

PhD in Electrical Engineering and Computer Science

The PhD in electrical engineering and computer science is collaboratively offered by the School of Computing and department of electrical and computer engineering.

Admission

PhD in Electrical Engineering and Computer Science (EECS) has two tracks: computer science (CS) track and electrical and computer engineering (ECE) track.

Admission into the CS track requires a completed bachelor's or master's degree, with a grade point average of at least 3.250 in computer science, electrical engineering or a related field.

Admission into the ECE track requires the following:

1. A completed bachelor's or master's degree, with a grade point average of at least 3.250 in electrical engineering, computer engineering, computer science or a related field.
2. Official GRE General test score, or a support letter from an ECE graduate faculty member at Wichita State.
3. Evidence of ability to carry out independent research and present it in written English is highly desirable.
4. Two letters of recommendation and a statement of purpose are encouraged.

Each applicant is evaluated individually.

In addition, applicants with a bachelor's degree will only be admitted if a faculty member judges them as exceptional, and is willing to be their PhD advisor from the beginning of the program.

Program Requirements

In addition to the College of Engineering's PhD requirements (<http://catalog.wichita.edu/graduate/engineering/#graduationrequirements>), the electrical and computer engineering department requires the following:

Advisor

The student should secure an advisor to supervise their PhD dissertation as early as possible, but no later than the completion of their first academic year in the program.

Degree Requirements

A PhD plan of study should contain a minimum of 72 total credit hours, beyond undergraduate credits, with the following requirements:

- A minimum of 24 credit hours of ECE 976 PhD Dissertation.
- A minimum of 36 credit hours of coursework, including a maximum of 24 credit hours that can transfer from a master's degree. All these credit hours should be relevant to ECE (i.e., offered by graduate programs in computer engineering, computer science and/or electrical engineering).
- Twelve (12) credit hours of additional coursework, ECE 976, or combination of both.

Please refer to the respective section of the College of Engineering and Graduate School for their degree requirements.

Qualifying Exam (QE)

The PhD advisory committee, on the request of the advisor, shall conduct the Qualifying Exam (QE) to evaluate the student's research readiness to eventually complete the dissertation requirements. That

is, they have the needed background and satisfactory performance in the relevant coursework, demonstrated a preliminary understanding of the research literature relevant to their projected dissertation, and have a future-research plan including the graduation timeframe. The committee must inform the student about the structure of the qualifying exam in advance, e.g., allocated time to present their case for research readiness and Q&A from the committee, and open/closed to public. If the full committee is unavailable, at least three committee members are sufficient to administer the qualifying exam.

The student is graded pass or fail on the qualifying exam based on a simple majority vote of the committee. The committee may require revisions to the plan of study, remedial actions and/or supplementary assignments regardless of the outcome. If the student fails the qualifying exam, another attempt can be requested. No more than two attempts are permitted. The advisor should report the outcome to the department within three business days of the qualifying exam's conclusion. The student should complete the qualifying exam no later than completion of the initial two academic years in the program.

The student cannot schedule the qualifying exam without an approved plan of study on file, and also cannot attempt the Dissertation Approval Examination (DAE) without successfully completing the qualifying exam. The advisor, in consultation with the committee, may require the student to retake the qualifying exam should there be significant changes from the last successful attempt (e.g., original advisor or committee or dissertation-direction changes).

Applied Learning

Students in the PhD in electrical engineering and computer science program are required to complete an applied learning or research experience to graduate from the program. The requirement can be met by completing and defending a dissertation based on new and novel research (including a minimum of 24 credit hours of ECE 976 PhD Dissertation).