

**PROGRAM GOAL**  
**ELECTRICAL POWER ENGINEERING**  
**BACHELOR OF TECHNOLOGY PROGRAM**

**Goal:**

To provide an integrated educational experience directed toward development of the ability to apply pertinent knowledge to the solution of practical problems in the graduate's engineering technology specialty. To expand scientific and engineering knowledge by preparing our graduates for employment as power analysts and engineering technologists through innovative research and hands-on training that responds to the need and challenge of our ever-changing world.

**PROGRAM OBJECTIVES**  
**ELECTRICAL POWER ENGINEERING**  
**BACHELOR OF TECHNOLOGY PROGRAM**

**The program should enable the student to:**

1. Contribute to society in a broad range of careers.
2. Flourish professionally in an increasingly international and rapidly changing diverse world.
3. Effectively understand, use, and develop modern power engineering technologies and concepts.
4. Develop skills for clear communication and responsible teamwork, and to inculcate professional attitudes and ethics, so that one is prepared for the complex modern work environment
5. Acquire sufficient breadth and depth for successful subsequent graduate study, post-graduate study, or lifelong learning
6. Develop and apply critical thinking skills, enhancing the ability to address unstructured problems specific to technical specialties in power engineering.
7. Acquire the technical and managerial skills necessary to enter careers in the design, application and maintenance in power systems.

**PROGRAM OUTCOMES**  
**ELECTRICAL POWER ENGINEERING**  
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**The graduate should be able to:**

1. Demonstrate an appropriate mastery of the knowledge, techniques, skills and tools necessary for modern engineering, including the use of productivity software, power system analysis software, and computer programming, effectively in the practice of power engineering.
  
2. Apply the knowledge of:
  - a. Sciences and engineering to the analysis of power engineering systems.
  - b. Advanced mathematics, including calculus, linear algebra, probability and statistics, complex variables, vector calculus and discrete mathematics necessary to analyze and design complex electrical and power electronics devices.
  - c. Statistics/probability, transforms methods, or applied differential equations in support of power systems.
  
3. Design and conduct experiments in power engineering, make engineering measurements, analyze and interpret data, and apply experimental results to improve processes.
  
4. Apply creativity and critical thinking in
  - a. Analyzes, design, and implementation of power systems.
  - b. Analyze and implementation of high voltage engineering systems.
  
5. Function effectively on multidisciplinary teams involving people from diverse backgrounds
  
6. Identify and address problems in power engineering
  
7. Communicate effectively through a series of peer and faculty review, to include oral and written reports
  
8. Employ study skills and computer knowledge for lifelong learning for a successful career in power engineering

9. Demonstrate knowledge of the professional and ethical responsibilities incumbent upon the practicing power engineer.
10. Demonstrate the knowledge of contemporary global and societal issues and their relationship to professional ethics and engineering solutions
11. Demonstrate commitment to quality, timeliness, and continuous improvement