



Program Sheet for Major: **Civil Engineering**

Effective Fall 2013, Degree: Bachelor of Science

**General Education**

**STUDY AREAS:**

**I. Arts and Humanities (9 credits)**

	Crs
English Literature (200+ Level)	3
English Literature or PHIL or Fine Arts	3
PHIL or Fine Arts	3

**II. Social Sciences (6 credits)**

	Crs
History	3
ECON - ET 399-Engineering Economy**	3

**III. Behavioral Sciences (3 credits)**

	Crs
Anthropology or Psychology or Sociology	3

**IV. Natural Sciences (8 credits)**

	Crs
PHYS 125-Univ. Physics I	4
PHYS 126-Univ. Physics II	4

**SKILL AREAS:**

**I. Communication Skills (6 credits)**

	Crs
ENG 110 - Freshman Composition*	3
ENGR 290 - Engr. Tech. Writing & Presentation	3

**II. Mathematics (6 or 8 credits)**

	Crs
MATH 152-Calculus I*	4
MATH 221-Calculus II	4

**III.a Foreign Language (0-6 credits)**

	Crs
Required for students who have not completed 3 years in one language at HS level, or passed an exam with demonstrated foreign language equivalent, or demonstrated native proficiency.	0 - 3
	0 - 3

**III.b International (6 credits)**

	Crs
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**IV. University Requirements (2-3 credits)**

	Crs
PE 144-Fitness/Wellness (or ENGR 150 Transfer Stud.)	2 - 3

**Major Requirements**

		Crs	Sem.	
			F	S
ENGR 150	Introduction to Engineering	3	X	X
ENGR 251	Engr. Mechanics I (Statics)	3	X	X
ENGR 252	Engr. Mechanics II (Dynamics)	3	X	X
ENGR 357	Mechanics of Materials	3	X	X
ME 258	Engineering Thermodynamics	3	X	X
ME 354	Fluid Mechanics	3	X	
CE 253	Intro. to Engr. Surveying	3	X	
CE 301	CE Fundamental Computations	1	X	X
CE 458	Intro. GPS for Engr. (or CE 357)	3		X
CE 375	Hydraulic Engineering	3		X
CE 397	Structural Analysis I	3	X	X
CE 407	Structural Analysis II	3	X	
CE 451	Soil Mechanics /w Lab.	3		X
CE 452	Foundation Engineering	2		X
CE 454	Intro. To Transportation Engineering	3	X	
CE 470	Structural Steel Design	3	X	
CE 471	Reinforced Concrete Structures	3		X
CE 475	Hydrology and Storm Drainage	3	X	
CE 476	Environmental Engineering	3		X
CE 497	Prof. Practice & Sr. Project Research	2	X	
CE 498	Senior Design Project (Capstone)	2		X

**Additional Requirements**

	Crs	F	S
CHEM 161/2	General Chemistry I with Lab	4	X X
ETM 356	Materials Analysis (or CM 356)	3	X X
ENGR 240	Computational Math. for Engineering	3	X X
CE 222	CAD Applications in CE** (or ETC 122)	2	X X
MATH 226	Linear Algebra and Probability for Engr.	4	X X
MATH 355	Intro. to Differential Equations	4	X X
BIO/ESCI	Additional Science Elective****	4	X X
	Directed Technical Electives (2 courses)	6	X X
<b>Total Credits</b>		<b>130 to 137</b>	

Recommended Directed Technical Electives:  
 CE 472, CE 458, CE 402, ET 495, ENGR 490,  
 ETM 467, CHEM 200/201, CHEM 210/211, MATH 222

\* Placement examination may be required before enrolling in English and Mathematics, \*\* The recommended course  
 \*\*\* Courses with designator [I] in course description fulfill the General Education requirement and the International component.  
 \*\*\*\* BIO 121, or BMS 102 & 103, or ESCI 121 & 125; the Additional Science Elective must include a laboratory.

