ELECTRICAL ENGINEERING, B.S.E.

1. An ability to perform system analysis by applying principles of engineering, science, and mathematics.
2. An ability to analyze electric and magnetic fields and waves, electronic devices and circuits.
3. An ability to perform complex systems analysis.
4. An ability to build, test and characterize electric circuits.
5. An ability to design and build complex systems that require both hardware and software as components of the system solution and that meet multiple criteria and fulfill specific needs.
6. An ability to communicate effectively in writing to technical and non-technical audiences, using a broad spectrum of text and graphical elements.
7. An ability to communicate effectively in oral presentations, with and without graphics support, to a variety of audiences, especially technical audiences.
8. Identifying and mitigating public, societal, and/or environmental risk factors associated with a project.
9. High-level considerations of ethical issues in commercialization plans, prototype system to market analysis.
10. An ability to work together towards common team goals, demonstrating effective collaboration, communication, diligence, and resourcefulness.
11. An ability to effectively evaluate, critique, and assist fellow team members, with an aim to develop their fullest capabilities.
12. An ability to design and conduct tests and validate performance.
13. An ability to analyze and interpret system performance.
14. An ability to find and apply technical information needed to apply complex electronic devices in the development of system solutions.
15. An ability to research, locate, and explain the state of the art of a technology needed to satisfy some system solution and to use that information in an analysis of alternatives to identify a promising implementation option.

Academic Standards

Program GPA

Program GPA requirement policies are described in the College of Engineering and Computing section of this bulletin. For the purpose of these policies, the following courses are used to determine the Program GPA for the Electrical Engineering B.S.E. program: all Lower Division Engineering courses, all Electrical Engineering Major courses, and all Career Plan Elective courses.