

Outcomes Assessment Plan

Department of Industrial and Enterprise Systems Engineering (IESE)

I. Process Used in Developing the Plan

The Industrial and Enterprise Systems Engineering Outcome Assessment Plan (“Plan”) is being coordinated by the Associate Head for Undergraduate Programs, Professor Manssour H. Moeinzadeh, and the Associate Head for Graduate Programs, Professor Carolyn Beck, with advisory input from the Department’s faculty, Courses and Curriculum Committee, Assessment and Continuous Improvement Committee, Graduate Programs Committee, and Alumni Advisory and Industry Board. The Plan is an evolution and extension of activities that have been used by our department for many years to assess and improve the quality of our educational programs.

II. Desired Learning Outcomes

In accordance with the ABET (Accreditation Board for Engineering and Technology) criteria for program outcomes, the B.S. graduates of the Department of Industrial and Enterprise Systems Engineering should have:

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs
- (d) an ability to function on multi-disciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global and societal context
- (i) a recognition of the need for, and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues

- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice
- (l) an ability to understand how to apply business fundamentals to promote utilization of new technology

M.S. and Ph.D. graduates should have all of the above plus an ability to develop and conduct independent research.

The individual courses in the IE and GE curricula are mapped to the outcomes listed above, such that each course produces several, but not necessarily all, of the outcomes listed. The combined effect of all the required courses in both curricula serve to produce each desired learning outcome several times over. An example of the desired outcomes mapping is given in Appendix A, pages A-1 & A-2, which shows the outcomes mappings for the General Engineering Program. A similar mapping is used for the Industrial Engineering Program as well.

III. Measurement Instruments and Techniques

The Department of Industrial and Enterprise Systems Engineering plans to evaluate the success of the outcomes it has set for its graduates in the following ways:

A. Undergraduates

(a) Available Instruments

1. Homework, exams, reports, laboratories and grades associated with undergraduate courses.
2. Capstone design course

The education of our undergraduate students culminates with a capstone design project. The quality and quantity of the work done in this course represents an outstanding example of the talents they have acquired during their college education. In addition, their efforts in this course are well documented: the final reports as well as video recordings of the project presentations are available in the Department files.

3. Capstone engineering design national competition award summaries (annual Lincoln Arc Welding Foundation Awards)
4. Senior Capstone Design sponsor's survey
5. Instructor/Course Evaluation System (ICES) results
6. Employment statistics

College of Engineering Placement Survey of new graduates. Examples include starting salaries, number of interviews, offers received, and percent of graduates who continue their education.

7. Alumni surveys

- a. Senior survey conducted by the University of Illinois at Urbana-Champaign
- b. College of Engineering surveys of alumni 5, 10, 20, 25, and 30 years after graduation
- c. Senior exit survey conducted by the Department

8. National and international examinations

- a. The Fundamentals of Engineering examination (FE): This is the first test that must be taken to become a professional engineering. Seniors are encouraged to take the exam.
- b. The Graduate Record Examination (GRE): Seniors interested in graduate school are encouraged to take the exam.

9. National and international fellowship and similar prestigious awards

Feedback from student societies

The Department Head and Associate Head for Undergraduate Programs meet periodically with a group of student representatives from student societies, such as IIE, Gamma Epsilon, ISGE, and Alpha Pi Mu to obtain feedback on the undergraduate program.

