

Administrative and Educational Support Report*

Department of Electrical Engineering

**Annual Action Plan
Annual Assessment Report**

June 2004 – May 2005

*Student Learning Outcomes for this department are available at
<http://ie.panam.edu/CoSELearningOutcomes.htm>



Annual Action Plan: June 1, 2004–May 31, 2005

Unit: Department of Electrical Engineering

UTPA Mission: The University of Texas-Pan American (UTPA) serves the higher education needs of a rapidly growing, international, multicultural population in the South Texas Region. The University preserves, transmits and creates knowledge to serve the cultural, civic, and economic advancement of the region and the state. The University provides students advanced instruction in academic programs offered through innovative delivery systems that lead to professional certification, and baccalaureate, master's and doctoral degrees. Through teaching, research, creative activity and public service, UTPA prepares students for lifelong learning and leadership roles in the state, nation and world community.

Division: Academic Affairs

Unit Head: Dr. Heinrich Foltz

Unit Mission:

The Electrical Engineering Department will provide undergraduate students from the Lower Rio Grande Valley a quality education to prepare them for the practice of engineering, with sufficient depth to continue their education beyond the baccalaureate degree. The curriculum provides skills that enhance the understanding of engineering sciences by:

- including an adequate number of courses in the fundamental areas of mathematics, science, and engineering,
- having a strong laboratory component,
- emphasizing design, and stressing verbal and written communication, and
- incorporating the use of current computational hardware and software technologies.

To promote an awareness of current and emerging industrial practice, the department provides students opportunities to participate in:

- professional organizations,
- industrial internships or co-op experiences, and
- scholarly activities including supervised research.

The department provides the opportunity for student success in the undergraduate program through:

- a readily available faculty, who continuously strive to improve their instructional materials and the methods of dissemination, practice lifelong learning by keeping abreast of and participating in the latest developments in their chosen areas of expertise, and interact across disciplines, and
- liberal student access to the computational facilities and laboratories of the department.

Unit Goal:

To provide a quality electrical engineering program grounded in the liberal arts and humanities that cultivates active life-long learning, critical thinking, problem solving, and an awareness of environmental and societal impacts of technology.

Link to UTPA Goal(s):

- 1: Ensure undergraduate student access and success
- 2: Enhance graduate education and research

Unit Objective (Action Priority: #1 is highest)	Link to UTPA Objective	Expected Outcome for Unit Objective (AA-Measurable Objective)	Strategy(ies) to Achieve Expected Outcomes	Assessment Criteria, Evaluation Methods for Expected Outcome	New Resources Needed in FY05
Program development (1)	2, 4, 6	Maintain an ongoing self-assessment process as required by ABET, University, and SACS	Develop and administer assessment tests. Develop and administer	(1) Completion of internal assessment tests on schedule. (2) Completion of student	Funds to administer tests and surveys

Annual Action Plan, June 1, 2004–May 31, 2005

Unit Objective (Action Priority: #1 is highest)	Link to UTPA Objective	Expected Outcome for Unit Objective (AA-Measurable Objective)	Strategy(ies) to Achieve Expected Outcomes	Assessment Criteria, Evaluation Methods for Expected Outcome	New Resources Needed in FY05
		standards.	alumni and employer surveys. Hold an outcomes assessment "retreat" each semester.	surveys. (3) Completion of state board (FE) exams. (4) Completion of once per semester academic assessment meeting for all faculty.	
		Work with Computer Science to develop a new degree program in Computer Engineering, and with all College of Science and Engineering departments to develop an MS option in Bioengineering.	Develop a draft curriculum for a BS in Computer Engineering degree. Develop a draft BS in Computer Engineering degree proposal for the THECB. Develop degree plan in Bioengineering as a nonsubstantive modification to existing MSE program.	Submission of Proposals for programs	None

Unit Goal:

To facilitate and reward excellence in scholarship and research.

Link to UTPA Goal(s):

- 1: Ensure undergraduate student access and success
- 2: Enhance graduate education and research

Unit Objective (Action Priority: #1 is highest)	Link to UTPA Objective	Expected Outcome for Unit Objective (AA-Measurable Objective)	Strategy(ies) to Achieve Expected Outcomes	Assessment Criteria, Evaluation Methods for Expected Outcome	New Resources Needed in FY05
Increased research (2)	2, 4, 5	Increase proposal submissions, with two specific objectives: having each graduate faculty member without external funding submit at least one major external proposal per year, and a total number of submissions equal to at least half the number of	Encourage faculty to write grant proposals. Assist junior faculty in developing research plans and proposals.	Number of proposals submitted.	Released time for faculty members with active research

Annual Action Plan, June 1, 2004–May 31, 2005

Unit Objective (Action Priority: #1 is highest)	Link to UTPA Objective	Expected Outcome for Unit Objective (AA-Measurable Objective)	Strategy(ies) to Achieve Expected Outcomes	Assessment Criteria, Evaluation Methods for Expected Outcome	New Resources Needed in FY05
		faculty.			

