Doctoral Degrees

**PhD or DSc in Electrical Engineering or Systems Science & Mathematics**

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 credit hours of post-baccalaureate study consistent with the residency and other applicable requirements of Washington University in St. Louis and the Graduate School. 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 hours of post-baccalaureate course work.
- Pass a written qualifying examination, to be taken before the second academic year of the program.
- Pass an oral preliminary research examination, to be completed within two years of passing the written qualifying examination and at least one year prior to completion of the dissertation.
- Satisfy the general residency requirement for the Graduate School (PhD) or the McKelvey School of Engineering (DSc).
- Satisfy the general teaching requirement for PhD degrees offered by the Graduate School. (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 590 Electrical & Systems Engineering Graduate Seminar each semester.

The doctoral degree should ordinarily take no more than five years to complete for students who enter the program with a baccalaureate degree.