

**Assessment Plan  
Control Systems Engineering Program  
College of Engineering, Architecture and Technology  
Oklahoma State University  
Summer 2002**

**1. Name of Academic Program**

Control Systems Engineering (CSE)

**2. Degree Programs that are assessed under this plan**

M.S. in Control Systems Engineering (MSCSE)

**3. Mission, goal and objectives of the MSCSE program**

**MISSION**

The OSU Control Systems Engineering Program exists to provide engineers and scientists with knowledge, skills and techniques to facilitate research and employment in the area of controls engineering.

**GOALS**

**Goals for Instruction**

- Goal 1: Offer a quality program that is accessible to traditional full-time on-campus students and working professionals seeking a degree on a part-time basis.
- Goal 2: Seek to offer courses that are relevant and applicable to the current technical environment.
- Goal 3: Actively seek outstanding instructors and provide instructional support for improvement of teaching effectiveness.
- Goal 4: Actively recruit outstanding students and educate them to be highly skilled control systems engineers.

### **Goals for Research**

- Goal 1: Develop and strengthen relationships between OSU and industry.
- Goal 2: Match students with accomplished faculty to facilitate research activity in control systems engineering.

### **Goals for Outreach**

- Goal 1: Develop and strengthen relationships between OSU and industry by offering educational programs off-campus through distance learning.
- Goal 2: Contribute to the economic growth of the state, and nation by fostering workforce development.
- Goal 3: Provide reliable, quality distance learning instruction to reach students at any location.

## **OBJECTIVES**

### **Objectives for Instruction**

- Goal 1:** Offer a quality program that is accessible to traditional full-time on-campus students and working professionals seeking a degree on a part-time basis.

Objectives related to this goal are:

- 1. Stay abreast of developing trends in engineering education.
- 2. Provide adequate flexibility in scheduling and course delivery.
- 3. Continuously assess student satisfaction.

- Goal 2:** Seek to offer courses that are relevant and applicable to the current technical environment.

Objectives related to this goal are:

- 1. Review course offerings once each year.
- 2. Utilize feedback from students, industry and faculty to continuously improve course offerings and introduce timely topics.
- 3. Make adjustments to courses after reviewing evaluations.

- Goal 3:** Actively seek outstanding instructors and provide instructional support for improvement of teaching effectiveness.

Objectives related to this goal are:

- 1. Seek faculty members with extensive controls engineering experience.
- 2. Ensure instructors are aware of limitations and opportunities that distance learning education provides
- 3. Encourage self-evaluation by instructors.

**Goal 4:** Actively recruit outstanding students and educate them to be highly skilled controls engineers.

Objectives related to this goal are:

1. Provide ample information regarding program admission.
2. Ensure that all applicants meet minimum criteria for admission.
3. Devote necessary resources for marketing of the program.
4. Provide direction and advising that will assist students in reaching their professional goals.

### **Goals for Research**

**Goal 1:** Develop and strengthen relationships between OSU and industry.

Objectives related to this goal are:

1. Seek accomplished industry leaders to serve in an advisory capacity.
2. Increase awareness of the willingness and capabilities of the faculty to collaborate with industry

**Goal 2.** Match students with accomplished faculty to facilitate research activity in control systems engineering.

Objectives related to this goal are:

1. Encourage faculty members to find funding opportunities.
2. Encourage faculty members and students to present papers in technical or educational conferences.

### **Goals for Outreach**

**Goal 1:** Develop and strengthen relationships between OSU and industry by offering educational programs off-campus through distance learning.

Objectives related to this goal are:

1. Engage in dialog with employers to assess their personnel needs.
2. Provide assistance to companies that wish to provide on-site educational opportunities to their employees.

**Goal 2:** Contribute to the economic growth of the state, and nation by fostering workforce development.

Objectives related to this goal are:

1. Assist in aligning employers with skilled CSE graduates.
2. Seek to increase value of current employees through continuing education.

**Goal 3:** Provide quality distance learning instruction to reach students at any location.

Objectives related to this goal are:

1. Stay abreast of latest distance learning technology

2. Assess the student's receiving capabilities of various distance learning technology.
3. Be proactive in addressing technical and logistical problems.
4. Provide high level of customer service to all students and instructors.

#### **4. Expected Student Outcomes of the Control Systems Engineering Program**

The expected outcomes for graduates of the MSCSE are:

- Implement modern control techniques,
- Keep up with the latest control and data acquisition strategies,
- Deal with noisy, non-linear and non-stationary processes,
- Develop new production and quality control procedures,
- Work with real-time, distributed software,
- Develop advanced controls procedures,
- Continue to learn concepts, tools and skills,
- Articulate and defend their ideas in a professional manner,
- Understand professional, ethical and social responsibilities,
- Recognize contemporary professional, societal and global issues and be aware of and respect diversity.

#### **5. Methods used to evaluate student achievement**

The MSCSE program has used the following methods to evaluate student performance and achievement

- Annual student satisfaction survey
- Feedback from employers
- Feedback from MSCSE Faculty

#### **6. Assessment results are integrated into curriculum and planning in the following manner:**

- Students are solicited once annually to evaluate the MSCSE program.
- A committee reviews suggestions for procedure changes and course topics.
- Suggested topics are matched to existing classes or the development of a new course is sought.
- Suggestions for changes in curriculum are presented to the committee in an annual meeting.