Unit Goal:	To promote ongoing professional, university, and community service activities by faculty, staff, and students that enhance the quality of life in our community.
Link to UTPA Goal(s):	1: Ensure undergraduate student access and success 2: Enhance graduate education and research

Unit Objective (Action Priority: #1 is highest)	Link to UTPA Objective	Expected Outcome for Unit Objective (AA-Measurable Objective)	Strategy(ies) to Achieve Expected Outcomes	Assessment Criteria, Evaluation Methods for Expected Outcome	New Resources Needed in FY05
Community service (3)	1, 2, 4	Encourage faculty to participate in outreach activities, including high-school visits, on-campus tours, local professional societies, competitions, and presentations, with a goal of having each faculty member participate in at least three recruitment/outreach events per year.	Properly reward activities in merit and tenure processes. Properly notify faculty of opportunities for outreach events.	Number of events/activities attended - target is three per year per faculty member.	None

Unit Goal:	To provide effective student recruitment, development, retention, and placement programs designed to promote and service a diverse student population.
Link to UTPA Goal(s):	1: Ensure undergraduate student access and success 2: Enhance graduate education and research

Unit Objective (Action Priority: #1 is highest)	Link to UTPA Objective	Expected Outcome for Unit Objective (AA-Measurable Objective)	Strategy(ies) to Achieve Expected Outcomes	Assessment Criteria, Evaluation Methods for Expected Outcome	New Resources Needed in FY05
Student access and success (4)	1, 2, 4	Have faculty participate in at least three recruitment/outreach events per year.	Properly reward activities in merit and tenure processes. Properly notify faculty of opportunities for outreach events.	Number of events attended.	None

Annual Action Plan, June 1, 2004–May 31, 2005

Unit Objective (Action Priority: #1 is highest)	Link to UTPA Objective	Expected Outcome for Unit Objective (AA-Measurable Objective)	Strategy(ies) to Achieve Expected Outcomes	Assessment Criteria, Evaluation Methods for Expected Outcome	New Resources Needed in FY05
		Seek funding for scholarship and work-study opportunities, with a goal of supporting 20 students per year.	Seek external funding for scholarship and work-study opportunities for EE students.	Number of students supported on scholarship or work assignments.	None



Annual Assessment Report: June 1, 2004–May 30, 2005

Unit: **Department of Electrical Engineering**

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Division: **Academic Affairs**

Unit Head: **Dr. Heinrich Foltz**

Unit Mission:

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- including an adequate number of courses in the fundamental areas of mathematics, science, and engineering,
- having a strong laboratory component,
- emphasizing design, and stressing verbal and written communication, and
- incorporating the use of current computational hardware and software technologies.

To promote an awareness of current and emerging industrial practice, the department provides students opportunities to participate in:

- professional organizations,
- industrial internships or co-op experiences, and
- scholarly activities including supervised research.

The department provides the opportunity for student success in the undergraduate program through:

- a readily available faculty, who continuously strive to improve their instructional materials and the methods of dissemination, practice lifelong learning by keeping abreast of and participating in the latest developments in their chosen areas of expertise, and interact across disciplines, and
- liberal student access to the computational facilities and laboratories of the department.

Unit Goal:

To provide a quality electrical engineering program grounded in the liberal arts and humanities that cultivates active life-long learning, critical thinking, problem solving, and an awareness of environmental and societal impacts of technology.

