

Cover Sheet: Request 13546

CE Curriculum Change - C or Better Requirement in Core Civil Engineering Courses

Info

Process	Major Curriculum Modify Ugrad/Pro
Status	Pending at PV - University Curriculum Committee (UCC)
Submitter	Robert Thieke robert.thieke@essie.ufl.edu
Created	1/27/2019 1:04:03 PM
Updated	2/15/2019 7:47:30 AM
Description of request	The current passing grade requirement in all undergraduate courses taught in the Civil and Coastal Engineering Department is D- or better. This change would add a "C or better" passing grade requirement to the following 5 core classes in the 5 civil engineering specialty areas: CEG 4011, CGN 4160, CES 3102, CWR 3201 , TTE 4004C.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	ENG - Civil and Coastal Engineering 011904000	Robert Thieke	Approved by CCE Department	1/27/2019
Civil Engineering BS Curriculum Change 2019 - C or Better in Core CE Courses.docx					1/27/2019
College	Approved	ENG - College of Engineering	Heidi Dublin	Approved by HWCOE Curriculum Committee and at HWCOE Faculty Meeting	2/12/2019
No document changes					
Associate Provost for Undergraduate Affairs	Approved	PV - APUG Review	Casey Griffith		2/15/2019
No document changes					
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			2/15/2019
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					
Academic Assessment Committee Notified					
No document changes					
College Notified					
No document changes					

Major|Modify_Curriculum for request 13546

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Submitter: Robert Thieke robert.thieke@essie.ufl.edu

Created: 1/27/2019 12:03:19 PM

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Responses

Major Name Civil Engineering

Major Code CE

Degree Program Name BS Civil Engineering

Undergraduate Innovation Academy Program No

Effective Term Fall

Effective Year 2019

Current Curriculum for Major Currently the required passing grades for all undergraduate classes taught within the Civil and Coastal Engineering Department is D- or better.

Proposed Curriculum Changes We propose to require C or better grades in the five core classes in the five respective specialty areas in Civil Engineering (Geotechnical, Construction, Structures, Water Resources, Transportation):

CEG 4011 Soil Mechanics

CGN 4160 Civil Engineering Practice

CES 3102 Mechanics of Engineering Structures

CWR 3201 Hydrodynamics

TTE 4004C Transportation Engineering

Pedagogical Rationale/Justification The five courses specified are the most fundamental courses in each of the five major specialty areas in Civil Engineering. To provide the best foundation for our students, we would like to mirror the approach used in the earlier engineering fundamental courses (Statics, Dynamics, Mechanics of Materials). Although students are allowed to specialize in one of the five areas enumerated, it is essential for successful civil engineering practice to have a breadth of knowledge in the field; and this change would raise the standard for that breadth of knowledge.

Impact on Enrollment, Retention, Graduation We expect the impact on students to be slight and somewhat smaller than the impact of the C or better requirement currently imposed in the prerequisite courses of Statics, Dynamics and Mechanics of Materials. For example, the number of students who did not attain the C or better grade in the five civil engineering classes in Fall 2018 was 14 out of 482 enrolled. Of these, 2 earned E grades and would have had to repeat the course anyway. An additional 12 students (2.9%) would have had to repeat a course under the proposed curriculum change.

Assessment Data Review Although CE students' pass rates on the Fundamentals of Engineering (FE) Examination continue to exceed the national average; those rates have dropped and the scores within individual Civil Engineering subject areas are not as strong as those in some fundamental engineering subject areas (Statics, Dynamics, Mechanics of Materials), which are courses that require a C or better grade to move forward.

Academic Learning Compact and Academic Assessment Plan None

To remain on track, students must complete the appropriate critical-tracking courses, which appear in bold. These courses must be completed by the terms as listed above in the Critical Tracking criteria.

This semester plan represents an example progression through the major. Actual courses and course order may be different depending on the student's academic record and scheduling availability of courses. Prerequisites still apply.

Plan of Study Grid

Semester One	Credits
CGN 2002 Introduction to Civil Engineering	1
Select one:	3
CHM 2045 General Chemistry 1 (Critical Tracking ; Gen Ed Physical Sciences) ¹	
CHM 2095 Chemistry for Engineers 1 (Critical Tracking ; Gen Ed Physical Sciences)	
CHM 2045L General Chemistry 1 Laboratory (Gen Ed Physical Sciences)	1
ENC 1101 Expository and Argumentative Writing (State Core Gen Ed Composition ; Writing Requirement: 6,000 words) ¹	3
IDS 1161 What is the Good Life (Gen Ed Humanities) ¹	3
MAC 2311 Analytic Geometry and Calculus 1 (Critical Tracking ; Gen Ed Mathematics) ¹	4
Credits	15
Semester Two	
ENC 3246 Professional Communication for Engineers (Gen Ed Composition; Writing Requirement: 6,000 words) ¹	3
MAC 2312 Analytic Geometry and Calculus 2 (Critical Tracking ; State Core Gen Ed Mathematics) ¹	4
PHY 2048 Physics with Calculus 1 (Critical Tracking ; State Core Gen Ed Physical Sciences) ¹	3
PHY 2048L Laboratory for Physics with Calculus 1 (Gen Ed Physical Sciences)	1
State Core Gen Ed Humanities ¹	3
State Core Gen Ed Social and Behavioral Sciences ¹	3
Credits	17

Semester Three

COP 2271	Computer Programming for Engineers	2
MAC 2313	Analytic Geometry and Calculus 3 (Critical Tracking ; Gen Ed Mathematics) ¹	4
PHY 2049	Physics with Calculus 2 (Critical Tracking ; Gen Ed Physical Sciences) ¹	3
PHY 2049L	Laboratory for Physics with Calculus 2	1
STA 3032	Engineering Statistics	3
	Gen Ed Social and Behavioral Sciences with International; Writing Requirement: 6,000 words	3
	Credits	16

Semester Four

CGN 2328	Technical Drawing and Visualization	3
CGN 3710	Experimentation and Instrumentation in Civil Engineering	3
EGM 2511	Engineering Mechanics: Statics ¹	3
MAP 2302	Elementary Differential Equations (Critical Tracking ; Gen Ed Mathematics) ¹	3
	Science elective	3
	Credits	15

Semester Five

CGN 3421	Computer Methods in Civil Engineering	3
CGN 4160	Civil Engineering Practice ¹	3
CGN 3510	Introduction to Sustainable Engineering	3
EGM 3400	Elements of Dynamics ¹	2
EGM 3520	Mechanics of Materials ¹	3
	Select one:	3
GIS 3072C	Geographic Information Systems	
SUR 3103C	Geomatics	
SWS 4720C	GIS in Soil and Water Science	

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[URP 4273](#) Survey of Planning Information Systems
Credits **17**

Semester Six

[CES 3102](#) Mechanics of Engineering Structures¹ 4

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[CGN 3501C](#) Civil Engineering Materials 4

[CWR 3201](#) Hydrodynamics¹ 4

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[TTE 4004C](#) Transportation Engineering¹ 4

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Credits **16**

Semester Seven

[CEG 4011](#) Soil Mechanics¹ 4

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[EGS 4034](#) Engineering Ethics and Professionalism 1

Second-Level Core courses 9

Technical elective 3

Credits **17**

Semester Eight

Second-Level Core course 3

[CGN 4806](#) Transportation-Water-Materials Design 3

or
[CGN 4910](#) or Structures-Geotechnical-Construction Comprehensive System Design 3

Design elective 3

Technical electives 6

Credits **15**

Total Credits **128**

¹ Minimum grade of C required.