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Cover Sheet for Assessment Plans

BY:

Directions: Please complete a separate cover sheet for each degree program (e.g., Associates – Doctorate). Feel free to make copies of this sheet if needed. Those graduate programs with an integrated master's and doctoral program may submit one cover sheet. The department head and respective dean are to sign before the plans are submitted to the Provost.

Department / Unit: Engineering Technology

Title and Level of Academic Program (e.g., Chemistry, Ph.D.):
B.S. in Engineering Technology – Mechanical Engineering Technology Option

When submitting an Assessment Plan, please check and indicate when the faculty endorsed the plan.

<input checked="" type="checkbox"/> Faculty have met, reviewed, and endorsed the Assessment Plans being submitted for this degree program.	Date of Endorsement: <u>11/01/04</u>
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Acil Simmons
Department Head's Signature

11-1-04
Date

Darin E. Fulmer
College Dean's Signature
(Required for Undergraduate Programs)

7/11/05
Date

Dean of the Graduate School's Signature
(Required for Graduate Degree Programs)

Date

November 1, 2004: Assessment plans are to be sent to the respective Dean
November 29, 2004: Relevant materials are to be sent from the Deans to the Provost

B.S. in Engineering Technology – Mechanical Engineering Technology Option
Assessment of Student Learning Plan
Kansas State University

- 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: Technology and Aviation
Department: Engineering Technology
Date: October 29, 2004

B. Contact Person(s) for the Assessment Plans

Julia Morse, Associate Professor
Raju Dandu, Associate Professor, MET Program Coordinator

C. Degree Program

B.S. in Engineering Technology – Mechanical Engineering Technology Option

D. Assessment of Student Learning Three-Year Plan

1. Student Learning Outcome(s)

Of our program's fifteen Student Learning Outcomes, we have chosen to focus on the following three in the next three years:

Mechanical Engineering Technology program graduates will demonstrate:

C. Communication.

1. ability to write clear and effective technical reports, proposals, and business correspondence.
2. ability to communicate orally technical information to a variety of audiences.

D. Professional Behavior in a Diverse World.

1. understanding and respect for diversity in the workplace and the importance of working effectively as teams.

Associate degree graduates will attain a fundamental competency in each of these categories, while baccalaureate degree graduates will reach a higher level of achievement, as appropriate for that degree.

Special rationale for selecting these learning outcomes

C. Communication.

- Feedback from our Industrial Advisory Board and other industries that hire our graduates stress written and oral communication ability as a top factor in graduate success.

- A new writing center is being established in the College of Technology and Aviation. We would like to partner with our Writing Center colleagues to learn how to better assess student writing skills and how we can best help our students in this area.

D. Professional Behavior in a Diverse World.

- Feedback from our Industrial Advisory Board and other industry input indicates the importance of student ability to work effectively on team projects—a key element of this SLO.
- K-State at Salina has active programs exposing students and faculty to multi-cultural diversity. MET faculty are interested in assessing student preparedness in this area.

Relationship to K-State Student Learning Outcomes:

Program SLOs	University-wide SLOs (Undergraduate Programs)					Program SLO is conceptually different from university SLOs
	Knowledge	Critical Thinking	Communication	Diversity	Academic / Professional Integrity	
1. C.1. Ability to write clear and effective technical reports, proposals, and business correspondence			X			
2. C.2. Ability to communicate orally technical information to a variety of audiences.			X			
3. D.1. Understanding and respect for diversity in the workplace and the importance of working effectively as teams.				X		

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

Learning Outcomes	Measures			Who will be assessed?
	Direct	Indirect	Not sure	
C.1. Ability to write clear and effective technical reports, proposals, and business correspondence	Capstone course project report [rubric]			All students enrolled in the course
			Feedback from internship employers [mid-internship review, questionnaire, or other tool to be developed]	Students who participate in internships arranged through Career Services
			Feedback from employers of graduates [survey]	Students recently employed
	Project/assignment rubrics in a sample of courses (ECET 304, MET 481, MET 333, ENGL 302)			Students enrolled in these courses
C.2. Ability to communicate orally technical information to a variety of audiences.	Capstone course project presentation [rubric – instructor/audience evaluators, usually including industry representatives]			All students enrolled in the course
			Feedback from internship employers [mid-internship review, questionnaire, or other tool to be developed]	Students who participate in internships arranged through Career Services
			Feedback from employers of graduates [survey]	Students recently employed
	Course assignment assessment (from a sample of courses,			Students enrolled in courses

	selected as deemed appropriate: MET 353, MET 481, MET 471, SPCH 106, etc.)			
D.1. Understanding and respect for diversity in the workplace and the importance of working effectively as teams.	Capstone project-tool to assess team skills	Capstone project – student’s self-report of workplace team and diversity skills confidence level [rubric]		All students enrolled in the course
	Course assignment assessment (from a sample of courses, selected as deemed appropriate: MET 365, ECET 304, MET 481, etc.)			All students enrolled in the course
			Feedback from employers of graduates [survey]	Students recently employed

