DELAWARE TECHNICAL AND COMMUNITY COLLEGE

and

UNIVERSITY OF DELAWARE

PROGRAM ARTICULATION AGREEMENT

**Associate Degree
A.A.S. Computing and Information Science**

**Bachelor of Science Degree in Computer Science
Minor in Cybersecurity**

2021 through 2026

Associate-Bachelor Program Articulation Agreement

between

Delaware Technical and Community College
and
University of Delaware

for
A.A.S. Computing and Information Science
and
B.S. Computer Science
Cybersecurity Minor

AGREEMENT

WHEREAS Delaware Technical and Community College (DTCC) and University of Delaware (UD) are committed to expanding educational opportunities for the citizens of the State of Delaware, and

WHEREAS the two institutions are committed to providing a smooth transition for students wishing to earn an Associate degree and a Bachelor degree, and

WHEREAS the intent of the two institutions is to avoid duplication of curricula where appropriate within articulated programs of studies, and

WHEREAS the two institutions better serve the educational growth of students and the economic development of the community through cooperative educational planning and optimal utilization of community resources,

BE IT HEREWITH RESOLVED that this agreement commits the partners to full support of an articulation process between similar academic programs offered by the two institutions.

PROVISIONS OF THE AGREEMENT

1. The institutions agree to follow the connected degree curricula delineated in this document for the transfer of DTCC's Associate in Applied Science degree program in Computing and Information Science and UD's Bachelor of Science in Computer Science and Cybersecurity Minor degree programs.

2. Both educational institutions will cooperate toward developing, disseminating, and presenting the articulated program information to students.

3. Graduates of the DTCC program who have completed the Associate degree with a cumulative grade point average of 3.2 or higher, a grade point average of 3.2 or higher in the CSC and CIS courses combined, and a B or better in all MAT courses will be automatically accepted into the Bachelor's degree program at UD. Those with a cumulative grade point average equal to or greater than 2.8 and less than 3.2 will be considered for admission on a space available basis. Students will be considered for admission based on the completed work at the time of review. DTCC will provide confirmation of degree completion upon student's final semester of coursework. Students who do not complete the degree program as outlined in the agreement may have admission based on the articulation agreement criteria rescinded; however, they still may be considered for regular transfer admission based on the totality of their academic record. UD reserves the right to recalculate the DTCC cumulative grade point average to account for DTCC's grade forgiveness policy when making admission decisions.

4. Students must complete the courses in the specified Associate degree program herein with a grade of C or better to receive the credits for transfer. Students are expected to complete all courses outlined in the DTCC portion of the agreement at DTCC. Students who have attended a college or university other than DTCC and transferred credits to DTCC in pursuit of the Associate degree may not be admissible via the provisions of this articulation agreement. In such cases, students will be considered based on their entire academic history but will not be guaranteed admission to the Bachelor degree program or the course equivalencies detailed within the provisions of this agreement. Coursework taken at an institution other than DTCC may not transfer to UD as noted in the agreement. It is expected that students will complete all coursework in the UD portion of the agreement at UD. Students who previously attended UD are not eligible for admission via an articulation agreement; instead, they should apply for readmission consideration if wishing to re-enroll at UD.

5. Students intending to transfer should complete the UD admissions application following the third semester of their Associate degree program. Students should note on their application that they are applying as part of an articulation agreement/connected degree.

6. Students are subject to all the policies and procedures of both institutions.

7. Students are subject to all specific policies pertaining to students admitted to the Bachelor of Science in Computer Science and Cybersecurity Minor degree programs.

8. This articulation agreement is based on the present curricula contained in this document and it is effective for a period of five years from the date of signing by both parties.

9. At any time, both institutions may initiate changes to this articulation agreement. Both institutions reserve the right to modify the programs as deemed necessary and agree to inform the appropriate individuals of said changes. Departments will review agreements and notify the appropriate individuals at each institution of any changes by July 1 of each year the agreement is in effect. The University of Delaware will make a good faith effort to honor this articulation agreement for any DTCC student who enrolls in the Computing and Information Science Associate degree program during the five-year period specified for this agreement and graduates with the required Associate degree within eight (8) years of the signing of this agreement by both parties. A student who meets these conditions must apply to the University of Delaware and be accepted in order to receive the benefits of this agreement.

CONNECTED DEGREE ANALYSIS
Matching Worksheet/Suggested Course Sequence/Bachelor Completion

