

Appendix A: Transfer Course Equivalencies

Effective dates: *October 1, 2020* through *September 30, 2023*

	SUNY Erie Community College A.S. – Engineering Science			SUNY Canton B. Tech– Civil & Environmental Engineering Technology (2488)		
Semester	Course #	Course Name	Cr	Course #	Course Name	Cr
1				CONS 101	Elementary Surveying	4
	ES 138	Engineering Concepts	1	ENGS 101	Introduction to Engineering	2
	MT 283	Calculus and Analytic Geometry III (course substitution)	4	MATH 123	Pre-Calculus ¹	4
	PH 280 & 281	Physics for Science & Engineering I & Lab	4	PHYS 121/131 & PHYS 125/135	College/Univ. Physics I & Lab	4
	ES 177 OR 178	Intro to 3D Modeling Using Creo Parametric OR Civil Engineering CAD	2	SOET 116	Intro to Computer Aided Drafting & Design	2
Semester	Course #	Course Name	Cr	Course #	Course Name	Cr
2	ES 207	Statics	3	CONS 172	Technical Statics ²	3
	EN 100	Composition I: Rhetorical Strategies	3	ENGL 101	Composition and the Spoken Word	3
	MAT 181	Calculus and Analytic Geometry I	4	MATH 161	Calculus ¹	4
	PH 282 & 283	Physics for Science & Engineering II & Lab	4	PHYS 122/132 & PHYS 126/136	College/Univ. Physics II & Lab	4
		General Education Elective			GER Course (3, 4, 5, 6, 7, 8, 9) ³	3
Semester	Course #	Course Name	Cr	Course #	Course Name	Cr
3	CH 180 & 181	University Chemistry I & Lab (GER 2)	4	CHEM 150	College Chemistry and Lab (GER 2)	4
				CONS 203	Advanced Surveying	3
	ES 209	Mechanics of Materials	3	CONS 272	Strength of Materials for Tech ²	3
				CONS 280	Civil Engineering Materials	3
	MT 182	Calculus and Analytic Geometry II	4	MATH 162	Calculus II ¹	4
			MECH 221	Engineering Materials Lab	1	
Semester	Course #	Course Name	Cr	Course #	Course Name	Cr
4				CONS 216	Soils in Construction ⁴	4
	ES 230	Engineering Problem Solving Using MATLAB	3	ENGS 102	Programming for Engineers	2
	MT 284	Introduction to Differential Equations	4	MATH 364	Differential Equations ¹	4
		General Elective	3		GER Course (3, 4, 5, 6, 7, 8, 9) ³	3
	ES 204	Thermodynamics (L/L course credit only)	3		Program Elective ^{6(UD)+7(CHEM 155)}	3
Semester	Course #	Course Name	Cr	Course #	Course Name	Cr
5				CONS 336	Structural Analysis	3
		General Education Elective	3		GER Course (3, 4, 5, 6, 7, 8, 9) ³	3
	ES 200	Electrical Networks (L/L course credit only)	4		Program Elective ^{6(LD/UD)+7(UD)}	3
					CONS Course ⁵	4
					CONS Course ⁵	4
Semester	Course #	Course Name	Cr	Course #	Course Name	Cr
6				CONS 274	Construction Management	3
				SOET 250	Intro to 3D CADD and BIM	2
				SOET 370	Engineering Economics	3
					CONS Course ⁵	3
	ES 208	Dynamics (L/L course credit only)	3		Program Elective ^{6(UD)+7(UD)}	3
Semester	Course #	Course Name	Cr	Course #	Course Name	Cr
7				SOET 377	Engineering Ethics	1
					CONS Course ⁵	4
					GER Course (3, 4, 5, 6, 7, 8, 9) ³	3
					Program Elective ^{6(UD)+7(UD)}	3
					Program Elective ^{6 only (UD)}	3
Semester	Course #	Course Name	Cr	Course #	Course Name	Cr
8				CONS 477	Capstone Project	3
				SOET 348	Engineering Safety	1
					CONS Course ⁵	4
					Program Elective ^{6(UD)+7(UD)}	3
					Program Elective ^{6(UD)+7(UD)}	3
	Accepted Transfer Credit Total		59	SUNY Program Credit Total		125

Appendix A: Transfer Course Equivalencies

Transfer credits for **SUNY Erie Community College** program requirements will be accepted as follows, however do not serve to fulfill requirements of SUNY Canton's **Civil and Environmental Engineering Technology, B.Tech** program:

SUNY Erie Community College			SUNY Canton		
Course #	Course Name	Cr	Course #	Course Name	Cr
ES 139	Computer Skills for Engineers	1	CITA 110	Introduction to Information Technology	3

Additional Notes

¹ Students starting with Calculus I, will take Calculus I, Calculus II, Differential Equations, and a fourth math class of their choosing and with advisement.

² Students may take ENGS 201 Statics in place of CONS 172 and ENGS 203 Engineering Strength of Materials in place of CONS 272. Note that ENGS 201 and ENGS 203 may not be offered in like semesters to CONS 172 and CONS 272 and this substitution may alter program course sequencing.

³ GER = General Education Elective. Students must accomplish 7 separate GER categories: GER 3, 4, 5, 6, 7, 8, or 9. Students focusing on environmental engineering technology must take 2 300/400 level GER courses in order to reach 45 upper division credits.

⁴ Writing Intensive Course

⁵ CONS Course: Five (5) courses are required by all students in the program. These courses are: CONS 285 Engineering Geology, CONS 322 hydraulics, CONS 385 Hydrology & Hydrogeology, CONS 386 Water Quality, and CONS 387 Water & Wastewater Treatment. They are being referred to as CONS Courses because they will be offered on a rotational basis, every 2, 3, or 4 semesters depending on enrollment.

