

SUNY Canton Civil & Environmental Engineering Technology BT 2488			Fall 2019		
Program Coordinator: Adrienne Rygel Advisors: Adrienne Rygel, Joseph Reilly, Yilei Shi					
1 st Semester			Credit	Term	Grade
ENGS 101	Introduction to Engineering		2		
SOET 116	Intro to Computer Aided Dr+D		2		
CONS 101	Elementary Surveying		4		
MATH 123	Pre-Calculus Algebra		4		
PHYS 121/131	College Physics I or University Physics I		3		
PHY 125/135	College Physics I Lab or University Physics I Lab		1		
2nd Semester			16		
CONS 172	Technical Statics ²		3		
ENGL 101	Composition and the Spoken Word		3		
	GER (3,4,5,6,7, 8, or 9) ³		3		
MATH 161	Calculus I ¹		4		
PHYS 122/132	College Physics II or University Physics II		3		
PHYS 126/136	College Physics II Lab or University Physics II Lab		1		
3rd Semester			17		
CONS 203	Advanced Surveying		3		
CONS 272	Strength of Materials for Tech ²		3		
CONS 280	Civil Engineering Materials		3		
MECH 221	Engineering Materials Lab		1		
MATH 162	Calculus II ¹		4		
CHEM 150	College Chemistry I		4		
4th Semester			18		
ENGS 102	Programming for Engineers		2		
CONS 216	Soils in Construction WI		4		
Math 364	Differential Equations ¹		4		
	GER (3,4,5,6,7,8,9) ³		3		
	Program Elective ^{6(UD) + 7 (CHEM 155)}		3		
5th Semester			16		
CONS 336	Structural Analysis		3		
	CONS Course ⁵		4		
	CONS Course ⁵		4		
	Program Elective ^{6(LD/UD) + 7 (UD)}		3		
	GER (3,4,5,6,7,8,9) ³		3		
6th Semester			17		
SOET 370	Engineering Economics		3		
CONS 274	Construction Management		3		
SOET 250	Intro to 3D CADD And BIM		2		
	CONS Course ⁵		3		
	Program Elective ^{6(UD) + 7 (UD)}		3		
7th Semester			14		
SOET 377	Engineering Ethics		1		
	GER (3,4,5,6,7,8,9) ^{3 (UD for Env. Eng. path)}		3		
	CONS Course ⁵		4		
	Program Elective ^{6(UD) + 7 (UD)}		3		
	Program Elective ^{6 only (LD)}		2		
8th Semester			13		
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		
			14		
Total Required Program Credits			125		

Graduation Requirements: Total Semester Credit Hours – 125

Minimum G.P.A.

Student _____

Certified for Graduation: Yes No

ID # _____

Certified by: _____

Class of _____ G.P.A. 1 _____ 2 _____ 3 _____ 4 _____ Total G.P.A. _____ Total Earned Credits _____

¹ If a student enters the program at Calculus I (MATH 161) they can replace MATH 123 with a different math class 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.

This will alter program sequence.

³ GER = General Education Elective: Students must accomplish 7 separate GER categories: GER 3, 4, 5, 6, 7, 8, or 9 and 45 Upper Division Credits.⁵ CONS Course: Five (5) courses are required by all students in the program. 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. See list below⁶ Program Elective - Focus on Structural Civil Engineering Tech: A list of approved Program Electives is provided below. Students wanting to focus more on structural civil engineering technology must 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. For students focusing on structural civil eng., 5 of their 6 additional program electives must be 300/400 level.⁷ Program Elective - Focus on Environmental Engineering Tech: A list of approved Program Electives is provided below. Students wanting to focus on environmental engineering technology must take a total of 6 Program Electives. They must take the 2 courses marked with *E (CHEM 155 and BIOL 150) and 4 additional program electives, with strong advisement that two of these be CONS 350 and MATH 141. Students may take a course designated with a *S as an additional program elective. If MATH 141 is taken a second GER must be upper division or an additional upper division elective course must be taken.**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 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 I	4
CHEM 302	Organic Chemistry II	4
EADM 201	Fund. Of Emergency Manag.	3
ESCI 320	Weather, Climate, & 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 Mgmt	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

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 Elect. and Mechanical Sys.	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