



### Cecil College and Wilmington University

## Associate of Science in Computer Science 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
ART/HUM		Arts and Humanities Elective	3	HUM	XXX	Humanities Elective	3
SCI- BIO, ENV, CHM, PSC, PHY		Science Elective w/Lab	4	SCI	XXX	Science Elective	4
SCI- BIO, ENV, CHM, PSC, PHY		Science Elective 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 w/Python	3
CSC	205	Computer Science I	3	CSC	240	JavaScript	3
CSC	218	Computer Science II	4	CSC	315	Fundamentals of 0-0 Programming	3
				CSC	XXX	COT Supplemental	1
MAT	201	Calculus I with Analytical Geometry	4	MAT	310	Calculus I	3
MAT	202	Calculus II with Analytical Geometry	4	MAT	311	Calculus II	3
MAT	236	Discrete Structures	3	MAT	330	Discrete Math	3
MAT	240	Introduction to Linear Algebra	4	MAT	2XX	Mathematics Elective	3
				MAT	XXX	Supplemental Mathematics Credit	4
EGL	101	College Composition	3	ENG	121	English Composition I	3
EGL	102	Composition and Literature	3	ENG	122	English Composition II	3
SPH	121	Interpersonal Communications	3	PSY	309	Interpersonal Communication Skills	3
MAT	121	Precalculus	4	MAT	200	Precalculus	3
		CSC or PHE elective	2	CSC	XXX	COT Elective	2
SOC SCI		Social Science Elective	3	SOC	XXX	Behavioral Science Elective	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	SEC 100	Introduction to Computer Hardware & Operation		3	See Note: 1
2	SEC 210	Principles and Practice of Information Security		3	
3	SEC 230	Introduction to Linux		3	See Note: 1
4	SEC 235	Networks and Telecommunications		3	See Note: 1
5	SEC 250	Operating System and Computer Network Security		3	
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. CSC 130, Introduction to Linux for SEC 230, Introduction to Linux
  - b. CSC 135, Client Systems for SEC 100, Computer Hardware & Operation
  - c. CSC 140, Intro to Networking for SEC 235, Networks and Telecommunications
  - d. CSC 154, Introduction to Windows 10 for SEC 340, Windows Operating Systems and System Administration
  - 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	SEC 100	Introduction to Computer Hardware & Operation		3	See Note: 1
2	SEC 210	Principles and Practice of Information Security		3	
3	SEC 230	Introduction to Linux		3	See Note: 1
4	SEC 235	Networks and Telecommunications		3	See Note: 1
5	SEC 250	Operating System and Computer Network Security		3	
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	
Security Electives (15 credits) complete 5 courses from the following options:					
15-20		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	

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  - 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 140, Intro to Networking for SEC 235, Networks and Telecommunications
  - d. CSC 154, Introduction to Windows 10 for SEC 340, Windows Operating Systems and System Administration
  - 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	SEC 235	Networks and Telecommunications		3	See Note: 1
6	PHI 314	Ethics for Computer Professionals		3	
7	BBA 430	Big Data and Visualization		3	
8	CSC 305	Computer Architecture		3	
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	ISM420	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. CSC 135, Client Systems for SEC 100, Computer Hardware & Operation
  - b. CSC 140, Intro to Networking for SEC 235, Networks and Telecommunications
  - c. Either VCP 144, Web Design I - Design Fundamentals OR CSC 182, Web Applications Development will satisfy for CSC 100, Web Design & Development

**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	See Note: 1
2	CSC 100	Web Design & Development		3	See Note: 1
3	SEC 100	Intro to Comp Hardware & Operation		3	
4	SEC 205	Fundamentals of Cybersecurity		3	See Note: 1
5	CSC 235	Networks and Telecommunications		3	
6	CSC 305	Computer Architecture		3	
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	O-O 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. CSC 135, Client Systems for SEC 100, Computer Hardware & Operation
  - b. CSC 140, Intro to Networking for SEC 235, Networks and Telecommunications
  - c. Either VCP 144, Web Design I - Design Fundamentals OR CSC 182, Web Applications Development will satisfy for CSC 100, Web Design & Development

**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	SEC 235	Networks and Telecommunications		3	See Note: 1
6	BBA 430	Big Data and Visualization		3	
7	CSC 305	Computer Architecture		3	
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	O-O 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. CSC 135, Client Systems for SEC 100, Computer Hardware & Operation
  - b. CSC 140, Intro to Networking for SEC 235, Networks and Telecommunications
  - c. Either VCP 144, Web Design I - Design Fundamentals OR CSC 182, Web Applications Development will satisfy for CSC 100, Web Design & Development