CIVIL AND ENVIRONMENTAL ENGINEERING PHD

Degree Requirements
The following requirements are in addition to, or further elaborate upon, those requirements outlined in The Graduate School Policy Guide (https://catalogs.northwestern.edu/tgs/academic-policies-procedures).

PhD
Total Units Required: TGS requires a minimum of nine courses to be completed for a letter grade (e.g. A, B, C, etc). Transfer credits are not allowed. Individual programs may require more than nine units. Students completing a MS degree in the same program along the way to earning a PhD may be able to use some of the MS coursework to meet the coursework requirement, depending on the guidelines of the individual program and consent of the advisor.

Programs of study for the PhD include MS requirements plus advanced engineering courses with coursework as needed in mathematics, operations research, chemistry, biology, geology, physics, materials science, economics, geography, sociology, and political science. (See department guide.)

Specializations
The Civil and Environmental Engineering PhD program has four specializations:

- Environmental engineering and science (https://www.mccormick.northwestern.edu/civil-environmental/graduate/environmental-engineering-science)
- Geotechnics (https://www.mccormick.northwestern.edu/civil-environmental/graduate/geotechnics)
- Mechanics, materials, and structures (https://www.mccormick.northwestern.edu/civil-environmental/graduate/mechanics-materials-structures)
- Transportation systems analysis and planning (https://www.mccormick.northwestern.edu/civil-environmental/graduate/transportation-systems-analysis-planning)

Other PhD Degree Requirements
- Candidacy: Admission to Candidacy is a milestone where faculty assess whether a student has acquired sufficient knowledge and experience to proceed with PhD research. The initial offer of admission to the PhD program does not guarantee Admission to Candidacy. In order to advance to Candidacy the student must: a) meet the TGS English Proficiency Requirement b) Identify research advisor c) achieve cumulative 3.5 GPA d) pass the Qualifying Exam.
- Prospectus: The Prospectus process typically involves development of a written research proposal that will culminate in the dissertation. This research proposal is presented and defended in oral form to the prospectus committee.
- PhD Dissertation: PhD students must complete a written dissertation that is a significant and original research contribution, based on the research proposal in the Prospectus. PhD students defend the dissertation in a presentation open to the public. The details of the individual dissertation and defense are up to the advisor and PhD student, and subject to the requirements available on the TGS website.