

Proposal Status: Workflow not started

FULL PROPOSAL: Substantive Change(s) to a Program of Study

*Note: New courses included in a program of study change require submission of the **Substantive Change to a Course** proposal.*

Title of proposal (must begin with department abbreviation): ENCE program requirement changes.

Place an X next to the ones that apply:

<input checked="" type="checkbox"/>	Alteration of requirements for any program of study including majors, minors, concentrations and certificates
<input type="checkbox"/>	Creating a new program or concentration
<input type="checkbox"/>	Changing admission requirements into a program

Effective date: Fall 2015

Contact information:

Spokesperson Name: Ignatius Fomunung	Department: Civil and Chemical
Building: EMCS	Office Number: 440D
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Faculty of the originating department approved this proposal on 10/23/2014 (date) by a vote of 4 aye votes; 0 nay votes; 0 abstentions; 0 eligible voting members absent

1. Description of proposed changes
Drop Math 2550, ENEE 2700, ENGR 1850, and ENGR1011, and replace them with approved Civil Engineering Electives
2. Rationale for requested change
Include data from the annual institutional effectiveness cycle or outcomes assessment; information on changes in disciplinary field(s); national, community and workforce development trends; and address any impact on enrollment trends.
Math 2550 is multivariable calculus, which is not a crucial need for the undergraduate degree in Civil Engineering.
ENEE 2700 is Electrical Circuits I: The content of this course needed in the CE degree is sufficiently covered in another required course, Electricity and Magnetism (PHYS 2310 and PHYS 2310L)
ENGR 1850 and ENGR 1011: these courses will give way to a similar more meaningful course to CE majors.
3. Current program requirements as listed in the Catalog (**current Catalog copy—include all current required courses**)

Program Requirements

- CHEM 1110 - General Chemistry I and

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- CHEM 1110L - General Chemistry I Laboratory
- MATH 1950 - Calculus with Analytic Geometry I *
- MATH 1920 - Calculus II
- MATH 2200 - Elementary Linear Algebra
- MATH 2450 - Introduction to Differential and Difference Equations
- MATH 2550 - Multivariable Calculus
- PHYS 2310 - Principles of Physics - Electricity and Magnetism and
- PHYS 2310L - Principles of Physics Laboratory - Electricity and Magnetism

Engineering Fundamentals:

- ENGR 1011 - Introduction to Two- and Three-Dimensional Modeling
- ENGR 1030 - Basic Engineering Science
- ENGR 1030L - Freshman Engineering Laboratory
- ENGR 1040 - Vector Statics
- ENGR 1850 - Introduction to Engineering Design
- ENGR 2220 - Probability and Statistics for Engineering #
- ENGR 2460 - Mechanics of Materials
- ENGR 2460L - Mechanics of Materials Laboratory
- ENEE 2700 - Electrical Circuits I
- ENGR 3850 - Interdisciplinary Design Project I

Program and Related Courses

- GEOL 4450 - Hydrology

Engineering Fundamentals:

- ENGR 2240 - Introduction to Engineering Computations
- ENGR 2480 - Dynamics
- ENGR 3070 - Fluid Mechanics
- ENGR 3070L - Fluid Mechanics Laboratory
- ENGR 3520 - Engineering Economy

Technical Elective:

- Two 3-hour 3000-level or 4000-level courses in an Engineering specialty.

One science elective selected from:

- GEOL 1110 - Physical Geology and
- GEOL 1110L - Physical Geology Laboratory
- GEOL 1160 - Current Geological Perspectives of Earth
- GEOL 1230 - Environmental Geology
- BIOL 1100 - Conservation of Biodiversity
- BIOL 1110 - Principles of Biology I

4. Proposed new description and program requirements to be listed in the Catalog (**current Catalog copy—include all current required courses**)

Program Requirements

- CHEM 1110 - General Chemistry I and
- CHEM 1110L - General Chemistry I Laboratory
- MATH 1950 - Calculus with Analytic Geometry I *
- MATH 1920 - Calculus II

