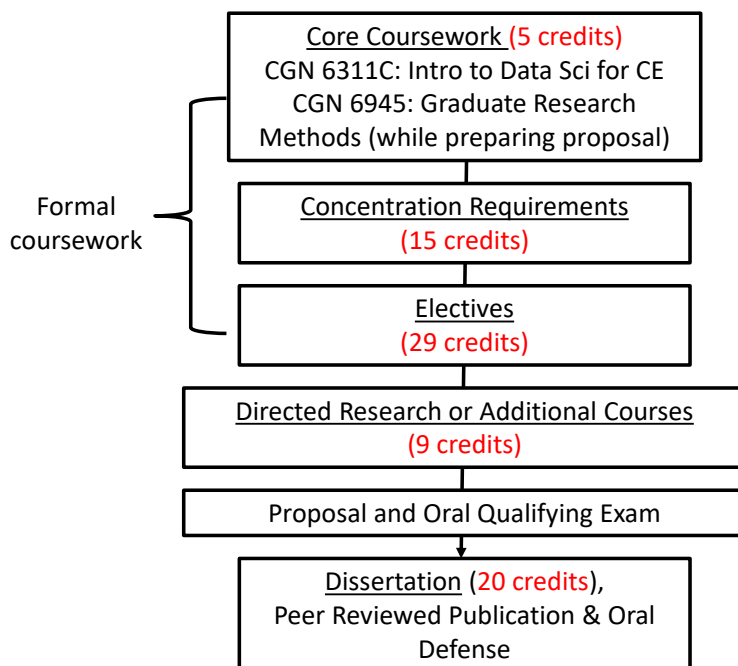


PhD Civil Engineering Course Registration Guide and Program of Study Form

In the CEE department at USF, graduate students are expected to know their program requirements and register themselves for classes using Oasis. The staff class search feature will help you to search for open classes (<https://usfweb.usf.edu/DSS/StaffScheduleSearch>). When using this tool, be sure to enter the correct Term, Department, Level (e.g., graduate/undergraduate), and Status (open). The following graphic shows the structure of the PhD program:



Total Credits Required:

78 Credits - students without an approved master's degree

48 credits - students with an approved master's degree

Core Courses (5 credits) - These courses are required for every PhD student. Note that both classes are normally taught in both the fall and spring semesters. Students should not sign up for Graduate Research Methods until they are writing their proposal and preparing for their qualifying exam.

- CGN 6311C Introduction to Data Science for Civil Engineers (3 credits)
- CGN 6945 Graduate Research Methods in CEE (2 credits)

Concentration Requirements (15 credits) - Concentrations are offered in Engineering for International Development, Structural, Geotechnical, Transportation, Materials, and Water Resources Engineering (see below for requirements). Each concentration allows for some credits of coursework in the area of concentration or closely related areas that you are free to select on your own. Note that it is possible to select two concentrations (e.g., Water Resources and Engineering for International Development).

Electives (29 credits) - Electives are grad level classes that you are free to select based on your interests and career goals. You may select additional courses in your concentration area, CEE courses outside your concentration area (e.g., Transportation students can take Water Resources classes) or classes in another department (e.g., GIS, Engineering Management, Geosciences, Public Health, Mathematics).

Independent Study (up to 9 credits) - Up to 9 credits of Independent Study (IS) may be taken to meet concentration or elective requirements. IS credits may be used for the following: 1) students sit in on an

undergraduate course and receive graduate credit by doing additional work, 2) a student or group of students can study a topic under the direction of a faculty member, 3) students may work on a project with a faculty member and write a report (this is similar to a thesis but normally not as extensive). Students must write a proposal and submit a [registration form](#) to sign up for IS credits.

Additional Credits (9 credits) - An additional 9 credits of coursework or directed research is required.

Dissertation Credits (20 credits) - A minimum of 20 credits of dissertation, an approved PhD dissertation and a dissertation defense are required. Students may not sign up for dissertation credits until they have defended their proposal and advanced to candidacy.

Masters along the way - PhD students who enter the program without a master's degree will normally file for a [Master's Along the Way](#) after they have completed the requirements for either the thesis or non-thesis master's degree. Please refer to the program of study for the master's degree to make sure that you have fulfilled all the degree requirements. Students who have completed a MS degree prior to joining the PhD program at USF may apply up to 30 credits of coursework from their master's degree toward the coursework requirements for the PhD. This includes up to 6 credits of master's thesis.