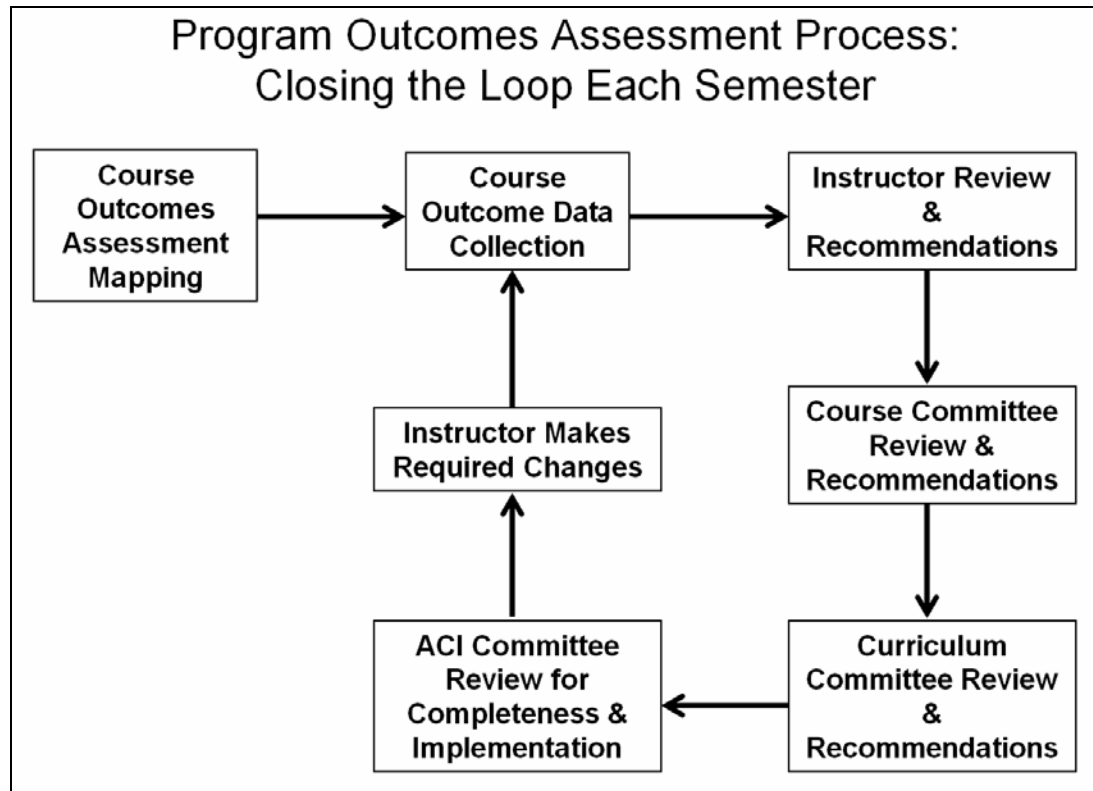
10. Alumni board reviews

The IESE alumni board meets twice per semester with the Department. A portion of these meetings is set aside to solicit input from the Board on the programs of the Department.

(b) Assessment Techniques

The assessment processes for the desired program outcomes for both curricula are managed through use of a custom-developed database which stores all information for the required courses for the IE and GE curricula. This includes, courses, sections, instructor information, outcome mappings, assessment data, and the various reviewing committees - including the Course Committees, the Curriculum Committee, and the Assessment and Continuous Improvement Committee (ACI). The ACI committee has the responsibility to review the course outcome data, as well as the recommendations of the Instructor, the

Course Committee and the Curriculum Committee and compile the recommendations for delivery to the instructor for any changes that must be made. The semester of implementation is recorded as well as implementation details. This closes the loop to make sure that appropriate actions are made to maintain the high quality of the educational experience in each required course in the program. An illustration of the process and the closed feedback loop is shown below:



For each required course in the two curricula, a subset of the outcomes mapping for that course (typically 3 per course/section) is assessed in a manner that each outcome (a-1) is assessed multiple times for each curricula. A sample of the outcomes assessment mapping is shown in Appendix pages A-3, 4.

The assessment data for each item assessed is taken from normal student work product, including exam problems, homework sets, reports, presentations, final exam problems, etc. For each item assessed, criteria are established by the instructor for passing the assessment. The assessment item is “scored” and the results are compiled showing the percent passing the assessment, the average score, and the standard deviation. The instructor then determines if corrective actions are necessary for the course/section. Instructor recommendations are then reviewed by the Course Committee, then by the Curriculum Committee, and finally by the ABET Continuous Improvement Committee to assure that the corrective measures are reasonable and completed.

