Doctor of Philosophy in Electrical Engineering & Computer Science

The Doctor of Philosophy (PhD) in electrical engineering and computer science prepares students for conducting advanced research in several specialization areas listed below. Students of this program take courses that span the breadth of this field, as well as depth in their chosen specialization areas. Under the supervision of recognized researchers, students conduct research leading to archival publications, and prepare themselves for a research-oriented career.

Admission
Admission into the PhD EECS program 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 science, or a related field
2. Official GRE General (Aptitude) test scores

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

Courses of study leading to the PhD degree are available with specializations in any of the following fields:
(1) control systems
(2) communication and signal processing
(3) energy and power systems
(4) computer networking
(5) computers systems and architecture
(6) algorithms and software systems

English Proficiency
Non-native speakers of English must provide either an official TOEFL score of at 79 on the internet based test, OR an overall minimum band score of 6.5 on the IELTS examination, OR a score of 58 or higher on the PTE-Academic.

The Admission Process
All admissions to graduate study at Wichita State University are processed by the Graduate School, and final determination is made by the Dean of the Graduate School. The admission process starts by filing an official WSU application for admission and an application fee. Copies of transcripts of all previous academic work and official GRE scores should be sent directly to the Graduate School office. International students are also required to file additional official documents, such as the official financial support certification and official TOEFL, IELTS, or PTE-Academic scores. Upon request by the Graduate Dean, the department graduate coordinator performs an academic and admissibility evaluation of the materials submitted and makes an admission recommendation to the Dean of the Graduate School. Final action on each case and notification of action is handled by the Graduate School office.

Degree Requirements
The PhD EECS degree requires the satisfactory completion of a program approved by the student’s doctoral advisory committee and the Dean of the Graduate School. The program normally contains about 30 hours of post-master’s graduate course work. A doctoral student must pass a comprehensive examination, a dissertation approval exam, and a final oral presentation and defense of dissertation.

Financial Aid
Several financial aid opportunities are available on a competitive basis to the best qualified students in the form of doctoral fellowships and teaching and research assistantships. Furthermore, the university at large provides several campus employment opportunities for students.
Faculty

Visvakumar Aravinthan, Associate Professor. Power systems and reliability, smart distribution systems and grids, distribution systems reliability
Abu Asaduzzaman, Associate Professor. Computer systems and architecture, parallel computing, computer modeling and simulation, and computer performance evaluation
Rajiv Bagai, Associate Professor and Graduate Coordinator. Web anonymity, data models, deductive databases, logic programming, programming languages
Debswapna Bhattacharya, Assistant Professor. Bioinformatics, computational biology, data science, big data analytics, machine learning, data mining
Animesh Chakravarthy, Associate Professor. Robotics, autonomous and interconnected vehicles, dynamics and control of time-varying systems
Zheng Chen, Assistant Professor. Dynamics & controls, bio-inspired robotics, renewable energy systems
Yanwu Ding, Associate Professor and Graduate Coordinator. Communication systems, wireless communications, signal processing
Ali Eslami, Assistant Professor. Cyber-physical systems, error-correcting codes, interconnected networks, wireless networks
Murtuza Jadliwala, Assistant Professor. Computer networking, information assurance, network security, graph theory and combinatorial optimization
Ward T. Jewell, Professor. Power systems, power quality, sustainability
Hufeza Kagdi, Associate Professor. Software maintenance, visualization, and evolution, empirical software engineering, program comprehension

Preethika Kumar, Associate Professor. Quantum computing architectures
Hyuck M. Kwon, Professor. Communication systems/theory, wireless communications
Vinod Namboodiri, Associate Professor. Wireless networking
Chengzong Pang, Assistant professor. Power system security, stability analysis for smart grid
Prakash Ramanan, Professor. XML, database systems, algorithms, data structures, information retrieval
Sergio Salinas, Assistant Professor. Privacy and security, cyber-physical systems, big data computing
Kaushik Sinha, Assistant Professor. Machine learning, artificial intelligence, data mining
Steven R. Skinner, Professor and Associate Dean. Quantum computing
Yi Song, Assistant Professor. Wireless networks, network security, cognitive radio networks
Pu Wang, Assistant Professor. Data networks, cognitive radio networks, Internet of multimedia things
John M. Watkins, Professor and Chair. Control systems

For More Information
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