

| SUNY Canton Civil & Environmental Engineering Technology BT 2488 | | | Fall 2022 | | |
|--|---|--|-----------|------|-------|
| Department Chair: Adrienne Rygel Advisors: Robert Burnett, Adrienne Rygel, Aksel Seitllari | | | | | |
| 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 | | |
| | | | 16 | | |
| 2 nd Semester | | | | | |
| 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 | | |
| | | | 17 | | |
| 3 rd Semester | | | | | |
| CONS 203 | Advanced Surveying | | 3 | | |
| CONS 272 | Strength of Materials for Tech ² | | 3 | | |
| CONS 280 | Civil Engineering Materials | | 3 | | |
| CONS 275 | Strength of Materials Lab | | 1 | | |
| MATH 162 | Calculus II ¹ | | 4 | | |
| CHEM 150 | College Chemistry I | | 4 | | |
| | | | 18 | | |
| 4 th Semester | | | | | |
| CONS 216 | Soils in Construction | | 4 | | |
| Math 364 | Differential Equations ¹ | | 4 | | |
| | GER (3,4,5,6,7,8,9) ³ | | 3 | | |
| | CONS 322 Hydraulics | | 4 | | |
| | | | 15 | | |
| 5 th Semester | | | | | |
| CONS 336 | Structural Analysis | | 3 | | |
| SOET 250 | Intro to 3D CADD and BIM | | 2 | | |
| | CONS Course ⁴ (CONS 386 or CONS 385) | | 4 | | |
| | Program Elective ⁶ | | 3 | | |
| | GER (3,4,5,6,7,8,9) ³ | | 3 | | |
| | | | 15 | | |

| 6 th Semester | | | | |
|---------------------------------------|--|------------|--|--|
| ECON 370 | Engineering Economics | 3 | | |
| CONS 274 | Construction Management | 3 | | |
| | CONS Course ⁴ (CONS 387 or CIVL 384) | 3 | | |
| CIVL 339 | Structural Analysis Lab | 1 | | |
| | Program Elective ⁶ | 3 | | |
| | Design Elective ⁵ | 3 | | |
| | | 16 | | |
| 7 th Semester | | | | |
| SOET 377 | Engineering Ethics | 1 | | |
| | GER (3,4,5,6,7,8,9) ³ (UD for Env. Eng. path) | 3 | | |
| | CONS Course ⁴ (CONS 386 or CONS 385) | 4 | | |
| | Program Elective ⁶ | 3 | | |
| | Program Elective ⁶ | 2 | | |
| | | 13 | | |
| 8 th Semester | | | | |
| CONS 477 | Capstone Project | 3 | | |
| SOET 348 | Engineering Safety | 1 | | |
| | CONS Course ⁴ (CIVL 384 or CONS 387) | 4 | | |
| | Program Elective ⁶ | 3 | | |
| | Program Elective ⁶ | 3 | | |
| | | 14 | | |
| Total Required Program Credits | | 124 | | |

Graduation Requirements: Total Semester Credit Hours – 124

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 _____

¹ **MATH:** If a student enters the program at Calculus I, they will take Calculus I, Calculus II, Differential Equations and a fourth math class of their choosing and with advisement.

² **Structural Foundation Classes:** 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. Depending on Program Elective selection students may need to take one or more 300/400 level GER courses in order to reach 45 upper division credits.

⁴ **CONS Course:** Four (4) courses are required by all students in the program. These courses are: CIVL 384 Engineering Geology, 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 other year, depending on enrollment.

⁵ **Design Elective:** All students must take at least one civil structural design course (CONS 304, CONS 324, or CONS 370).

⁶ **Program Electives:** A list of approved Program Electives is provided below. Students wanting to focus more on structural civil engineering technology must take a total of 6 Program Electives and are strongly advised to take CONS 222. Students wanting to focus on environmental engineering technology must take a total of 5 Program Electives, two of which must be CHEM 155 and BIOL 150, and they are strongly advised to take CONS 350 and MATH 141. It's advised that CHEM 155 be taken in Semester 4, if possible and that BIOL 150 be taken in Semester 5 or sooner if possible. Students must be sure that enough 300/400 level courses are taken to fulfill the minimum requirement of 45 upper division courses. Students focusing on environmental engineering will likely have to take a 300-/400-level GER. Course selection must be under advisement of and with approval of the assigned academic program advisor or department chair.

Approved Program Electives

CIVL 381, CIVL 480, CIVL 3XX, CIVL 4XX, CMGT 200, CMGT 300, CMGT 301, CMGT 304, CMGT 305, CMGT 308, CMGT 322, CMGT 323, CMGT 389, CMGT 403, CMGT 406, CMGT 410, CONS 111, CONS 112, CONS 222, CONS 226, CONS 304, CONS 316, CONS 324, CONS 338, CONS 350, CONS 366, CONS 368, CONS 370, CONS 372, CONS 375, CONS 432, CONS 472, CONS 485, CONS 486, CONS 487, CONS 3XX, CONS 4XX, AREA 110, AREA 210, AREA 310, AREA 320, AREA 322, AREA 324, AREA 340, AREA 370, AREA 424, CHEM 155, CHEM 301, CHEM 302, BIOL 150, BIOL 209, EADM 201, ENGS 102, SOET 314, SOET 352, SOET 353, SOET 374, SOET 400, SOET/BSAD 430, LEST 388, MATH 141, MATH 341, MATH 351, MATH 361, MATH 371, MATH 401, MATH 461, MECH 301, MECH 341, MECH 342