A sample of the instructor Assessment Data Collection Form is given in Appendix page A-5. A sample of the Assessment Review form is given on Appendix pages A-6, 7.

A web-based user interface has been developed for deployment of the database using Microsoft's Active Server Pages (ASP) on an Internet Information Services (IIS) web server. This allows deployment of the database for data entry by each instructor via a user-friendly web-based form. This includes uploading a PDF file of an example of the assessment item to the database. The PDF file may be an exam question, homework problem, etc. These PDF files are related to each outcome assessment such that they are immediately available for review by the instructor, the various committees, etc. via the web interface.

Examples of two database interface forms are given in Appendix A-8. An example of one of the web data entry and review pages is given on Appendix A-9.

B. Graduates

1. Thesis

M.S. students are required to write a thesis or do an independent study project. Ph.D. students must write a thesis and present an oral defense of their thesis.

2. Qualifying and preliminary exams

Ph.D. students are required to pass a qualifying exam which consists of written and oral examinations on their coursework. In addition, Ph.D. students must prepare a thesis proposal, including written and oral presentations.

3. Homework, exams, reports, laboratories, and grades associated with graduate courses.

4. Instructor/Course Evaluation system (ICES) results

5. Employment statistics

Examples include place of employment, starting salaries, number of interviews and offers received.

6. Graduate student survey

7. National and international fellowship and similar prestigious awards

8. Alumni board reviews

The IESE alumni board meets twice per year with the Department. A portion of these meetings is set aside to solicit input from the Board on the programs of the Department

Additional data provided in Appendix B.

IV. Process for Using the Results

For many years, we have been using the results of assessments to continuously improve the quality of our programs. The results are presented to: (i) the Accreditation Board for Engineering and Technology (ABET), (ii) the Department's faculty, (iii) Department committees, (iv) our alumni, and (v) the College and Campus administration.

The frequency and extent of the processes used by the Department vary from the daily discussion between our faculty and students to the two or more formal procedures that are described below.

1. A review is conducted every six years by the Department and College for the Accreditation Board for Engineering and Technology (ABET). The self-examination takes place over an approximately two-year period and includes almost every aspect of the Department's programs. Several man-months of effort are invested in the Department's self-examination, and the review culminates in a two-volume report that contains about 100 pages of material.
2. The Curriculum Committee, Assessment and Continuous Improvement Committee, and the Graduate Programs Committee meet periodically during both semesters to modify the undergraduate and graduate programs, based on feedback received from our students, alumni, faculty, and other sources.

V. Timetable for Implementation

All undergraduate measurement instruments and techniques are already in use. Newly developed web-based program objectives and outcome assessment process will be employed on a trial basis in the Spring 2008 semester with full implementations in 2008-2009 academic year. All graduate measurement instruments and techniques are already in use with the exception of the graduate student surveys, which we plan to implement in the 2008-2009 academic year.

VI. Support Needs

The continued support of the College of Engineering and other components of the University of Illinois in collecting, analyzing, and presenting survey results, ICES scores, employment data, etc., will be needed.

Although development of the Microsoft Access ABET Assessment Database as well as the Microsoft Active Server Page web user interface has been accomplished by IESE personnel, support will be needed for equipment and IT concerns for housing the database data and web site. This will include a web server running Microsoft Internet Information Services (IIS). Other minor IT support may be required from time to time. A \$1000.00 grant from CTE has been awarded by the UIUC Center for Teaching Excellence to underwrite in part the data collection and implementation of the assessment plan.

VII. Plan Modification

If a measurement instrument heretofore overlooked or later developed by any agency is judged by the Department's Assessment and Continuous Improvement Committee or Plan Coordinator to complement, replace, or enhance the existing Plan instruments of Section III, the Department of Industrial and Enterprise Systems Engineering reserves the right, upon approval of the Campus Outcome Assessment Committee, to modify its Plan to include it.