Admission to the Civil Engineering Program requires: eligibility to enroll in or completion of MATH 152 (Calculus I) and eligibility to enroll in or completion of ENG 110 (Freshman Composition).

A minimum grade of C- is required in all courses in the major, all additional course requirements and courses in Study Area IV, Skill Area I and Skill Area II.



Typical Course Schedule for **Civil Engineering - FY Track** Effective Fall 2013, Degree: BS  
 (For students entering with <15 transfer credits who are qualified to take MATH 152 and ENG 110 in the **first/Fall** semester)

First Year						
Fall				Spring		
ENGR 150	Introduction to Engineering		3	MATH 221	Calculus II	4
CHEM 161/2	General Chemistry I w/Lab		4	ENGR 240	Computational Math. for Engr.	3
MATH 152	Calculus I		4	PHYS 125	Calculus-based Physics I	4
ENG 110	Freshman Composition		3	CE 222	CAD Applic. in CE (or ETC 122)	2
PE 144	Fitness & Wellness		2	SA-I	Arts, Phil & Ethics. - Gen. Ed. #1	3
Semester Total Hours = 16				Semester Total Hours = 16		

Second Year						
Fall				Spring		
MATH 226	Linear Algebra & Probability		4	MATH 355	Intro. to Differential Equations	4
PHYS 126	Calculus-based Physics II		4	ESCI/BIO/BMS	Additional Science Elective****	4
ENGR 251	Engr. Mechanics I - Statics		3	ENGR 252	Engr. Mechanics II - Dynamics	3
CE 253	Intro. to Engineering Surveying		3	ENGR 357	Mechanics of Materials	3
SA-I Lit	Literature (200 level) - Gen.Ed.#2		3	ME 258	Thermodynamics	3
Semester Total Hours = 17				Semester Total Hours = 17		

Third Year						
Fall				Spring		
ME 354	Fluid Mechanics		3	CE 375	Hydraulic Engineering	3
CE 397	Structural Analysis I		3	CE 451	Soil Mechanics w/Lab	3
CE 454	Intro. to Transportation Engr.		3	CE 471	Reinforced Conc. Structures	3
ETM 356	Materials Analysis (or CM 356)		3	CE 458	Intro. GPS for Engr. (or CE 357)	3
CE 301	CE Fundamental Computations		1	ET 399	Engineering Economy (in SA II)	3
ENGR 290	Engr. Tech. Writing & Present.		3	SA-II Hist.	History - Gen. Ed. #3	3
Semester Total Hours = 16				Semester Total Hours = 18		

Fourth Year						
Fall				Spring		
CE 407	Structural Analysis II		3	CE 476	Environmental Engineering	3
CE 470	Structural Steel Design		3	CE 498	Senior Design Project (Capstone)	2
CE 475	Hydrology & Storm Drainage		3	CE 452	Foundation Engineering	2
CE 497	Prof. Practice & Sr. Proj. Res.		2	CE DTE list**	Civil Engr. Dir. Technical Elective	3
CE DTE list**	Civil Engr. Dir. Technical Elective*		3	SA-I	Fine Arts - Gen. Ed. #5	3
SA-III	Behavioral Sci. - Gen. Ed. #4		3	*** Semester Total Hours = 13		
Semester Total Hours = 17				<b>Total Program Hours = 130</b>		

\*\* Civil Engr. Dir. Technical Electives: CE 472 (3), CE 458 (3), CE 402 (1), ET 495(3), ENGR 490 (3), ETM 467 (3), CHEM 200/201 (3+1), CHEM 210/211 (3+1), MATH 222 (4)  
 \*\*\* Additional General Education (SA III.a) Foreign Language (6 credits) is required for students who have not completed 3 years in one language at HS level, or passed an exam with demonstrated foreign language equivalent, or demonstrated native proficiency.  
 \*\*\*\* BIO 121, or BMS 102 & 103, or ESCI 121 & 125; the Additional Science Elective must include a laboratory.

# CCSU, Dept. of Engineering – Civil Engineering – Program Flowchart

Effective date: 2013 Fall Semester

