



## Cecil College and Wilmington University

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

#### Admissions:

1. Guaranteed admissions to WilmU
2. WilmU application fee waiver
3. Early access to a WilmU recruiter, admissions associate, and/or academic advisor 100% online or at a WilmU location
4. Program-to-program course maps from a Cecil associate degree through the eligible WilmU bachelor degree
5. Ability to enroll at both Cecil and WilmU concurrently
6. Opportunity to complete select graduate courses as part of an undergraduate degree at the undergraduate per credit tuition
7. While some lower-level courses may still be required, Cecil students will enter WilmU with junior status towards completion of a bachelor's degree consistent with program-to-program plan of study.

#### Associate Degree Coursework and Transfer:

Cecil College				CR	Wilmington University Course Equivalents				CR
SCI		Science Elective w/Lab		4	SCI	XXX	Science Elective		4
CSC	103	Survey of Operation Systems		3	SEC	250	OS and Computer System Security		3
CSC	104	Computer Science Fundamentals		3	CSC	200	Computer Science Fundamentals		3
CSC	106	Introduction to Programming Logic		3	CSC	1XX	COT Elective		3
CSC	109	Introduction to Programming		3	SEC	290	Introduction to Programming w/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	182	Web Applications Development		3	CSC	1XX	COT Elective		3
CSC	203	Seminar in Information Systems		1	CSC	2XX	COT Elective		1
CSC	205	Computer Science I		3	CSC	240	JavaScript		3
VCP	144	Web Design I - Design Fundamentals		3	CSC	100	Web Design and Development		3
EGL	101	Freshman Composition		3	ENG	121	English Composition I		3
EGL	211	Technical Writing		3	COM	250	Technical Writing		3
SPH	121 OR 141	Interpersonal Communication Public Speaking		3	PSY ENG	309 131	Interpersonal Communication Skills or Public Speaking		3
MAT		Math Elective*		4	MAT	1XX	Math Elective		4
CSC		Computer Science Elective		3	CSC	XXX	COT Elective		3
CSC		Computer Science Elective		3	CSC	XXX	COT Elective		3
CSC		Computer Science Elective		3	CSC	XXX	COT Elective		3
CSC		Computer Science Elective		3	CSC	XXX	COT Elective		3
SOC SCI		Social Science Elective		3	SOC	XXX	Behavioral Science Elective		3
Total				60	Total				60

\* Recommended Math Course

**Option 1:****B.S. in Cybersecurity- no concentration (Remaining Course Requirements)**

#	Course ID	Course Name	GR Req.	CR	Notes
1	EGL 122	English Composition II		3	See Note: 1
2	CTA 206	Computer Applications		3	See Note: 1
3	SEC 100	Introduction to Computer Hardware & Operation		3	See Note: 1
4	SEC 210	Principles and Practice of Information Security		3	
5	SEC 230	Introduction to Linux		3	See Note: 1
6	CSC 345	Database Foundations		3	
7	MAT 308	Inferential Statistics		3	See Note: 1
8	PHI 314	Ethics for Computer Professionals		3	
9	SEC 310	Cryptography: Algorithms & Applications		3	
10	SEC 335	Linux for Systems Administrators		3	
11	SEC 340	Windows Operating Systems & System Administration		3	See Note: 1
12	SEC 410	Web and Data Security		3	
13	SEC 450	Protecting Your Network: Firewall and Perimeter Security		3	
14	SEC 480 or SEC 490	Experiential Learning in Cybersecurity or Computer and Net. Sec. Intern.		3	
15		College of Technology Elective (Any WilmU course with a CSC, CTA, GMO, ISM, MIS, SOD, SEC, or TEC prefix)		3	
Security Electives (15 credits) complete 5 courses from the following options:					
16-20	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 IoT 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 IoT; 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	

