

Electrical Engineering Program Educational Objectives

Revised by the ECE faculty on May 3, 2005

1. Educate students to pursue a productive career.
2. Provide the necessary background for students to successfully pursue advanced study at LSU or elsewhere.

Electrical Engineering Program Outcomes

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In order to meet the program objectives, a graduate of the program will have the following accomplishments:

1. an ability to apply knowledge of mathematics, science, and engineering (ABET Criterion 3(a));
2. an ability to design and conduct experiments, as well as to analyze and interpret data (ABET Criterion 3(b));
3. an ability to design a system, component, or process to meet desired needs within realistic constraints (ABET Criterion 3(c));
4. an ability to function on multi-disciplinary teams (ABET Criterion 3(d));
5. an ability to identify, formulate, and solve engineering problems (ABET Criterion 3(e));
6. an understanding of professional and ethical responsibility (ABET Criterion 3(f));
7. an ability to communicate effectively, including conveying technical material (ABET Criterion 3(g));
8. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context (ABET Criterion 3(h));
9. a recognition of the need for and adequate preparation for continued professional growth and life-long learning (ABET Criterion 3(i));
10. a knowledge of contemporary issues, especially engineering issues (ABET Criterion 3(j));
11. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice (ABET Criterion 3(k));

12. an ability to apply knowledge of probability and statistics, mathematics through differential and integral calculus, basic sciences, and engineering sciences necessary to analyze and design complex electrical and electronic devices, software, and systems containing hardware and software components (Program criteria);
13. an ability to apply advanced mathematics, including differential equations, linear algebra, and complex variables, to solve electrical engineering problems (Program criteria).