

Cover Sheet: Request 10021

Civil Engineering Curriculum Change 2015

Info

| | |
|-------------|--|
| Process | Major Curriculum Modify Ugrad/Pro |
| Status | Tabled |
| Submitter | Thieke, Robert J robert.thieke@essie.ufl.edu |
| Created | 2/6/2015 12:52:29 PM |
| Updated | 12/10/2015 9:52:41 AM |
| Description | Changes to two courses currently required for the B.S. degree in Civil Engineering: 1) EML 3007 - to be replaced by CGN 3510 Sustainable Engineering (UCC1 form approved with new course number). 2) SUR 4201 to be replaced by a choice of one of three courses: SUR 3103C, SWS 4720C, URP 4273 (see documents) |

Actions

| Step | Status | Group | User | Comment | Updated |
|--|----------|--|--------------------|--|----------------------|
| Department | Approved | ENG - Civil and Coastal Engineering 011904000 | Thieke, Robert J | | 2/6/2015 |
| Added Civil Engineering Curriculum Change 2015 Existing Curriculum (After GenEd Changes).docx Deleted Civil Engineering Curriculum Change 2015 Technical Content Changes (Track Changes).docx | | | | | 2/6/2015 2/6/2015 |
| College | Approved | ENG - College of Engineering | Caple, Elizabeth | | 3/23/2015 |
| No document changes | | | | | |
| University Curriculum Committee | Comment | PV - University Curriculum Committee (UCC) | Gebhardt, Susan | Added to April agenda | 3/27/2015 |
| No document changes | | | | | |
| University Curriculum Committee | Tabled | PV - University Curriculum Committee (UCC) | Morrison, Lee Shaw | Tabled at the request of Dr. Lindner; please add to the May agenda. | 4/23/2015 |
| No document changes | | | | | |
| University Curriculum Committee | Tabled | PV - University Curriculum Committee (UCC) | Morrison, Lee Shaw | Tabled again to allow for courses included in the request to be approved in advance of approving this request. | 5/21/2015 |
| No document changes | | | | | |
| University Curriculum Committee | Tabled | PV - University Curriculum Committee (UCC) | | | 5/21/2015 |
| No document changes | | | | | |
| Office of the Registrar | | | | | |
| No document changes | | | | | |

| Step | Status | Group | User | Comment | Updated |
|---|---------------|--------------|-------------|----------------|----------------|
| Student Academic Support System | | | | | |
| No document changes | | | | | |
| Catalog | | | | | |
| No document changes | | | | | |
| Academic Assessment Committee Notified | | | | | |
| No document changes | | | | | |
| College Notified | | | | | |
| No document changes | | | | | |

**Civil Engineering B.S. Degree Curriculum Changes
2015 Catalog**

Curriculum Changes:

1) Recommended by CCE Curriculum Committee:

- a) Replace EML 3007 Thermodynamics with new course CGN 3510 Sustainable Engineering
 - UCC1 Submitted for new course and approved as CGN 3510
 - Course will also be used by Environmental Engineering BS for sustainability elective

- b) Replace SUR 4201 Route Geometrics with choice of one of 3 classes:
 - i. SUR 3103C Geomatics (Surveying)
 - ii. URP 4273 GIS in Urban and Regional Planning
 - iii. SWS 4720C GIS in Soil and Water Science

2) Approved by faculty vote on 12/12/2014

Recommended Semester Plan

To remain on track, students must complete the appropriate critical-tracking courses, which appear in bold.