ASSOCIATE DEGREE PROGRAM — A.A.S. COMPUTING AND INFORMATION SCIENCE, DELAWARE TECHNICAL & COMMUNITY COLLEGE — Course No./Name	CR	BACHELOR'S DEGREE COURSE MATCH OR POTENTIAL COURSE MATCH — Course No./Name	CR	BACHELOR'S DEGREE COMPLETION — B.S. COMPUTER SCIENCE W/ CYBERSECURITY MINOR, UNIVERSITY OF DELAWARE — Course No./Name	CR
Term 1 (fall)				**Term 6 (fall)**	
CSC 114 Computer Science I	4	CISC 108 Intro to Computer Science I / CISC 166DE Department Elective	3 / 1	XXXX XXX Creative Arts & Humanities Breadth Course#	3
HIS 112 U.S. History Post-Civil War	3	HIST 106 U.S. History Since 1865 (History and Cultural Change Breadth Course)	3	XXXX XXX General Elective Course	3
ENG 101 Composition I	3	ENGL 166DE Department Elective (ENG 101 + ENG 102 = ENGL 110 Exemption)	3	CISC 361 Operating Systems	3
XXX XXX Social Science Elective Choose 1 from: POL 111 Political Science or ECO 111 Macroeconomics or PSY 121 General Psychology or SOC 111 Sociology I	3	Social and Behavioral Sciences Breadth Course POSC 150 Intro to American Politics or ECON 103 Intro to Macroeconomics or PSY 100 General Psychology or SOCI 201 Intro to Sociology	3	CPEG 494 System Hardening and Protection (Concentration Elective 1)*	3
SSC 100 First Year Seminar	1	UNIV 166T Transfer Elective	1	MATH 205 Statistical Methods or MATH 350 Probability Theory	3 or 4
MAT 180 College Algebra or MAT 183 Reasoning with Functions I	4 or 5	MATH 166DE Department Elective or MATH 166DE Department Elective	4 or 5		
	18/19		18/19		15/16
Term 2 (spring)				**Term 7 (spring)**	
CSC 164 Computer Science II	4	CISC 181 Intro to Computer Science II / CISC 166DE Department Elective	3 / 1	CISC 320 Intro to Algorithms	3
CSC 210 Systems Programming	3	CISC 210 Introduction to Systems Programming	3	CISC 355 Computers, Ethics and Society	3
ENG 102 Composition II	3	ENGL 166DE Department Elective (ENG 101 + ENG 102 = ENGL 110 Exemption)	3	CISC 450 Computer Networks (CISC Elective Course 1)^	3
HIS 111 U.S. History Pre-Civil War	3	HIST 105 U.S. History to 1865	3	CISC 303 Automata Theory	3
MAT 190 Pre-Calculus	4	MATH 117 Pre-calculus for Scientists and Engineers	4	CISC 372 Parallel Computing	3
	17		17		15
Sub-Total	35/36		35/36		30/31

ASSOCIATE DEGREE PROGRAM — A.A.S. COMPUTING AND INFORMATION SCIENCE — DELAWARE TECHNICAL & COMMUNITY COLLEGE		BACHELOR'S DEGREE COURSE MATCH OR POTENTIAL COURSE MATCH		BACHELOR'S DEGREE COMPLETION — B. S. COMPUTER SCIENCE W/ CYBERSECURITY MINOR — UNIVERSITY OF DELAWARE	
Course No./Name **Term 3 (summer)**	**CR**	**Course No./Name**	**CR**		
MAT 281 Calculus I	4	MATH 241 Analytic Geometry and Calculus A	4		
	4		4		
Course No./Name **Term 4 (fall)**	**CR**	**Course No./Name**	**CR**	**Course No./Name** **Term 8 (fall)**	**CR**
CIS 130 Computer Organization	3	CISC 260 Machine Organization & Assembly Language	3	CPEG XXX Concentration Elective 2; Choose from Cybersecurity approved list*	3
MAT 282 Calculus II (Choose as a Support Elective)	4	MATH 242 Analytic Geometry and Calculus B	4	CISC 304 or MATH 349	3
ECO 122 Microeconomics	3	ECON 101 Intro to Microeconomics	3	CISC 3XX CISC Elective Course 2^	3
CIS 211 Data Structures	4	CISC 220 Data Structures	3	CISC 498 CISC Design Project 1 (DLE)	3
		CISC 266DE Department Elective	1	XXXX XXX Lab Science Course 2	4
	14		**14**		**16**
Term 5 (spring)		**Term 9 (spring)**			
ENG 122 Technical Writing and Communication	3	ENGL 410 Technical Writing	3	CISC 499 CISC Design Project 2 (DLE)	3
CSC 214 Computer Science III	4	CISC 275 Introduction to Software Engineering	3	CISC 465 Intro to Cybersecurity (Concentration Elective 3)*	3
		CISC 266DE Department Elective	1	CPEG XXX Concentration Elective 4; Choose from Cybersecurity approved list*	3
PHY 281 Physics I with Calculus	4	PHYS 207 Fundamentals of Physics I	4	XXXX XXX Lab Science Course 3	4
MAT 263 Principles of Discrete Math	4	MATH 210 Discrete Math I	3	XXXX XXX General Elective Course (may be needed to attain 124 credits)	1
		MATH 266DE Department Elective	1		
	15		**15**		**14**
TOTAL	**68/69**		**68/69**		**60/61**

One course must fulfill the Multicultural Requirement.
* Advisor approved Concentration courses
^ Advisor approved CISC course at the 301 and above level.
• Minimum grade of C- required for all University and College Breadth Requirements.

