

# ELECTRICAL ENGINEERING (ENGINEERING)

---

research in peer-reviewed venues, by giving talks to professional peers, and by completing the SARI requirements.

## Learning Outcomes

### Master of Science (M.S.)

1. **KNOW:** Demonstrate understanding of a breadth of advanced core principles and methods in Electrical Engineering, which is primarily demonstrated by successfully completing course work representing a breadth of Electrical Engineering application areas.
2. **APPLY/CREATE:** Apply knowledge of a breadth of Electrical Engineering principles, which is primarily demonstrated by formulating and executing course projects in course work representing a breadth of Electrical Engineering application areas.
3. **COMMUNICATE:** Communicate proficiently in oral and written formats, which is primarily demonstrated by their successful oral defense of their written thesis or paper, by successful written and oral outcomes on their course projects, and by publishing or presenting their research work in academic or professional venues.
4. **THINK:** Analyze and apply existing state-of-the-art Electrical Engineering methods, which is primarily demonstrated by their successful oral defense of their written thesis or paper, publications in professional venues, and by participation in internships within industry.
5. **PROFESSIONAL PRACTICE:** Demonstrate an understanding of, and a commitment to, the standards for scholarship and research integrity, which is primarily demonstrated by successful completion of the Electrical Engineering colloquia, by their successful oral defense of their written thesis or paper, and by successful participation in internships within industry.

### Doctor of Philosophy (Ph.D.)

1. **KNOW:** Demonstrate an understanding of advanced core principles and methods as well as modern research findings from selected sub-fields of Electrical Engineering, which is typically demonstrated by passing the Qualifying Examination and the Comprehensive Examination.
2. **APPLY/CREATE:** Apply knowledge of selected sub-fields of Electrical Engineering in formulating and executing a research plan, which is typically demonstrated by passing the Comprehensive Examination, by publishing their dissertation research in peer-reviewed venues, by peer-reviewing manuscripts, and by successful completion of internships within industry.
3. **COMMUNICATE:** Communicate with high levels of proficiency in oral and written formats, which is typically demonstrated by passing the Final Oral Examination, by giving talks to professional peers in their areas of research, and by completing the language competency requirements.
4. **THINK:** Analyze and synthesize appropriate literature, to critically review their work in the context of the literature, and to formulate and defend conclusions based on their research that represent new scholarly contributions, which is typically demonstrated by passing the Comprehensive Examination and Final Oral Examination, and by publishing their dissertation research in peer-reviewed venues.
5. **PROFESSIONAL PRACTICE:** Demonstrate an understanding of, and a commitment to, the standards for scholarship and research integrity, which is typically demonstrated by publishing their dissertation