

**Electrical Engineering  
Assessment of Student Learning Plan  
Kansas State University**

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BY:.....

Check the box if your program's student learning outcomes have been modified since November 2003. If so, please email (apr@ksu.edu) or attach a hard copy to this document.

**A. College, Department, and Date**

College: College of Engineering  
Department: Electrical and Computer Engineering  
Date: October 28, 2004

**B. Contact Person(s) for the Assessment Plans**

Andrew Rys, Professor  
Anil Pahwa, Professor and Head

**C. Degree Program**

B.S. in Electrical Engineering

**D. Assessment of Student Learning Three-Year Plan**

**1. Student Learning Outcome(s)**

Graduates of the computer engineering program will have:

1. an ability to design a system, component, or process to meet specifications
2. an ability to apply knowledge of science, mathematics, and engineering
3. an ability to use oral and written communications effectively

Relationship to K-State Student Learning Outcomes (insert the program SLOs and check all that apply):

| <b>University-wide SLOs (<u>Undergraduate Programs</u>)</b>                    |                  |                          |                      |                  |  |   |
|--|------------------|--------------------------|----------------------|------------------|--|---|
| <b>Program SLOs</b>  | <b>Knowledge</b> | <b>Critical Thinking</b> | <b>Communication</b> | <b>Diversity</b> | <b>Academic / Professional Integrity</b> | <b>Program SLO is conceptually different from university SLOs</b> |
| 1. an ability to design a system, component, or process to meet specifications | X                | X                        |                      |                  |  |   |
| 2. an ability to apply knowledge of science, mathematics, and engineering      | X                | X                        |                      |                  |  |   |
| 3. an ability to use oral and written communications effectively               |                  |                          | X                    |                  |  |   |

2. How will learning outcomes be assessed? What groups will be included in the assessment?

| Learning Outcomes   | Measures                       |               |          | Who will be assessed?              |
|---|--------------------------------|---------------|----------|------------------------------------|
|   | Direct                         | Indirect      | Not sure |                                    |
| 1. an ability to design a system, component or process to meet specifications | EECE 431 exams and assignments |               |          | All students enrolled in the class |
|   |                                | Senior Survey |          | All seniors                        |
| 2. the ability to apply knowledge of science, mathematics, and engineering    | EECE 511 exam questions        |               |          | All students enrolled in the class |
|   | EECE 526 exam questions        |               |          | All students enrolled in the class |
|   |                                | Senior Survey |          | All seniors                        |
| 3. an ability to use oral and written communications effectively              | EECE 590 oral presentations    |               |          | All students enrolled in the class |
|   | EECE 590 formal reports        |               |          | All students enrolled in the class |
|   |                                | Senior Survey |          | All seniors                        |

3. When will these outcomes be assessed? When and in what format will the results of the assessment be discussed?

| Learning Outcomes   | Timetable for Assessment of Learning Outcomes |                             |                    | Baseline Created?                         |
|---|---|-----------------------------|--------------------|---|
|   | 2005  | 2006                        | 2007               |   |
| 1. an ability to design a system, component or process to meet specifications | EECE 431<br>Fall and Spring                   | EECE 431<br>Fall and Spring | EECE 431<br>Spring | 3 year baseline created after Spring 2007 |
|   | Both semesters                                | Both semesters              | Spring             | 3 year baseline created 1999              |
| 2. the ability to apply knowledge of science, mathematics, and engineering    | EECE 511<br>Fall and Spring                   | EECE 511<br>Fall and Spring | EECE 511<br>Spring | 3 year baseline created after Spring 2007 |
|   | EECE 526<br>Fall and Spring                   | EECE 526<br>Fall and Spring | EECE 526<br>Spring | 3 year baseline created after Spring 2007 |
|   | Both semesters                                | Both semesters              | Spring             | 3 year baseline created 1999              |
| 3. an ability to use oral and written communications effectively              | EECE 590<br>Spring                            | EECE 590<br>Spring          | EECE 590<br>Spring | 3 year baseline created after Spring 2007 |
|   | EECE 590<br>Fall                              | EECE 590<br>Fall            | EECE 590<br>Spring | 3 year baseline created after Spring 2007 |
|   | Both semesters                                | Both Semesters              | Spring             | 3 year baseline created 1999              |

4. What is the unit's process for using assessment results to improve student learning?

| Learning Outcomes   | Improvement Process   |
|---|---|
| 1. an ability to design a system, component or process to meet specifications | The department Course and Curriculum Committee will review data each semester. If changes are indicated the results will be taken to the entire faculty for action. Senior survey results will be monitored and compared to the established baseline. |
| 2. the ability to apply knowledge of science, mathematics, and engineering    | The department Course and Curriculum Committee will review data each semester. If changes are indicated the results will be taken to the entire faculty for action. Senior survey results will be monitored and compared to the established baseline. |
| 3. an ability to use oral and written communications effectively              | The department Course and Curriculum Committee will review data each semester. If changes are indicated the results will be taken to the entire faculty for action. Senior survey results will be monitored and compared to the established baseline. |