Suggested Course Sequence

ASSOCIATE DEGREE A.A.S. COMPUTING AND INFORMATION SCIENCE DELAWARE TECHNICAL AND COMMUNITY COLLEGE				BACHELOR'S DEGREE B.S. COMPUTER SCIENCE W/ CYBERSECURITY MINOR UNIVERSITY OF DELAWARE			
Term 1 (Fall)			**CR**	**Term 6 (Fall)**			**CR**
CSC	114	Computer Science I	4	XXXX	XXX	Creative Arts & Humanities Breadth Course#	3
HIS	112	U.S. History Post Civil War	3	XXXX	XXX	General Elective Course	3
ENG	101	Composition I	3	CISC	361	Operating Systems	3
XXX	XXX	Social Science Elective (Choose 1: POL 111, ECO 111, PSY 121, SOC 111)	3	CPEG	494	System Hardening and Protection (Concentration Elective 1)*	3
SSC	100	First Year Seminar	1	MATH	205 or 350	Statistical Methods or Probability Theory	3 or 4
MAT MAT	180 or 183	College Algebra or Reasoning with Functions I	4 or 5				
			18/19				15/16
Term 2 (Spring)				**Term 7 (Spring)**			
CSC	164	Computer Science II	4	CISC	320	Intro to Algorithms	3
CSC	210	Systems Programming	3	CISC	355	Computers, Ethics and Society	3
ENG	102	Composition II	3	CISC	450	Computer Networks (CISC Elective Course 1)^	3
HIS	111	U.S. History Pre-Civil War	3	CISC	303	Automata Theory	3
MAT	190	Pre-Calculus	4	CISC	372	Parallel Computing	3
			17				15
Term 3 (Summer)							
MAT	281	Calculus I	4				
Term 4 (Fall)				**Term 8 (Fall)**			
CIS	130	Computer Organization	3	CPEG	XXX	Concentration Elective 2; Choose from Cybersecurity approved list*	3
MAT	282	Calculus II (Choose as Support Elective)	4	XXXX	XXX	CISC 304 OR MATH 349	3
ECO	122	Microeconomics	3	CISC	3XX	CISC Elective Course 2^	3
CIS CSC	211 or 211	Data Structures or Data Structures	4	CISC	498	CISC Design Project 1 (DLE/Capstone)	3
				XXXX	XXX	Lab Science Course 2	4
			14				16
Term 5 (Spring)				**Term 9 (Spring)**			
ENG	122	Technical Writing and Communication	3	CISC	499	CISC Design Project 2 (DLE/Capstone)	3
CSC	214	Computer Science III	4	CISC	465	Intro to Cybersecurity (Concentration Elective 3)*	3
PHY	281	Physics I with Calculus	4	CPEG	XXX	Concentration Elective 4; Choose from Cybersecurity approved list*	3
MAT	263	Principles of Discrete Math	4	XXXX	XXX	Lab Science Course 3	4
				XXXX	XXX	General Elective Course (may only be needed if MATH 205 is chosen instead of MATH 350)	1
			15				14
Total Credits			68/69				60/61
				# One course must fulfill the Multicultural Requirement. * Advisor approved Concentration courses ^ Advisor approved CISC course at the 301 and above level. • Minimum grade of C- required for all University and College Breadth Requirements.			

- The Bachelor of Science degree program in Computer Science (including Cybersecurity Minor courses) requires a minimum of 124 credits. Additional free elective credit may be needed to reach this minimum.
- Course sequencing may vary by semester. See your advisor.

For more information, contact:	
Delaware Technical Community College Dover, DE: (302) 857-1767 Georgetown, DE: (302) 259-6489 Stanton/Wilmington, DE: (302) 434-5564	**University of Delaware** F. Charles Shermeyer: (302) 831-8659 Dr. Adarsh Sethi: (302) 831-1945

APPROVAL

This program articulation agreement is between Delaware Technical and Community College's Associate of Applied Science Degree in Computing and Information Science and the University of Delaware's Bachelor of Science in Computer Science and Cybersecurity Minor.

Approval is granted for a period of five years effective on the date both parties have fully executed this agreement.

This agreement may be executed electronically through the use of any program that meets the requirements of the Delaware Uniform Electronic Transactions Act, or other applicable law, or in any number of counterparts and all of such counterparts shall together constitute one and the same instrument. Delivery of an executed counterpart of a signature page of this Agreement in Portable Document Format (PDF) or by facsimile transmission shall be effective as delivery of a manually executed original counterpart of this Agreement.

DELAWARE TECHNICAL AND COMMUNITY COLLEGE   **UNIVERSITY OF DELAWARE**

Dr. Mark T. Brainard, President	Date 1/4/2022	

Justina M. Thomas
Justina M. Thomas (Dec 17, 2021 12:40 EST)   Dec 17, 2021

Justina M.Thomas, Vice President for   Date
Academic Affairs

Frank Sciallo
Frank Sciallo (Dec 16, 2021 14:22 EST)   Dec 16, 2021

Frank Sciallo, Department Chair,   Date
Information Technologies

Robin Morgan   3/7/2022

Dr. Robin Morgan, Provost   Date

Dr. Levi T. Thompson, Dean, College of   1/28/2022
Engineering, and Elizabeth Inez Kelley   Date
Professor, Chemical & Biomolecular
Engineering

Dr. Rudolph Eigenmann, Chair   1/27/2022
Computer and Information Sciences   Date