

# CIVIL AND ENVIRONMENTAL ENGINEERING PHD

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## 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:

The total course units required varies by the Specialization and the student's educational background, and typically supersedes the required minimum courses specified by TGS. Students completing an MS degree in a related field may be able to reduce the required number of units, depending on the requirements of the specialization and approval of the PhD advisor. PhD students may also earn an MS degree along the way to meeting degree requirements for the PhD, although this is not required. Transfer credits are not allowed. Additional information on course requirements is available on the departmental website.

#### 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.