| Semester 1 | Credits |
|---|----------|
| CHM 2045 General Chemistry 1 (GE-P) * or CHM 2095 Chemistry for Engineers 1 (GE-P) | 3 |
| CHM 2045L General Chemistry 1 Laboratory (GE-P) | 1 |
| IUF 1000 What is the Good Life (GE-H) | 3 |
| MAC 2311 Analytic Geometry and Calculus 1 (GE-M-T) * | 4 |
| ENC 1101 (GE-C-T, E6) | 3 |
| Total | 14 |
| Semester 2 | Credits |
| CGN 2002 Introduction to Civil Engineering | 1 |
| ENC 3246 Professional Communication for Engineers (GE-C-T, E6) * | 3 |
| MAC 2312 Analytic Geometry and Calculus 2 (GE-M-T) * | 4 |
| PHY 2048 Physics with Calculus 1 (GE-P-T) * | 3 |
| PHY 2048L Physics with Calculus 1 Laboratory (GE-P) | 1 |
| State Core GE-S (GE-S-T)** | 3 |
| Total | 15 |

| Semester 3 | Credits |
|---|---------|
| MAC 2313 Analytic Geometry and Calculus 3 (GE-M) * | 4 |
| PHY 2049 Physics with Calculus 2 (GE-P) * | 3 |
| PHY 2049L Physics with Calculus 2 Laboratory (GE-P) | 1 |
| State Core GE-H (GE-H-T, D) | 3 |
| Social and Behavioral Sciences (GE-S, N, E6) | 3 |
| Total | 14 |
| Semester 4 | Credits |
| EGM 2511 Engineering Mechanics: Statics * | 3 |
| EML 3007 Elements of Thermodynamics and Heat Transfer or EML 3100 Thermodynamics CGN 3510 Sustainable Engineering | 3 |
| MAP 2302 Elementary Differential Equations (GE-M) * | 3 |
| STA 3032 Engineering Statistics | 3 |
| Science elective: choose one BSC 2010 Integrated Principles of Biology 1 or EES 4103 / EES 4102L Applied Ecology and Environmental Biology Laboratory or GEO 3250 Climatology or GLY 2030C Environmental and Engineering Geology or MET 3503 Weather and Forecasting or SWS 4720C GIS in Soil and Water Science or URP 4273 Survey of Planning Information Systems (GIS) | 3 |
| Total | 15 |
| Semester 5 | Credits |
| CGN 3421 Computer Methods in Civil Engineering | 4 |
| CGN 3710 Experimentation and Instrumentation in Civil Engineering | 3 |
| CGN 4101 Civil Engineering Cost Analysis | 3 |

| | |
|---|----------------|
| EGM 3400 Elements of Dynamics * | 2 |
| EGM 3520 Mechanics of Materials * | 3 |
| Total | 15 |
| Semester 6 | Credits |
| CEG 4011 Soil Mechanics | 4 |
| CGN 2328 Technical Drawing and Visualization | 3 |
| CGN 3501C Civil Engineering Materials | 4 |
| CWR 3201 Hydrodynamics | 4 |
| Total | 15 |
| Semester 7 | Credits |
| CGN 4160 Civil Engineering Practice | 4 |
| CES 3102 Mechanics of Engineering Structures | 4 |
| CWR 4202 Hydraulics | 3 |
| TTE 4004C Transportation Engineering | 4 |
| Total | 15 |
| Semester 8 | Credits |
| CEG 4012 Geotechnical Engineering | 3 |
| CES 4702 Analysis and Design in Reinforced Concrete | 3 |
| EGN 4034 Professional Ethics | 1 |
| ENV 4514C Water and Wastewater Treatment | 3 |

| | |
|---|----------------|
| Technical elective (see list below) | 3 |
| Total | 13 |
| Semester 9 | Credits |
| SUR 4201 Route Geometrics and Design <u>Select one of:</u> SUR 3103C Geomatics, or URP 4273 Survey of Planning Information Systems, or SWS 4720C GIS in Soil and Water Science | 3 |
| CGN 4806 Transportation -Water- Materials Design or CGN 4910 Structures -Geotech- Construction Design | 3 |
| Design elective (see list below) | 3 |
| Technical electives (see list below) | 6 |
| Total | 15 |

* Minimum grade of C required

[Back to Top](#)

