

Strategic Educational Plan for the Electrical Engineering

Department

1. Introduction

The electrical engineering department strategic educational plan is developed in alignment with the institutional strategic plan of the university to ensure that the department contributes effectively to the university's mission, vision, and long-term goals. The plan provides a structured framework for improving academic quality, strengthening research activities, enhancing community engagement, and preparing graduates who meet the needs of the labor market.

The department Strategic Educational plan supports the university's commitment to excellence in education, innovation, community service, and sustainable development.

2. Alignment with Institutional Mission and Vision

The electrical engineering department ensures that its objectives and activities are consistent with the university's Strategic Educational priorities by focusing on:

- ✓ Delivering high-quality engineering education
- ✓ Developing competent graduates capable of solving real-world engineering problems
- ✓ Promoting research and innovation
- ✓ Strengthening industry collaboration
- ✓ Supporting community and sustainable development

Through this alignment, the department contributes directly to achieving the university's educational and developmental goals.

3. Strategic Educational Long-term Goals of the Program

Goal 1: Enhance the Quality of Engineering Education

Objective

Improve curriculum quality to meet international standards such as ABET accreditation requirements.

Actions

- ✓ Regular review and update of the curriculum.
- ✓ Integration of modern engineering tools and technologies.
- ✓ Continuous assessment of student learning outcomes.

Key Performance Indicators (KPIs)

- ✓ Student achievement of Graduate Outcomes (GOs).

- ✓ Improvement in course assessment results.
- ✓ Positive feedback from external reviewers.

Goal 2: Strengthen Teaching and Learning Effectiveness

Objective

Implement modern teaching strategies that enhance student engagement and learning.

Actions

- ✓ Adoption of active learning and problem-based learning.
- ✓ Integration of laboratory and project-based learning.
- ✓ Use of modern software tools and simulation platforms.

KPIs

- ✓ Student satisfaction with teaching methods.
- ✓ Increased student participation in practical projects.
- ✓ Improved academic performance indicators.

Goal 3: Promote Research and Innovation

Objective

Encourage faculty and students to participate in scientific research and innovative projects.

Actions

- ✓ Support faculty research activities.
- ✓ Encourage student participation in research projects.
- ✓ Develop collaborations with research institutions.

KPIs

- ✓ Number of research publications.
- ✓ Participation in research projects and conferences.
- ✓ Student involvement in innovative engineering solutions.

Goal 4: Strengthen Industry Collaboration and Labor Market Alignment

Objective

Enhance cooperation with industry to ensure program relevance to market needs.

Actions

- ✓ Establish partnerships with electrical engineering companies and industries.
- ✓ Expand industrial training opportunities for students.
- ✓ Invite industry experts for seminars and guest lectures.

KPIs

- ✓ Number of industry partnerships.
- ✓ Student participation in internships.
- ✓ Employer satisfaction with graduates.

Goal 5: Enhance Laboratory and Practical Learning Resources

Objective

Improve laboratory facilities and practical training opportunities.

Actions

- ✓ Upgrade laboratory equipment.
- ✓ Increase the number of practical experiments.
- ✓ Integrate hardware-based engineering projects.

KPIs

- ✓ Number of laboratory experiments conducted.
- ✓ Student competency in using engineering tools.
- ✓ Laboratory utilization rates.

Goal 6: Community Engagement and Sustainable Development

Objective

Contribute to community development through engineering expertise and outreach.

Actions

- ✓ Organize engineering workshops for the community.
- ✓ Participate in renewable energy and sustainability projects.
- ✓ Support community-based technical initiatives.

KPIs

- ✓ Number of community service projects.
- ✓ Participation in sustainability initiatives.
- ✓ Community engagement activities conducted annually.

4. Implementation and Monitoring

The implementation of the strategic educational plan is monitored through the department council and program assessment committee. Progress is evaluated periodically using performance indicators and assessment reports.

Key mechanisms include:

- ✓ Annual program review meetings
- ✓ Course and program assessment reports
- ✓ Feedback from students, alumni, and industry partners

✓ Recommendations from the Industrial Advisory Board
Continuous improvement actions are implemented based on evaluation results to ensure alignment with institutional goals and ABET requirements.

5. Continuous Improvement

The strategic educational plan is reviewed and updated periodically to ensure that it remains consistent with:

- ✓ The university strategic educational plan
- ✓ technological advancements in electrical engineering
- ✓ industry and labor market needs
- ✓ ABET accreditation requirements

This continuous review ensures that the electrical engineering department maintains high academic standards and produces graduates capable of contributing effectively to society and the engineering profession.