Systems Science & Mathematics, PhD (ESE)

Students pursuing the Doctor of Philosophy (PhD) or Doctor of Science (DSc) degrees in Electrical Engineering or Systems Science & Mathematics must complete a minimum of 72 units of post-baccalaureate study consistent with the residency and other applicable requirements of the McKelvey School of Engineering. These 72 units must consist of at least 36 units of course work and at least 24 units of research, and they may include work done to satisfy the requirements of a master's degree in a related discipline. Up to 24 units for the PhD and 30 units for the DSc may be transferred to Washington University in St. Louis from another institution.

Below is a list of the steps needed to complete the requirements for a doctoral degree in the Department of Electrical & Systems Engineering. Each candidate for the degree must do the following:

- Complete at least 36 units of post-baccalaureate course work. Students are required to take at lease five courses from the Electrical & Systems Engineering department with a course number of 4000 or higher.
- Complete the qualifying process (which includes a qualifying examination) and match with a research mentor before the second academic year of the program (PhD) or before the end of the third year of study (DSc).
- Pass an oral preliminary research examination, to be completed within two academic years of completing the qualifying process.
- Satisfy the general residency requirement for the McKelvey School of Engineering.
- Satisfy the general teaching requirement as specified by the department. (There is no teaching requirement for the DSc.)
- Write a doctoral dissertation that describes the results of original and creative research in a specialization within electrical engineering or systems science and mathematics.
- Pass a final oral examination in defense of the dissertation research.
- Take ESE 5997 - Electrical & Systems Engineering Graduate Seminar each semester (PhD) or during each semester of full-time study (DSc).