

**DELAWARE TECHNICAL AND COMMUNITY COLLEGE**

**and**

**UNIVERSITY OF DELAWARE**

**PROGRAM ARTICULATION AGREEMENT**

**Associate in Applied Science Degree  
Civil Engineering Technology  
Civil Transfer Option**

**Bachelor Degree  
Civil Engineering**

**FILENAMES: UD-DTCC\_CTO\_07-05-2021\_Final\_Rev\_1.doc**

**2021 through 2026**

# **Associate-Baccalaureate Program Articulation Agreement**

**between**

**Delaware Technical and Community College  
and  
University of Delaware**

**for**

**Civil Engineering Technology, Civil Transfer Option  
and  
Civil Engineering**

## **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's degree and a bachelor's 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 curriculums delineated in this document for the transfer of DTCC's Associate in Applied Science degree program in Civil Engineering Technology, Civil Transfer Option and UD's Bachelor of Civil Engineering degree program.
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 in Applied Science degree with a cumulative grade point average of 3.0 or higher and have earned a grade of B or better in MAT 282: Calculus II and CHM 150: Chemical Principles I will automatically be accepted into the baccalaureate program at University of Delaware. 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, 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 program may not be admissible via the provisions of this articulation agreement. In such cases, students will be considered based on their entire academic history and not guaranteed admission to the Bachelor's 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 and instead 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's 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 Civil Engineering degree program.
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 Delaware Technical and Community College student who enrolls in the Civil Engineering Technology, Civil Transfer Option Associate in Applied Science 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's Completion

ASSOCIATE DEGREE PROGRAM A.A.S. CIVIL ENGINEERING TECHNOLOGY, CIVIL TRANSFER OPTION DELAWARE TECHNICAL & COMMUNITY COLLEGE		BACHELOR'S DEGREE COURSE MATCH OR POTENTIAL COURSE MATCH		BACHELOR'S DEGREE COMPLETION BACHELOR OF CIVIL ENGINEERING	
Course No./Name First Semester (fall)	CR	Course No./Name	CR	Course No./Name Sixth Semester (summer)	CR
CET 125 Civil and Environmental Drafting and Design	3	EGGG 101 Introduction to Engineering EGGG 166DE Departmental Elective	2 1	CISC 106 Computer Science for Engineers	3
MAT 281 Calculus I	4	MATH 241 Analytic Geometry and Calculus A	4		3
ENG 101 Critical Thinking and Academic Writing*	3	ENGL 166DE Departmental Elective (ENG 101 + ENG 102 = ENGL 110 Exemption)	3	Course No./Name Seventh Semester (fall)	
Social Science Elective (Choose either HIS 111 or HIS 112)	3	Breadth Requirement Elective #1 Counts as HIST 205 or HIST 206, respectively, in the History and Cultural Change category.	3	CIEG 301 Structural Analysis	4
SSC 100 First Year Seminar	1	UNIV 166DE Departmental Elective	1	CIEG 320 Soil Mechanics	3
	14		19	CIEG 323 Soil Mechanics Lab	1
Second Semester (spring)		Course No./Name		CIEG 305 Fluid Mechanics	3
CET 144 Surveying Principles	4	LARC 222 Introduction to Surveying (cross-listed with CIEG 222 which counts as Technical Elective #1) LARC 266DE Departmental Elective	3 1	CIEG 306 Fluid Mechanics Lab	1
MAT 282 Calculus II	4	MATH 242 Analytic Geometry and Calculus B	4	CIEG 331 Environmental Engineering	3
PHY 281 Physics I w/Calculus	4	PHYS 207 Fundamentals of Physics I	4		15
ENG 102 Composition and Research*	3	ENGL 166DE Departmental Elective (ENG 101 + ENG 102 = ENGL 110 Exemption)	3	Course No./Name Eighth Semester (spring)	
XXX XXX Social Science Elective (Choose from ECO 111, ECO 122, POL 111, PSY 121 or SOC 111)	3	XXXX XXX Breadth Requirement Elective #2 Counts as ECON 103, ECON 101, POSC 150, PSYC 100, or SOCI 201, respectively, in the Social and Behavioral Science category.	3	XXXX XXX Technical Elective #2	3
	18		18	CIEG 321 Geotechnical Engineering	3

			CIEG 486 Engineering Project Management	3
			CIEG 351 Transportation Engineering	3
			CIEG 451 Transportation Engineering Lab	1
			CIEG 213 Civil Engineering Materials Laboratory	1
			CIEG 315 Probability and Statistics for Engineers	3
				<b>17</b>

\*Beginning Fall 2021, ENG 101 will be renamed Composition I and beginning Spring 2022, ENG 102 will be renamed Composition II.