**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. EGL 102 Composition and Literacy for ENG 122, English Composition II
  - b. CSC 130, Introduction to Linux for SEC 230, Introduction to Linux
  - c. CSC 135, Client Systems for SEC 100, Computer Hardware & Operation
  - d. CSC 154, Introduction to Windows 10 for SEC 340, Windows Operating Systems and System Administration
  - e. CIS 101, Introduction to Computer Concepts for CTA 206, Computer Applications
  - f. 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	EGL 122	English Composition II		3	See Note: 1
2	CTA 206	Computer Applications		3	See Note: 1
3	SEC 100	Introduction to Computer Hardware & Operation		3	See Note: 1
4	SEC 210	Principles and Practice of Information Security		3	
5	SEC 230	Introduction to Linux		3	See Note: 1
6	CSC 345	Database Foundations		3	
7	MAT 308	Inferential Statistics		3	See Note: 1
8	PHI 314	Ethics for Computer Professionals		3	
9	SEC 310	Cryptography: Algorithms & Applications		3	
10	SEC 335	Linux for Systems Administrators		3	
11	SEC 340	Windows Operating Systems & System Administration		3	See Note: 1
12	SEC 410	Web and Data Security		3	
13	SEC 450	Protecting Your Network: Firewall and Perimeter Security		3	
14	SEC 480 OR SEC 490	Experiential Learning in Cybersecurity or Computer and Net. Sec. Intern.		3	
<b>Digital Forensics Concentration (18 Credits)</b>					
15-20		Select 6 courses from the following options: <ul style="list-style-type: none"> <li>• LES 331 Electronic Discovery</li> <li>• SEC 240 Foundations in Cyber Investigations</li> <li>• SEC 350 Introduction Computer Forensics</li> <li>• SEC 355 Mobile Device Security and Forensics</li> <li>• SEC 360 Advanced Mobile and IoT Forensics</li> <li>• SEC 370 Computer Incident Response Course</li> <li>• SEC 375 Malware Analysis Techniques</li> <li>• SEC 440 Network Forensics</li> </ul>		18	

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  - a. EGL 102 Composition and Literacy for ENG 122, English Composition II
  - b. CSC 130, Introduction to Linux for SEC 230, Introduction to Linux
  - c. CSC 135, Client Systems for SEC 100, Computer Hardware & Operation
  - d. CSC 154, Introduction to Windows 10 for SEC 340, Windows Operating Systems and System Administration
  - e. CIS 101, Introduction to Computer Concepts for CTA 206, Computer Applications
  - f. 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	EGL 122	English Composition II		3	See Note: 1
2	CTA 326	Integ. Excel into Business Problem		3	
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	CSC 345	Database Foundations		3	
12	CSC 350	Mobile App		3	
13	CSC 370	User-Centered Design		3	
14	CSC 400	0-0 Sys Anlys and Design		3	
15	ISM 420	Data Modeling and Warehousing		3	
16		CSC489 Experiential Learning in CS or CSC490 CSC Internship		3	
17		Elective		3	
18		Elective		3	
19		Elective		3	
20		Elective		3	

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  - a. EGL 102 Composition and Literacy for ENG 122, English Composition II
  - b. CSC 135, Client Systems for SEC 100, Computer Hardware & Operation
  - c. 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	EGL 122	English Composition II		3	See Note: 1
2	CTA 326	Integ. Excel into Business Problem		3	
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	CSC 345	Database Foundations		3	
10	CSC 350	Mobile App		3	
11	CSC 370	User-Centered Design		3	
12	CSC 400	0-0 Sys Anlys and Design		3	
13	CSC 414	Ethics for AI and Data Analytics		3	
14	CSC 419	Python for Data Science		3	
15	CSC 420	Intro to Artificial Intelligence		3	
16	CSC 430	Machine Learning Principles		3	
17	CSC 470	Computer Vision and Image Analysis		3	
18		CSC480 Experiential Learning in CS or CSC490 CSC Internship		3	
19		Elective		3	
20		Elective		3	

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  - a. EGL 102 Composition and Literacy for ENG 122, English Composition II
  - b. CSC 135, Client Systems for SEC 100, Computer Hardware & Operation
  - c. 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	EGL 122	English Composition II		3	See Note: 1
2	CTA 326	Integ. Excel into Business Problem		3	
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	CSC 345	Database Foundations		3	
11	CSC 350	Mobile App		3	
12	CSC 400	0-0 Sys Anlys and Design		3	
13	CSC 402	Data Analysis Storytelling		3	
14	CSC 407	Data Analysis for Organizations		3	
15	CSC 414	Ethics for AI and Data Analytics		3	
16	CSC 419	Python for Data Science		3	
17	ISM 420	Data Modeling and Warehousing		3	
18		CSC480 Experiential Learning in CS or CSC490 CSC Internship		3	
19		Elective		3	
20		Elective		3	

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  - a. EGL 102 Composition and Literacy for ENG 122, English Composition II
  - b. CSC 135, Client Systems for SEC 100, Computer Hardware & Operation
  - c. CSC 218, Computer Science II for CSC 315 Fund. of 0-0 Programming