

SUNY Canton Civil & Environmental Engineering Technology BT 2488			Fall 2017		
Program Coordinator: Adrienne Rygel Advisors: Adrienne Rygel, Joseph Reilly, Yilei Shi					
1 <sup>st</sup> 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		
<b>2<sup>nd</sup> Semester</b>			<b>16</b>		
CONS 172	Technical Statics <sup>2</sup>		3		
ENGL 101	Composition and the Spoken Word		3		
	GER (3,4,5,6,7, 8, or 9) <sup>3</sup>		3		
MATH 161	Calculus I <sup>1</sup>		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		
<b>3<sup>rd</sup> Semester</b>			<b>17</b>		
CONS 203	Advanced Surveying		3		
CONS 272	Strength of Materials for Tech <sup>2</sup>		3		
CONS 280	Civil Engineering Materials		3		
MECH 221	Engineering Materials Lab		1		
MATH 162	Calculus II <sup>1</sup>		4		
CHEM 150	College Chemistry I		4		
<b>4<sup>th</sup> Semester</b>			<b>18</b>		
ENGS 102	Programming for Engineers		2		
CONS 216	Soils in Construction <sup>4</sup>		4		
MATH 364	Differential Equations <sup>1</sup>		4		
	GER (3,4,5,6,7,8,9) <sup>3</sup>		3		
	Program Elective <sup>6(UD) + 7 (CHEM 155)</sup>		3		
<b>5<sup>th</sup> Semester</b>			<b>16</b>		
CONS 336	Structural Analysis		3		
	CONS Course <sup>5</sup>		4		
	CONS Course <sup>5</sup>		4		
	Program Elective <sup>6(LD/UD) + 7 (UD)</sup>		3		
	GER (3,4,5,6,7,8,9) <sup>3</sup>		3		
<b>6<sup>th</sup> Semester</b>			<b>17</b>		
SOET 370	Engineering Economics		3		
CONS 274	Construction Management		3		
SOET 250	Intro to 3D CADD And BIM		2		
	CONS Course <sup>5</sup>		3		
	Program Elective <sup>6(UD) + 7 (UD)</sup>		3		
<b>7<sup>th</sup> Semester</b>			<b>14</b>		
SOET 377	Engineering Ethics		1		
	GER (3,4,5,6,7,8,9) <sup>3</sup> (UD for Env. Eng. path)		3		
	CONS Course <sup>5</sup>		4		
	Program Elective <sup>6(UD) + 7 (UD)</sup>		3		
	Program Elective <sup>6 only (LD)</sup>		2		
<b>8<sup>th</sup> Semester</b>			<b>13</b>		
CONS 477	Capstone Project		3		
SOET 348	Engineering Safety		1		
	CONS Course <sup>5</sup>		4		
	Program Elective <sup>6(UD) + 7 (UD)</sup>		3		
	Program Elective <sup>6(UD) + 7 (UD)</sup>		3		
			<b>14</b>		
<b>Total Required Program Credits</b>			<b>125</b>		

Graduation Requirements: Total Semester Credit Hours – 125

Minimum G.P.A. 2.0

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 \_\_\_\_\_

<sup>1</sup> If a student enters the program at Calculus I (MATH 161) they can replace MATH 123 with a different math class with advisement.<sup>2</sup> 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.<sup>3</sup> 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.<sup>4</sup> Writing Intensive Course<sup>5</sup> 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 below<sup>6</sup> 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.<sup>7</sup> 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**

Course #	Course Name	Credit
<b>*S - Students on Structural Path Must Take At Least 1</b>		
CONS 304 *S	Reinforced Concrete Design	3
CONS 324 *S	Structural Steel Design	3
CONS 370 *S	Timber Design	3
<b>*E - Students on Environmental Path Must Take Both</b>		
BIOL 150 *E	College Biology I	4
CHEM 155 *E	College Chemistry II	4
<b>Other Program Electives</b>		
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

**Approved Program Electives Continued**

Course #	Course Name	Credit
<b>Other Program Electives Continued</b>		
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