Doctoral dissertation committee - The PhD Committee consists of at least five members, three in the student's academic area, one who is a member of the College of Engineering outside Civil & Environmental Engineering, and one outside the College of Engineering. Note that student's must submit a CV and justification for any proposed committee member who is not a member of the [graduate faculty](#) of USF. An [Outside Chair](#) is required for the dissertation defense.

Qualifying Exam - Doctoral students must pass a qualifying exam no later than one semester following completion of 48 credits of coursework beyond a bachelor's degree. At minimum, the exam will include a written dissertation proposal and oral defense by the dissertation committee. A written exam in the area of concentration may also be required. Poor performance on the qualifying exam based on the judgment of the committee may result in the student failing the exam. If a student does not pass on the first attempt, he/she may request in writing to repeat the exam. Students who fail the second time will be dismissed by the program.

Publication Requirement - The department requires that all doctoral students have a paper accepted to a peer reviewed journal or conference. Please discuss this with your advisor early as it can take six months or more to receive review comments back from a journal. Many faculty members in the department require their students to have more than one paper accepted.

Concentration Requirements (15 credit hours minimum)

Engineering for International Development

Students must engage in full-time global training and service as part of the concentration (e.g., in the U.S. Peace Corps, with a non-governmental organization, or equivalent). This work must be incorporated into the student's dissertation. Students may register for CST 6990 for 0 credit hours while in their country of service.

- ENV 6510 Sustainable Development Engineering Credit Hours: 3

A minimum of 1 course from the following applied anthropology courses: (3 Credit Hours)

- ANG 6766 Research Methods in Applied Anthropology
- ANG 6730 Socio Cultural Aspects of HIV/AIDS
- ANG 6469 Selected Topics in Medical Anthropology: Health, Illness and Culture

A minimum of one course from the following global public health courses: (3 Credit Hours)

- PHC 6764 Global Health Principles and Contemporary Issues
- PHC 6761 Global Health Assessment Strategies

6 additional graduate level credit hours of coursework in international development engineering or closely related areas.

Geotechnical Engineering

- CEG 5115 Foundation Engineering
- CES 6118 Applied Finite Elements

9 additional credit hours of coursework in Geotechnical engineering or closely related areas.

Materials Engineering

At least 2 courses from the following list:

- CGN 6933 Special Topics in CEE: Advanced Concrete Construction Materials
- CGN 6720 Electrochemical Diagnostic Techniques
- CES 6010 Structural Life Prediction
- EMA 5326 Corrosion Control
- EMA 6510 Characterization of Materials

9 additional credit hours of coursework in Materials Engineering and Science or closely related areas.

Structural Engineering

At least 1 course from the following list of design courses:

- CES 6706 Advanced Concrete Design
- CES 6835 Design of Masonry Structures
- CES 5715C Prestressed Concrete

At least 1 course from the following list of analysis courses:

- CES 6118 Applied Finite Elements
- CES 6230 Advanced Structural Mechanics
- CES 6144 Advanced Structural Analysis
- CES 5209 Structural Dynamics

9 additional credit hours of coursework in Structures Engineering or closely related areas.

Transportation

- TTE 5205 Traffic Systems Engineering
- TTE 5501 Transportation Planning and Economics
- TTE 6930 Graduate Transportation Seminar (1 credit class required for students who entered the program after Fall 2021)
- TTE 6507 Travel Demand Modeling or TTE 6307 Statistical and Econometric Methods I

5 additional credit hours of coursework in Transportation Engineering or closely related areas.

Water Resources

4 courses (12 credit hours) from the following list:

- CWR 6235 Free Surface Flow
- CWR 6239 Waves and Beach Protection
- CWR 6305 Urban Hydrology
- CWR 6534 Coastal and Estuary Modeling
- CWR 6535 Hydrologic Models
- CWR 6105 Vadose Zone Hydrology
- CWR 6626 Ecological Engineering
- CWR 6122 Groundwater Engineering
- CWR 6820 Coastal Waves and Structures
- CWR 6538 Advanced Hydrologic Models
- CGN 6933 Special Topics in CEE: Advanced Computational Fluid Mechanics
- CGN 6933 Special Topics in CEE: Advanced Numerical Methods
- CGN 6933 Special Topics in CEE: Water Resources Sustainability

3 Additional Credit Hours in Water Resources Engineering or closely related areas.

Additional 9 Credits (may include directed research)					
Dissertation (minimum of 20 credits)					
Total credits of coursework (≥ 48 including 6 credits of thesis)					
Total credits of Independent study (≤ 9)					
Total credits (≥ 78)					

Notes for the GPD:

Major Professor signature and date

Graduate Program Director signature and date