ASSOCIATE DEGREE PROGRAM A.A.S. CIVIL ENGINEERING TECHNOLOGY, CIVIL TRANSFER OPTION DELAWARE TECHNICAL & COMMUNITY COLLEGE		BACHELOR'S DEGREE COURSE MATCH OR POTENTIAL COURSE MATCH		BACHELOR'S DEGREE COMPLETION BACHELOR OF CIVIL ENGINEERING	
Course No./Name Third Semester (Summer)	CR	Course No./Name	CR	Course No./Name Ninth Semester (fall)	
CHM 150 Chemical Principles I	5	CHEM 103 General Chemistry CHEM 166DE Departmental Elective	4 1	CIEG 461 Senior Design Project (DLE and Capstone)	2
	5		5	XXXX XXX Technical Elective #3	3
				XXXX XXX Technical Elective #4	3
				CIEG 402 Introduction to Sustainability	3
				XXXX XXX Breadth Requirement Elective #3	3
				XXXX XXX Breadth Requirement Elective #4	3
					17
Fourth Semester (fall)	CR	Course No./Name	CR	Course No./Name Tenth Semester (spring)	
MAT 283 Calculus III	4	MATH 243 Analytic Geometry and Calculus C	4	CIEG 461 Senior Design Project	2
CET 258 Statics w/Calculus	3	CIEG 211 Statics	3	CIEG 411 Communication for Stakeholders in Engineering	3
BIO 150 Biology I	4	BISC 207 Introductory Biology I (Science Elective with Lab)	4	XXXX XXX Technical Elective #5	3
CET 240 Hydraulics and Hydrology	4	CIEG 266DE Departmental Elective	4	XXXX XXX Breadth Requirement Elective #5	3
ENG 124 Oral Communication	3	COMM 212 Public Speaking & Professional Presentation	3	XXXX XXX Technical Elective #6	3
	18		18		14
Fifth Semester (spring)		Course No./Name			
CET 220 Civil CAD Basics	1	CIEG 266DE Departmental Elective	1		
CET 270 Solid Mechanics w/Calculus	3	CIEG 212 Solid Mechanics	3		
MET 264 Material Science	4	MSEG 302 Materials Science for Engineers (UD will sub for CIEG 214 Construction Materials) MSEG 366DE Departmental Elective	3 1		

MAT 292 Engineering Math I	3	MATH 351 Engineering Math I	3		
CET 244 Principles of Site Development	4	CIEG 161 Freshman Design	3		
		CIEG 166DE Departmental Elective	1		
ENG 122 Technical Writing and Communication	3	ENGL 410 Technical Writing	3		
	<b>18</b>		<b>18</b>		
<b>TOTAL</b>	<b>73</b>	<b>TOTAL</b>	<b>73</b>	<b>TOTAL</b>	<b>66</b>