⁶ Program Elective - Focus on Structural Civil Engineering Tech.: A list of approved Program Electives is provided. Students focusing on structural civil engineering technology must also take a total of 7 program electives. At least 1 must be one of the classes marked *S (CONS 304, CONS 324, or CONS 370). Students may take additional courses designated as *S, which is highly encouraged. Students are strongly advised to take CONS 222. Students must be sure that enough 300/400 level courses are taken to fulfill the minimum requirement of 45 upper division courses. For students focusing on structural civil eng., 5 of their 6 additional program electives must be 300/400 level. In addition to CONS 222, one additional program elective could be 100/.200 level, but only with advisement. Course selection must be under advisement of and with approval of the assigned academic program advisor or program coordinator.

⁷ Program Elective - Focus on Environmental Engineering Tech.: A list of approved Program Electives is provided. Students focusing on environmental engineering technology must also take a total of 6 program electives. They must take the 2 courses marked *E (CHEM 155 College Chemistry II and BIOL 150 College Biology I) and 4 additional program electives, with strong advisement that two of these be CONS 350 and MATH 141. It's advised that CHEM 155 be taken in Semester 4 if possible, putting off the Semester 4 GER until a later semester. It's advised that BIOL 150 be taken in Semester 5 or sooner if possible. Students may take a course designated with a *S as an additional program elective. Students must be sure that enough 300/400 level courses are taken to fulfill the minimum requirement of 45 upper division courses. All 4 additional program electives must be upper division, and one upper division GER must be taken to fulfill the 45 requirement. If MATH 141 is taken a second GER must

be upper division or an additional upper division elective course must be taken. Course selection must be under advisement of and with approval of the assigned academic program advisor or program coordinator.

NOTE: Civil & Environmental Technology students must meet seven of the ten and have a total of 30 credits for the General Education Requirements. Student Learning Outcomes can be found at www.canton.edu/csoet/cet/.

Appendix A: Transfer Course Equivalencies

STUDENT ELIGIBILITY: Graduates of Associate of Science– Engineering Science: General program at SUNY Erie Community College must possess a **minimum cumulative grade point average of 2.0 on a 4.0 scale**. SUNY Canton assures acceptance for SUNY Erie Community College students who have **a cumulative GPA of 3.0 or better**. Students are encouraged to apply during their last semester at SUNY Erie Community College.

Required CONS Courses

Course #	Course Name	Credit
CONS 285	Engineering Geology	4
CONS 322	Hydraulics	4
CONS 385	Hydrology and Hydrogeology	4
CONS 386	Water Quality	4
CONS 387	Water and Wastewater Treatment	3

Approved Program Electives

Course #	Course Name	Credit
*S - Students on Structural Path Must Take At Least 1		
CONS 304 *S	Reinforced Concrete Design	3
CONS 324 *S	Structural Steel Design	3
CONS 370 *S	Timber Design	3
*E - Students on Environmental Path Must Take Both		
BIOL 150 *E	College Biology I	4
CHEM 155 *E	College Chemistry II	4
Other Program Electives		
CONS 222	Construction Estimating	2
CONS 316	Foundation Design	3
CONS 338	Advanced Mechanics of Materials	3
CONS 350	Introduction to GIS	3
CONS 366	Structural Steel Detailing	3
CONS 368	Building Electrical and Mechanical Systems	3
CONS 372	Highways and Transportation	3
CONS 375	Structural Engineering Design	3
CONS 472	Advanced Highway Design	3
CONS 432	Civil Drafting and Design	3
CONS 226	Bridge Building	1
CONS 485	Solid Waste Management	3
CONS 486	Soil and Groundwater Remediation	3
CONS 487	Water Resources Management	3

Approved Program Electives Continued

Course #	Course Name	Credit
Other Program Electives Continued		
AREA 110	Intro to Alternative Energy	3
AREA 320	Exp. and Meas. I	3
AREA 322	Passive Solar Building	3
AREA 340	Geothermal Energy	3
AREA 370	Exp. and Meas. II	3
BIOL 155	College Biology II	4
BIOL 209	Microbiology	4
CHEM 301	Organic Chemistry	4
CHEM 302	Organic Chemistry II	4
EADM 201	Fund. Of Emergency Manag.	3
ESCI 320	Weather, Climate, and Climate Change	3
LEST 388	Environmental Law	3
MATH 141	Statistics	3
MATH 341	Statistics II	3
MECH 220	Engineering Materials lecture	3
MECH 340	Thermodynamics	3
MECH 341	Intermediate Fluid Mechanics	3
SOET 352	Advanced REVIT and BIM Management	3
SOET 430	Systems Analysis	3
MECH XXX	Other Mech. Tech. approved course	3 or 4
AREA XXX	Other ARES approved course	3 or 4
ELEC XXX	Other Elec. Tech. approved course	3 or 4

Program Contact

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 REV JUNE 2020

APPROVALS

SUNY Erie Community College:

No signatures required.

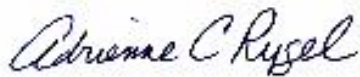
SUNY Canton:

A handwritten signature in black ink that reads "Michael G. Newtown".

10/27/2020

Michael Newtown, P.E.
Dean, Canino School of Engineering Technology

Date

A handwritten signature in black ink that reads "Adrienne C. Rygel".

10/27/2020

Dr. Adrienne Rygel
Department Chair, Civil & Environmental
Technology

Date