

Bachelor of Electrical Engineering

The Bachelor of Electrical Engineering program strives to achieve the aims through a well-structured approach with core, electives and general education modules. The undergraduate degree program has been specially designed so that students can achieve a strong foundation in computing, mathematical, engineering and scientific fundamentals during their early years of study. While in the senior years they can specialize in areas of their interest and at the same time broaden their knowledge in other areas through electives courses of their choice. Design, which is the heart of engineering, is integrated in EE program through various projects activities. The program also includes the requisite courses in communication skills, professionalism, humanities and social sciences. The student should complete 162 Credit Hours (CH) for graduation. Also, the EE program has a strong core in general education, basic sciences, computing and engineering in addition to a summer training of eight weeks.

Career Opportunities

Electrical Engineering education prepares students for a wide range of careers. Electrical Engineering graduates can look forward to bright and challenging careers in research, design and development, manufacturing, marketing, management, and other exciting fields.



جامعة الأمير سطام بن عبدالعزيز
Prince Sattam Bin Abdulaziz University

كلية الهندسة
College of Engineering

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The Electrical Engineering program is accredited by the Engineering Accreditation Commission of ABET, <https://www.abet.org>.



Engineering
Accreditation
Commission

Department of Electrical Engineering



Electrical Engineering Department

Electrical Engineering Department, established in the year 1426H/2005G. Electrical Engineering is among the most exciting and challenging areas of engineering, and are the key disciplines in a highly technological society. Electrical engineers have been driving the evolution of technology by being able to effectively apply fundamental concepts and integrate knowledge from various disciplines while pursuing frontier research, creating new ideas and innovations, and designing and developing new products.

The Electrical Engineering landscape is evolving rapidly and poses many challenges to engineers today. Prince Sattam bin Abdulaziz University's (PSAU's) Electrical Engineering (EE) undergraduate program is designed to graduate versatile engineers for immediate employment and to prepare them for challenges ahead. The program has strong emphasis on scientific and engineering fundamentals and a high degree of flexibility which can provide a wide diversity of educational experiences. It allows the students to plan their individual educational experience in accordance with their career aspirations. The EE Department is accredited from ABET. The accreditation period is from (2015-2021).

Bachelor of Electrical Engineering

The undergraduate Electrical Engineering program leads to the Bachelor of Electrical Engineering Degree with a Major in Electrical Engineering.

Facilities/Laboratories

The classrooms are well equipped with all modern audio-visual facilities. Highly dedicated, hardworking, young, dynamic and well qualified faculty is the main asset of the department. The department of Electrical Engineering has well equipped laboratories in different areas. The laboratories are enriched with all state of art equipment/-software to cater the needs of students as well as R&D and consultancy works. Our department laboratory staff is well qualified, able & hardworking. Labs also have a number of integrated personal computer systems to operate educational software. Every student has a good chance to have a hands-on experience and practice experimental work as the number of students per experimental station ranges from two to four only.

The Department of Electrical Engineering has the following laboratories that support its educational activities.

- Electric Circuits Laboratory
- Logic Design Laboratory
- Microprocessors Laboratory
- Electronic Devices Laboratory
- Analog and Digital Electronic Circuits Lab.
- Instrumentation Laboratory
- Communications Laboratory
- Control Systems Laboratory
- Electrical Power Laboratory
- Electrical Machine Laboratory
- Power Electronics Laboratory
- VLSI Integrated Circuit Laboratory

Program Educational Objectives (PEOs)

In line with its mission and vision, the EE Department aims to produce electrical engineers with strong foundation in the relevant sciences and technology, who are able to contribute to society through practice, innovation, enterprise and leadership.

The structure of the EE program is designed to meet the following program objectives:

- **Program Educational Objective #1 (PEO1):**
Work as professional electrical engineers in their field of specialization.
- **Program Educational Objective #2 (PEO2):**
Continue improving their skills and acquiring knowledge about new technologies in their field of specialization.
- **Program Educational Objective #3 (PEO3):**
Advance in their careers and attain leadership roles.

Student Outcomes (SOs)

Student outcomes describe what students are expected to know and be able to do by the time of graduation. These relate to the knowledge, skills, and behaviors that students acquire as they progress through the program. Student outcomes (1) through (7) as defined by ABET are:

- (1) An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
- (2) An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
- (3) An ability to communicate effectively with a range of audiences.
- (4) An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
- (5) An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
- (6) An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
- (7) An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Vision

Excellence in education and scientific research in the field of electrical engineering and building a community partnership to support the knowledge economy of KSA.

Mission

Providing a high quality educational program in the field of electrical engineering that meets national and international standards, through an academic environment that encourages community partnership in support of the knowledge economy of KSA.