# CONNECTED DEGREE CURRICULUM

## Suggested Course Sequence

ASSOCIATE DEGREE CIVIL ENGINEERING TECHNOLOGY, CIVIL TRANSFER OPTION DELAWARE TECHNICAL AND COMMUNITY COLLEGE				BACHELOR'S DEGREE CIVIL ENGINEERING UNIVERSITY OF DELAWARE			
Semester 1 (Fall)			CR	Semester 6 (Summer)			CR
CET	125	Civil and Environmental Drafting and Design	3	CISC	106	Computer Science	3
MAT	281	Calculus I	4				
ENG	101	Critical Thinking and Academic Writing	3				
XXX	XXX	Social Science Elective *	3				
SSC	100	First Year Seminar	1				
			14				3
Semester 2 (Spring)				Semester 7 (Fall)			
CET	144	Surveying Principles	4	CIEG	301	Structural Analysis	4
MAT	282	Calculus II	4	CIEG	320	Soil Mechanics	3
PHY	281	Physics I with Calculus	4	CIEG	323	Soil Mechanics Lab	1
ENG	102	Composition and Research	3	CIEG	305	Fluid Mechanics	3
XXX	XXX	Social Science Elective 2**	3	CIEG	306	Fluid Mechanics Lab	1
				CIEG	331	Environmental Engineering	3
			18				15
Semester 3 (Summer)				Semester 8 (Spring)			
CHM	150	Chemical Principles I	5	XXXX	XXX	Technical Elective #2	3
				CIEG	321	Geotechnical Engineering	3
				CIEG	486	Engineering Project Management	3
				CIEG	351	Transportation Engineering	3
				CIEG	451	Transportation Engineering Lab	1
				CIEG	315	Probability and Statistics for Engineers	3
				CIEG	213	Civil Engineering Materials Laboratory	1
			5				17
Semester 4 (Fall)				Semester 9 (Fall)			
MAT	283	Calculus III	4	CIEG	461	Senior Design (DLE and Capstone)	2
CET	258	Statics w/Calculus	3	XXXX	XXX	Technical Elective #3	3
BIO	150	Biology I	4	XXXX	XXX	Technical Elective #4	3
CET	240	Hydraulics and Hydrology	4	CIEG	402	Introduction to Sustainability	3
ENG	124	Oral Communications	3	XXXX	XXX	Breadth Requirement Elective #3	3
				XXXX	XXX	Breadth Requirement Elective #4	3
			18				17
Semester 5 (Spring)				Semester 10 (Spring)			
CET	220	Civil CAD Basics	1	CIEG	461	Senior Design	2
CET	270	Solid Mechanics w/Calculus	3	CIEG	411	Communication for Stakeholders in Engineering	3
MET	264	Material Science	4	XXXX	XXX	Technical Elective #5	3
MAT	292	Engineering Math I	3	XXXX	XXX	Breadth Requirement Elective #5	3
CET	244	Principles of Site Development	4	XXXX	XXX	Technical Elective #6	3
ENG	122	Technical Writing & Communication	3				
			18				14
<b>Total Credits</b>			<b>73</b>				<b>66</b>
<ul style="list-style-type: none"> <li>The Bachelor of Civil Engineering requires a minimum of 126 credits.</li> <li>Course sequencing may vary by semester. See your advisor.</li> <li>Beginning Fall 2021, ENG 101 will be renamed Composition I and beginning Spring 2022, ENG 102 will be renamed Composition II.</li> </ul> <p>* Choose either HIS 111 or HIS 112</p> <p>** Choose one from: ECO 111, ECO 122, POL 111, PSY 121, PSY 127, SOC 111</p>							

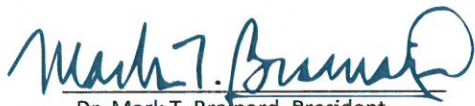
## APPROVAL

This program articulation agreement is between Delaware Technical and Community College's Associate of Applied Science Degree in Civil Engineering Technology, Civil Transfer Option and University of Delaware's Bachelor of Civil Engineering.


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. Bralhard, President

9/9/2021  
Date

  
Justina M. Thomas (Sep 14, 2021 11:58 EDT)  
Justina M. Thomas, Vice President  
for Academic Affairs


Sep 14, 2021  
Date

  
Diane M. Calloway (Sep 9, 2021 08:01 EDT)  
Diane Calloway, Department Chair,  
Civil Engineering Technologies,  
Owens Campus

Sep 9, 2021  
Date

  
Dr. Robin Morgan, Provost

9/28/2021  
Date

  
Dr. Levi T. Thompson, Dean, College  
of Engineering, and Elizabeth Inez  
Kelley Professor, Chemical &  
Biomolecular Engineering

9/24/2021  
Date

  
Dr. Jack Puleo, Professor and Chair,  
Civil and Environmental  
Engineering

9/4/2021  
Date