Appendix A – Supporting Documents

A-1

Department of IESE
 General Engineering
 ABET Criterion 3
 Course Outcomes Mappings

GE
 Crit 3 - Outcomes

Program Outcomes List:

- (a) an ability to apply knowledge of mathematics, science, and applied sciences
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to formulate or design a system, process or program to meet desired needs
- (d) an ability to function on multi-disciplinary teams
- (e) an ability to identify and solve applied science problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of solutions in a global and societal context
- (i) a recognition of the need for, and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern scientific and technical tools necessary for professional practice
- (l) an ability to understand how to apply business fundamentals to promote utilization of new technology

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
GE 100 Intro to General Engineering	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE 101 Engineering Graphics & Design	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
GE 161 Intro to Business Side of Eng	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE 310 Intro to General Eng Design	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
GE 311 Engineering Design Analysis	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
GE 312 Instrumentation and Test Lab	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	
GE 320 Introductory Control Systems	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE 330 OR Meth for Profit & Value Eng	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
GE 331 Analyt Methods for Uncertainty	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
GE 400 Engineering Law				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
GE 410 Component Design	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
GE 413 Eng Design Optimization	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Appendix A – Supporting Documents

Department of IESE
 General Engineering
 ABET Criterion 3
 Course Outcomes and Mappings

GE
 Crit 3 - Outcomes

Mapped:

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
GE 420 Digital Control of Dynm System	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
GE 423 Introduction to Mechatronics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
GE 424 State Space Desgn Meth in Cntl	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
GE 490 General Engineering Seminar						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
GE 494 Senior Engineering Project, I	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE 495 Senior Engineering Project, II	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
Outcomes Mappings Totals:	16	8	15	8	17	11	14	15	15	13	16	5

Department of IESE
 General Engineering
 ABET Criterion 3
 Course Outcomes and Assessments Mappings

GE
 Crit 3 - Outcomes

Program Outcomes List:

- (a) an ability to apply knowledge of mathematics, science, and applied sciences
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to formulate or design a system, process or program to meet desired needs
- (d) an ability to function on multi-disciplinary teams
- (e) an ability to identify and solve applied science problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of solutions in a global and societal context
- (i) a recognition of the need for, and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern scientific and technical tools necessary for professional practice
- (l) an ability to understand how to apply business fundamentals to promote utilization of new technology

	Mapped: <input checked="" type="checkbox"/>	Assessed: <input checked="" type="checkbox"/>	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
GE 100 Intro to General Engineering			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE 101 Engineering Graphics & Design			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
GE 161 Intro to Business Side of Eng			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE 310 Intro to General Eng Design			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
GE 311 Engineering Design Analysis			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
GE 312 Instrumentation and Test Lab			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	
GE 320 Introductory Control Systems			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE 330 OR Meth for Profit & Value Eng			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
GE 331 Analyt Methods for Uncertainty			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
GE 400 Engineering Law						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
GE 410 Component Design			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
GE 413 Eng Design Optimization			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Appendix A – Supporting Documents

Department of IESE
 General Engineering
 ABET Criterion 3
 Course Outcomes and Assessments Mapping

GE
 Crit 3 - Outcomes

Mapped: Assessed:

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
GE 420 Digital Control of Dynm System	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
GE 423 Introduction to Mechatronics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
GE 424 State Space Desgn Meth in Cntl	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
GE 490 General Engineering Seminar						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
GE 494 Senior Engineering Project, I	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GE 495 Senior Engineering Project, II	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
Outcomes Mappings Totals:	16	8	15	8	17	11	14	15	15	13	16	5
Outcomes Assessments Totals:	10	4	9	3	9	4	4	3	4	4	10	3

ABET Criterion 3

Program Outcomes Assesments Items for 2008-SP

Curriculum: General Engineering
Course: GE 101
Section: AL1
Course Title: Engineering Graphics & Design
Instructor: Leake, James

Outcomes Assessment Data:

(c) an ability to formulate or design a system, process or program to meet desired needs

Method: Final Exam Question 5/6/08

Item: Problem 3. on the exam. The problem requires that the student to review a set of drawings for compliance to a set of design criteria. 20 points for the problem.