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- MATH 2200 - Elementary Linear Algebra
- MATH 2450 - Introduction to Differential and Difference Equations
-
- PHYS 2310 - Principles of Physics - Electricity and Magnetism and
- PHYS 2310L - Principles of Physics Laboratory - Electricity and Magnetism

Engineering Fundamentals:

- ENGR 1011 - Introduction to Two- and Three-Dimensional Modeling
- ENGR 1030 - Basic Engineering Science
- ENGR 1030L - Freshman Engineering Laboratory
- ENGR 1040 - Vector Statics
-
- ENGR 2220 - Probability and Statistics for Engineering #
- ENGR 2460 - Mechanics of Materials
- ENGR 2460L - Mechanics of Materials Laboratory
-
- ENGR 3850 - Interdisciplinary Design Project I

Program and Related Courses

- GEOL 4450 - Hydrology

Engineering Fundamentals:

- ENGR 2240 - Introduction to Engineering Computations
- ENGR 2480 - Dynamics
- ENGR 3070 - Fluid Mechanics
- ENGR 3070L - Fluid Mechanics Laboratory
- ENGR 3520 - Engineering Economy

Technical Elective:

- Two 3-hour 3000-level or 4000-level courses in an Engineering specialty.
9 Hours of approved civil engineering electives at the 4000-level

One science elective selected from:

- GEOL 1110 - Physical Geology and
- GEOL 1110L - Physical Geology Laboratory
- GEOL 1160 - Current Geological Perspectives of Earth
- GEOL 1230 - Environmental Geology
- BIOL 1100 - Conservation of Biodiversity
- BIOL 1110 - Principles of Biology I

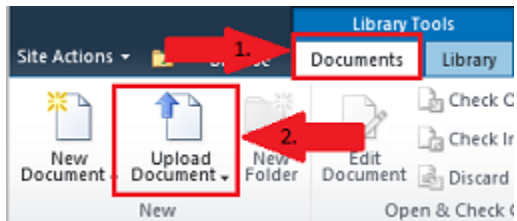
5. Outline the student learning outcomes—a statement of the minimum expectations of students as they complete the program. You must list at least three outcomes.
 1. Demonstrated ability in engineering graphics and CE software packages such as AutoCad and Microstation
 2. Gain enhanced expertise in one of the four major areas in CE; Structures, Geotechnical, Transportation, and Environmental
 3. Enhance student ability to apply math concepts to solve problems
6. How will students be assessed on the program learning outcomes?
Through regular class room evaluation techniques such as exams, reports, etc.

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7. Attach a curriculum map for the new program/concentration.
Please see the direction at the end of this proposal for how to upload your curriculum map document.
8. Does this change require new resources from the originating department or other departments (including the library)? If yes, please explain.
No
9. Will the proposed changes impact the ability of students to complete degree requirements in a timely manner? How will the proposed changes impact requirements in other departments or programs?
No and None
10. Attach a Clear Path Showcase for the new program/concentration.
Please see the directions at the end of this proposal for how to upload your clear path document.

Direction for uploading supporting documents:

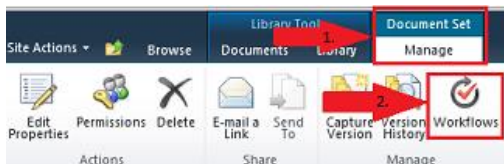
1. To upload your model syllabus to the folder for your proposal go to <https://spaces.utc.edu/sites/UndergraduateProposal>.
2. Next, click on the name of your proposal under "My Proposals".
3. Click the "Documents" tab and then click the "Upload Document" tab.



Important: After completing your proposal you must start the *Curriculum Proposal Workflow*.

To begin workflow:

1. Click on the name of your proposal below.
2. Next, click the "Document Set Manage" tab in the ribbon at the top of the page and select the "Workflows" button.



3. Under "Start a New Workflow" click "Curriculum Proposal Workflow" and then click the "Start" button.

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Workflow Sequence for Full Proposal –Program Changes

1. Department Head
2. College Curriculum Committee
3. College Dean
4. Other Areas Affected (If any)
5. Records Office
6. Associate Provost
7. Provost (if a fee will be assessed)
8. Faculty Senate Curriculum Committee
9. Faculty Senate