | | 3 | |
| 20 | | Elective | | 3 | |

Notes:

1. Wilm U has a credit residency policy of 3 0 credits. Therefore, additional credits beyond the associate degree requirements can be completed at Cecil College. However, certificate and accelerated options are available at Wilmington University for students with elective space. The following courses can be completed at Cecil College to maximize transfer credit:
   a. CSC 135, Client Systems for SEC 100, Computer Hardware & Operation
   b. Either VCP 144, Web Design I - Design Fundamentals OR CSC 182, Web Applications Development will satisfy the requirement for CSC 100, Web Design & Development
   c. CSC 205, Computer Science I for CSC 240 JavaScript
   d. CSC 218, Computer Science II for CSC 315 Fund. of 0-0 Programming