Criteria: 12 out of 20 points is passing the assessment.

Percent Pass: 92 Ave: 18.2 Std Dev: 0.12

Comments:

(d) an ability to function on multi-disciplinary teams

Method: Presentation 4/27/08

Item: Presentation by the team in a team project to analyze and design a new product. This will include the efectiveness of the work of the team, the quality of the presentation, and the final design work product.

Criteria: 5 our 10 possible points are passing.

Percent Pass: 95 Ave: 8.8 Std Dev: 0.2

Comments:

(e) an ability to identify and solve applied science problems

Method: Exam Question 4/21/08

Item: Final Exam Problem 6 - The selection of the appropriate drawing views, 3D views, etc. Including the appropriate dimensioning of the drawing.

Criteria: 12 our ot 20 possible points.

Percent Pass: 89 Ave: 15 Std Dev: 0.23

Comments:

Instructor Review:

Date Reviewed: 5/6/2008

Recommendations:

Comments:

Actions Taken:

Review Completed:

ABET Criterion 3

Program Outcomes Assesments Items for 2008-SP

Curriculum: General Engineering
Course: GE 101
Section: AL1
Course Title: Engineering Graphics & Design
Instructor: Leake, James

Course Committee Review:

Date Reviewed: 5/6/2008
Recommendations: Accept Instructor Recommendations
Comments: none
Review Completed:

Curriculum Committee Review:

Date Reviewed: 5/6/2008
Recommendations: No Changes Necessary
Comments: none
Review Completed:

ACI Committee Review:

Date Reviewed: 5/6/2008
Recommendations: Review & Implimentation Complete
Comments: none
Review Completed:

Implementation:

Corrective Actions: Lectures and other items were developed per the instructors recommendations.

Implimentation Semester: 2008-FA

All Tasks Complete:

Date All Tasks Complete: 5/25/2008

ABET Functions Switchboard

Select Function

Courses	Personnel	ABET Settings	ABET Maps	Assessments
IESE Course Data Retrieval	IESE Instructor Information	Criterion 2 ABET Objectives Listing	Criterion 2 ABET Course Objectives Map	View Outcomes Assessments
IESE Course Information	IESE Curricula Areas & Committees	Criterion 3 ABET Outcomes Listing	Criterion 3 ABET Course Outcomes Map	
IESE Course Listing	IESE Dept Committees		Crit 3 - Set Course Outcomes Assessments	
ABET Reports				
Close				

Outcomes Assessments Items for: GE 101 Section: AL1

1/3

00565

Go To Record: Edit this record

	Enter	Date:	Edit By	Date:
Outcome:	C	an ability to formulate or design a system, process or program to meet desired needs		
Assess Method:	Final Exam Question	HSW	4/7/2008	HSW 4/7/2008
Assess Item Desc:	Problem 3. on the exam. The problem requires that the student to review a set of drawings for compliance to a set of design criteria. 20 points for the problem.			
Assess Item PDF:	OutcomeAssessmentItemID_000565.pdf	<input type="button" value="Set PDF File"/>	Click Here to Open PDF	
Assess Criteria:	12 out of 20 points is passing the assessment.			
Assess Date:	5/6/08			
Percent Passed:	92			
Average:	18.2			
Std Dev:	0.12			
Comments:	<input type="text"/>			

Data Complete:

Instructor Course Outcome Data Entry - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://128.174.193.156/abet_jese/AssessmentItems_Instructor_Input.asp?lngOutcomeAssessmentItemID=565 Go Links >>

Google G Go M Bookmarks 35 blocked Settings

Instructor Course Outcome Data Entry

[Login Again](#) [Welcome Form](#) [Instructor Course List](#)

INSTRUCTIONS:

Fill in the Green Form Below with data describing the type of assessment, the description of the assessment item, Criteria for passing the assessment, a PDF file to upload which shows the assessment item, and the date of the assessment.

