Doctoral Degrees

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 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.

Following are stages to the completion of the requirements for a doctoral degree in the Department of Electrical & Systems Engineering. Each candidate for the degree must:

• 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 School of Engineering & Applied Science (DSc)
• Satisfy the general teaching requirement for PhD degrees offered by the Graduate School; 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. While individual circumstances will vary, the typical timeline will be as follows:

• Year 1: Course work and written qualifying examination
• Year 2: Course work, preliminary research, research advisory committee selection
• Year 3: Course work and preliminary research examination
• Year 4: Research
• Year 5: Research, completion of dissertation, and final oral examination

Students who enter the program with a master's degree may be able to shorten this timeline by one year or more.