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 Learning Outcomes			Discussion of Results
	2005	2006	2007	
C.1. Ability to write clear and effective technical reports, proposals, and business correspondence	<i>Spring senior capstone project report</i>	<i>Spring senior capstone project report</i>	<i>Spring senior capstone project report</i>	Annual meeting of program faculty , currently planned a few weeks into Spring semester. (Timing may change for most effective discussion.) Additional informal discussion is expected throughout the assessment process. Based on results, appropriate action will be discussed. Annual industrial advisory board meeting ; results to be shared with industry representatives, program faculty, and student representatives in attendance. Reaction and suggestions of board members will be noted and considered toward improvement efforts.
	<i>Summer internship responses from employers</i>	<i>Summer internship responses from employers</i>	<i>Summer internship responses from employers</i>	
	<i>Feedback from employers of graduates [survey]</i>	<i>Feedback from employers of graduates [survey]</i>	<i>Feedback from employers of graduates [survey]</i>	
	<i>Project/Assignment assessment from appropriate courses</i>	<i>Project/Assignment assessment from appropriate courses</i>	<i>Project/Assignment assessment from appropriate courses</i>	
C.2. Ability to communicate orally		<i>Spring senior capstone</i>	<i>Spring senior capstone</i>	Annual meeting of program faculty , currently planned a few

technical information to a variety of audiences.		<i>project report</i>	<i>project report</i>	<p>weeks into Spring semester. (Timing may change for most effective discussion.) Additional informal discussion is expected throughout the assessment process. Based on results, appropriate action will be discussed.</p> <p>Annual industrial advisory board meeting; results to be shared with industry representatives, program faculty, and student representatives in attendance. Reaction and suggestions of board members will be noted and considered toward improvement efforts.</p>
		<i>Summer internship responses from employers</i>	<i>Summer internship responses from employers</i>	
		<i>Feedback from employers of graduates [survey]</i>	<i>Feedback from employers of graduates [survey]</i>	
		<i>Project/Assignment assessment from appropriate courses</i>	<i>Project/Assignment assessment from appropriate courses</i>	
<p>D.1. Understanding and respect for diversity in the workplace and the importance of working effectively as teams.</p>			<p><i>Capstone project- tool to assess team skills</i></p> <p><i>Capstone project - student's self-report of workplace team and diversity skills confidence level [rubric]</i></p>	<p>Annual meeting of program faculty, currently planned a few weeks into Spring semester. (Timing may change for most effective discussion.) Additional informal discussion is expected throughout the assessment process. Based on results, appropriate action will be discussed.</p> <p>Annual industrial advisory board meeting; results to be shared with industry representatives, program faculty, and student representatives in attendance. Reaction and suggestions of board members will be noted and considered toward improvement efforts.</p>
			<i>Feedback from employers of graduates [survey]</i>	
			<i>Project/Assignment assessment from appropriate courses</i>	

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

Learning Outcomes	Improvement plan
C.1. Ability to write clear and effective technical reports, proposals, and	Our program area would like to take advantage of the expertise and resources of K-State at Salina's Writing Center, which has a mission to assist faculty in writing-across-the curriculum activities. We

business correspondence	believe development of good rubrics will help us as faculty with our own understanding of qualities of good writing to encourage among our students. We are also excited about the possibility of consulting with the Writing Center in order to develop more informed improvement strategies as may be indicated by assessment results.
C.2. Ability to communicate orally technical information to a variety of audiences.	Assessment will help us determine our students' current level of achievement compared to industry needs. Improvement efforts will be developed based on the need indicated by assessment results.
D.1. Understanding and respect for diversity in the workplace and the importance of working effectively as teams.	Assessment will help us determine our students' current level of achievement of this outcome. Improvement efforts will be developed based on the need indicated by assessment results. We may consult with industry representatives and/or members of the K-State at Salina Multicultural Committee.

Mechanical Engineering Technology Student Learning Outcomes

The following student-learning outcomes are appropriate for all graduates of associate degree and baccalaureate degree program options in the Department. Associate degree graduates will attain a fundamental competency in each of these categories, while baccalaureate degree graduates will reach a higher level of achievement, as appropriate for that degree.

Mechanical Engineering Technology program graduates will demonstrate:

A. Technical Skills and Knowledge.

1. the application of principles of engineering materials, applied mechanics, and applied fluid sciences.
2. the application of manufacturing processes, machine design, instrumentation and automation.
3. the application of concepts of technical graphics, computer-aided drafting, design, and modeling.
4. understanding of fundamentals of applied thermal sciences, basic electronics, industrial controls, and computer programming.

B. Creative Design, Application, and Lifelong Learning.

1. ability to analyze, design, test, and implement mechanical systems and processes.
2. ability to design, conduct, and interpret experiments.
3. application of applied physics and chemistry to mechanical systems and processes in a rigorous mathematical environment at or above the level of algebra and trigonometry.
4. ability to be life-long learners.
5. commitment to quality and continuous improvement

C. Communication.

1. ability to write clear and effective technical reports, proposals, and business correspondence.
2. ability to communicate orally technical information to a variety of audiences.

D. Professional Behavior in a Diverse World.

1. understanding and respect for diversity in the workplace and the importance of working effectively as teams.
2. awareness and understanding of the impact of technology on society.

E. Professional Development.

1. ability to apply project management techniques to mechanical and manufacturing systems.
2. ability to practice professional ethics and social responsibility.