Then fill in the percent of student passing the assessment, the average score (on the assessment item alone), and the standard deviation.

Check Data Entry Complete when done.

Course:	GE 101
Section:	AL1
Outcome:	c - an ability to formulate or design a system, process or program to meet desired needs

***Required Data**

*Assessment Item Type:	Final Exam Question
*Item Description:	Problem 3. on the exam. The problem requires that the student to review a set of drawings for compliance to a set of design criteria. 20 points for the problem.
*PDF File of Item Above:	Input PDF File => <input type="text"/> <input type="button" value="Browse..."/>
*Criteria for Passing this Assessment:	12 out of 20 points is passing the assessment.
*Date of Assessment:	5/6/08 (m/d/yy)
*Percent Passing:	92 (Passing this assessment item only - according to the criteria above.)
*Average Score:	18.2 (Of the scores on this assessment item only.)
*Standard Dev:	0.12 (Of the scores on this assessment item only.)
Comments:	<input type="text"/>
*Data Entry Complete	<input checked="" type="checkbox"/>
<input type="button" value="Save Changes"/> <input type="button" value="Exit Without Saving"/>	

IESE Grad Programs Outcome Assessment Plan**The Graduate Program****Student Profiles:**

Admission to our graduate programs is influenced by a large amount of data contained in student applications, such as GRE scores, course grades and the like. We are considering the feasibility of creating a concise student profile that would allow us to monitor the quality of successive classes of entering graduate students. Correlating such a profile with success rates in our program could help us sharpen our admission criteria. We have recently implemented a departmental web-based application service, which will be extremely useful towards this goal.

Acceptance Rates:

The percentage of those offers for admission to our Masters and Ph.D. programs and offers of financial support, which are accepted, is an indicator of the reputation of our programs. Monitoring the rates of change of these from year to year, and, more importantly, following up with selected phone and email interviews could be helpful in identifying aspects of our programs that need further study. We plan to regularize such inquiries as part of our assessment plan.

Time-To-Degree:

The number of semesters that a graduate student requires to complete a degree is one of the criteria often used for determining the health of a graduate program. We plan to sample our recently successful students, both on the Masters as well as the Ph.D. level to determine percentage of time spent on teaching, course work, preparation for exams and theses writing in order to evaluate our program criteria in these categories.

Alumni Relations:

Our graduates follow highly varied career paths. This makes it difficult to maintain contact beyond a first or second job change. We plan to utilize the Internet and other electronic and traditional means to establish and maintain contact with as many of our graduates as possible, and then build a data base that will allow us to document the careers of our graduates as part of the assessment of our programs. We also plan to strengthen ties with current students in the department in order to improve Alumni communications. The IESE alumni board meets once per semester with the department. A portion of these meetings is set aside to solicit input from the board on the programs of the department.

Support Needs:

Some of the activities described above will be incorporated into the day to day functions of the department. However, surveys and focus groups can be expensive and time consuming. It would be very helpful if we could increasingly call upon the Office of Instructional Resources to assist us in these activities.

Specific Assessments:

1. Thesis - M. S. students are required to write a thesis or a research project report. Ph. D. students must write a thesis and present an oral defense of their thesis.
2. Qualifying and preliminary exams - Ph. D. students are required to pass a qualifying exam which consists of written and oral examinations on their coursework. In addition Ph. D. students must prepare a thesis proposal including written and oral presentations.
3. Homework, exams, reports, laboratories and grades associated with graduate courses.
4. Instructor/Course Evaluation System (ICES) results for teaching assistantships
5. Employment statistics - Examples include place of employment, starting salaries, number of interviews and offers received.
6. Graduate student surveys
7. National and international fellowship and similar prestigious awards
8. Alumni board reviews - The IESE alumni board meets twice per year with the department. A portion of these meetings is set aside to solicit input from the board on the programs of the department.