Link to UTPA Goal(s):

- 1: Ensure undergraduate student access and success
- 2: Enhance graduate education and research
- 3: Improve UTPA's organizational effectiveness

Unit Objective (Priority: #1 is highest)	Link to UTPA Objective	Expected Outcome	Assessment Criteria, Evaluation Methods	Assessment Results (Use actual data to describe annual performance)	Use of Results (What change was made?)
Program development (1)	2, 4, 7	Maintain an ongoing self-assessment process as	(1) Completion of internal assessment tests on	(1) Tests were administered in September	Current and previous test results were used to adjust

Annual Assessment Report, June 1, 2004–May 31, 2005

Unit Objective (Priority: #1 is highest)	Link to UTPA Objective	Expected Outcome	Assessment Criteria, Evaluation Methods	Assessment Results (Use actual data to describe annual performance)	Use of Results (What change was made?)
		required by ABET, University, and SACS standards.	schedule. (2) Completion of student surveys. (3) Completion of state board (FE) exams. (4) Completion of once per semester academic assessment meeting for all faculty.	2004, and in February 2005, in all classes specified in Assessment Plan. (2) Alumni survey was changed to exiting senior survey, and administered in May 2005. (3) State board exams were given in October 2004 and April 2005. EXPECTED OUTCOME MET.	curriculum in ELEE 2330, 2420, 2321.
		Work with Computer Science to develop a new degree program in Computer Engineering, and with all College of Science and Engineering departments to develop an MS option in Bioengineering.	Submission of Proposals for programs	BS in Computer Engineering proposal submitted to administration April 2005; sent to Board of Regents in May 2005. MS Bioengineering still under discussion. 1 of 2 EXPECTED OUTCOMES MET.	Department is awaiting decision from THECB.

Unit Goal:

To facilitate and reward excellence in scholarship and research.

Link to UTPA Goal(s):

- 1: Ensure undergraduate student access and success
- 2: Enhance graduate education and research

Unit Objective (Priority: #1 is highest)	Link to UTPA Objective	Expected Outcome	Assessment Criteria, Evaluation Methods	Assessment Results (Use actual data to describe annual performance)	Use of Results (What change was made?)
Increased research (2)	2, 4, 5	Increase proposal submissions, with two specific objectives: having each graduate faculty	Number of proposals submitted.	6 new proposals submitted, one in preparation for July submission. Five out of eight tenure/tenure track	Faculty was asked to attend two research workshops sponsored by proposal writing. Two

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Unit Objective (Priority: #1 is highest)	Link to UTPA Objective	Expected Outcome	Assessment Criteria, Evaluation Methods	Assessment Results (Use actual data to describe annual performance)	Use of Results (What change was made?)
		member without external funding submit at least one major external proposal per year, and a total number of submissions equal to at least half the number of faculty.		faculty members had proposal activity. EXPECTED OUTCOME MET.	faculty members sent to NSF to discuss grant possibilities.

Unit Goal:	To promote ongoing professional, university, and community service activities by faculty, staff, and students that enhance the quality of life in our community.
Link to UTPA Goal(s):	1: Ensure undergraduate student access and success 2: Enhance graduate education and research

Unit Objective (Priority: #1 is highest)	Link to UTPA Objective	Expected Outcome	Assessment Criteria, Evaluation Methods	Assessment Results (Use actual data to describe annual performance)	Use of Results (What change was made?)
Community service (3)	1, 2, 4	Encourage faculty to participate in outreach activities, including high-school visits, on-campus tours, local professional societies, competitions, and presentations, with a goal of having each faculty member participate in at least three recruitment/outreach events per year.	Number of events/activities attended - target is three per year per faculty member.	Total of 18 events reported by faculty, average was 2 events per faculty member. EXPECTED OUTCOME NOT MET.	Outreach committee created to find outreach opportunities and then assign faculty to participate in them.

Unit Goal:	To provide effective student recruitment, development, retention, and placement programs designed to promote and service a diverse student population.
Link to UTPA Goal(s):	1: Ensure undergraduate student access and success 2: Enhance graduate education and research

Annual Assessment Report, June 1, 2004–May 31, 2005

Unit Objective (Priority: #1 is highest)	Link to UTPA Objective	Expected Outcome	Assessment Criteria, Evaluation Methods	Assessment Results (Use actual data to describe annual performance)	Use of Results (What change was made?)
Student access and success (4)	1, 2, 4	Have faculty participate in at least three recruitment/outreach events per year.	Number of events attended.	Total of 18 events reported by faculty, average was 2 events per faculty member. EXPECTED OUTCOME NOT MET.	Outreach committee created to find outreach opportunities and then assign faculty to participate in them.
		Seek funding for scholarship and work-study opportunities, with a goal of supporting 20 students per year.	Number of students supported on scholarship or work assignments.	More than 30 students were supported through TETC program and other programs. EXPECTED OUTCOME MET.	Requested approval to roll over unspent funds from THECB-supported undergraduate assistantships.

Additional Resources Needed (if any) that were requested for FY06 during the budget cycle: 1 new faculty position and increases in operating and travel funds