Technical Electives

| | |
|---|---|
| CCE 4015 Civil Engineering Estimating | 3 |
| CCE 4204 Construction Equipment, Methods and Management | 3 |
| CCE 4811 Construction Engineering Design | 3 |
| CEG 4104 Retaining Wall and Embankment Design | 3 |
| CEG 4111 Foundation Engineering Design | 3 |
| CES 4141 Stress Analysis | 3 |
| CES 4605 Analysis and Design in Steel | 3 |
| CES 4704 Advanced Reinforced Concrete Design | 3 |
| CES 4608 Advanced Steel Design | 3 |
| CGN 4503 Pavement Design | 3 |

| | |
|---|---|
| CGN 4600 Public Works Engineering | 3 |
| CGN 4905 Building Codes and Professional Practice | 3 |
| CWR 4114 Surface Hydrology | 3 |
| CWR 4120 Groundwater | 3 |
| CWR 4306 Urban Stormwater Systems Design | 3 |
| CWR 4542 Water Resources Engineering | 3 |
| SUR 4463 Subdivision Design | 3 |
| TTE 4106 Urban Transportation Planning | 3 |
| TTE 4201 Traffic Engineering | 3 |
| TTE 4300 Transportation Systems Analysis | 3 |
| One technical class at 3000/4000 level from outside CE department in geology, environmental engineering, building construction / architecture or urban and regional planning (or other as approved by adviser). | 3 |

Design Electives (choose at least one)

| | |
|---|---|
| CCE 4811 Construction Engineering Design | 3 |
| CEG 4104 Retaining Wall and Embankment Design | 3 |
| CEG 4111 Foundation Engineering Design | 3 |
| CES 4605 Analysis and Design in Steel | 3 |
| CES 4704 Advanced Reinforced Concrete Design | 3 |
| CES 4608 Advanced Steel Design | 3 |
| CGN 4503 Pavement Design | 3 |
| CWR 4306 Urban Stormwater Design | 3 |
| SUR 4463 Subdivision Design | 3 |

[Back to Top](#)

Recommended Semester Plan

To remain on track, students must complete the appropriate critical-tracking courses, which appear in bold.

| Semester 1 | Credits |
|---|----------|
| CHM 2045 General Chemistry 1 (GE-P) * or CHM 2095 Chemistry for Engineers 1 (GE-P) | 3 |
| CHM 2045L General Chemistry 1 Laboratory (GE-P) | 1 |
| IUF 1000 What is the Good Life (GE-H) | 3 |
| MAC 2311 Analytic Geometry and Calculus 1 (GE-M-T) * | 4 |
| ENC 1101 (GE-C-T, E6) | 3 |
| Total | 14 |
| Semester 2 | Credits |
| CGN 2002 Introduction to Civil Engineering | 1 |
| ENC 3246 Professional Communication for Engineers (GE-C-T, E6) * | 3 |
| MAC 2312 Analytic Geometry and Calculus 2 (GE-M-T) * | 4 |
| PHY 2048 Physics with Calculus 1 (GE-P-T) * | 3 |
| PHY 2048L Physics with Calculus 1 Laboratory (GE-P) | 1 |
| State Core GE-S (GE-S-T)** | 3 |
| Total | 15 |

| Semester 3 | Credits |
|---|---------|
| MAC 2313 Analytic Geometry and Calculus 3 (GE-M) * | 4 |
| PHY 2049 Physics with Calculus 2 (GE-P) * | 3 |
| PHY 2049L Physics with Calculus 2 Laboratory (GE-P) | 1 |
| State Core GE-H (GE-H-T, D) | 3 |
| Social and Behavioral Sciences (GE-S, N, E6) | 3 |
| Total | 14 |
| Semester 4 | Credits |
| EGM 2511 Engineering Mechanics: Statics * | 3 |
| EML 3007 Elements of Thermodynamics and Heat Transfer or EML 3100 Thermodynamics | 3 |
| MAP 2302 Elementary Differential Equations (GE-M) * | 3 |
| STA 3032 Engineering Statistics | 3 |
| Science elective: choose one BSC 2010 Integrated Principles of Biology 1 or EES 4103 / EES 4102L Applied Ecology and Environmental Biology Laboratory or GEO 3250 Climatology or GLY 2030C Environmental and Engineering Geology or MET 3503 Weather and Forecasting or SWS 4720C GIS in Soil and Water Science or URP 4273 Survey of Planning Information Systems (GIS) | 3 |
| Total | 15 |
| Semester 5 | Credits |
| CGN 3421 Computer Methods in Civil Engineering | 4 |
| CGN 3710 Experimentation and Instrumentation in Civil Engineering | 3 |
| CGN 4101 Civil Engineering Cost Analysis | 3 |

| | |
|---|----------------|
| EGM 3400 Elements of Dynamics * | 2 |
| EGM 3520 Mechanics of Materials * | 3 |
| Total | 15 |
| Semester 6 | Credits |
| CEG 4011 Soil Mechanics | 4 |
| CGN 2328 Technical Drawing and Visualization | 3 |
| CGN 3501C Civil Engineering Materials | 4 |
| CWR 3201 Hydrodynamics | 4 |
| Total | 15 |
| Semester 7 | Credits |
| CGN 4160 Civil Engineering Practice | 4 |
| CES 3102 Mechanics of Engineering Structures | 4 |
| CWR 4202 Hydraulics | 3 |
| TTE 4004C Transportation Engineering | 4 |
| Total | 15 |
| Semester 8 | Credits |
| CEG 4012 Geotechnical Engineering | 3 |
| CES 4702 Analysis and Design in Reinforced Concrete | 3 |
| EGN 4034 Professional Ethics | 1 |
| ENV 4514C Water and Wastewater Treatment | 3 |

| | |
|--|----------------|
| Technical elective (see list below) | 3 |
| Total | 13 |
| Semester 9 | Credits |
| SUR 4201 Route Geometrics and Design | 3 |
| CGN 4806 Transportation -Water- Materials Design or CGN 4910 Structures -Geotech- Construction Design | 3 |
| Design elective (see list below) | 3 |
| Technical electives (see list below) | 6 |
| Total | 15 |

* Minimum grade of C required

[Back to Top](#)

Technical Electives

| | |
|---|---|
| CCE 4015 Civil Engineering Estimating | 3 |
| CCE 4204 Construction Equipment, Methods and Management | 3 |
| CCE 4811 Construction Engineering Design | 3 |
| CEG 4104 Retaining Wall and Embankment Design | 3 |
| CEG 4111 Foundation Engineering Design | 3 |
| CES 4141 Stress Analysis | 3 |
| CES 4605 Analysis and Design in Steel | 3 |
| CES 4704 Advanced Reinforced Concrete Design | 3 |
| CES 4608 Advanced Steel Design | 3 |
| CGN 4503 Pavement Design | 3 |
| CGN 4600 Public Works Engineering | 3 |

| | |
|---|---|
| CGN 4905 Building Codes and Professional Practice | 3 |
| CWR 4114 Surface Hydrology | 3 |
| CWR 4120 Groundwater | 3 |
| CWR 4306 Urban Stormwater Systems Design | 3 |
| CWR 4542 Water Resources Engineering | 3 |
| SUR 4463 Subdivision Design | 3 |
| TTE 4106 Urban Transportation Planning | 3 |
| TTE 4201 Traffic Engineering | 3 |
| TTE 4300 Transportation Systems Analysis | 3 |
| One technical class at 3000/4000 level from outside CE department in geology, environmental engineering, building construction / architecture or urban and regional planning (or other as approved by adviser). | 3 |

Design Electives (choose at least one)

| | |
|---|---|
| CCE 4811 Construction Engineering Design | 3 |
| CEG 4104 Retaining Wall and Embankment Design | 3 |
| CEG 4111 Foundation Engineering Design | 3 |
| CES 4605 Analysis and Design in Steel | 3 |
| CES 4704 Advanced Reinforced Concrete Design | 3 |
| CES 4608 Advanced Steel Design | 3 |
| CGN 4503 Pavement Design | 3 |
| CWR 4306 Urban Stormwater Design | 3 |
| SUR 4463 Subdivision Design | 3 |

[Back to Top](#)