

Action Requested

- New Course
- Modification of Existing Course
- Deletion of Course

Complete the following sections:

- New Courses - B & C completely
- Modifications - A modified information, B & C completely
- Deletions - A & C completely

Date 2/10/2004

Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Home Department</td> <td style="width: 10%;">Div #</td> <td style="width: 60%;">Course Number</td> </tr> <tr> <td>Engineering</td> <td>258</td> <td>110</td> </tr> <tr> <td colspan="3">Cross Listed Course Information</td> </tr> <tr> <td colspan="3"> </td> </tr> <tr> <td colspan="3">Course Title</td> </tr> <tr> <td colspan="3">The Engineering Profession</td> </tr> <tr> <td>TITLE ABBREVIATION</td> <td>Time Sched Max = 19 Spaces</td> <td rowspan="2">The Engr. Profession</td> </tr> <tr> <td> </td> <td>Transcript Max = 20 Spaces</td> </tr> <tr> <td colspan="3">The Engr. Profession</td> </tr> <tr> <td colspan="3">Course Description</td> </tr> <tr> <td colspan="3">Course Description for Official Publication (Max = 50 words) This course provides exposure to each engineering discipline and helps undecided students select a major. 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- Approval
- Curriculum Comm. _____
 - Faculty _____
 - Rackham _____
 - Cross listed Unit 1 _____
 - Cross listed Unit 2 _____

Submitted By: Home Dept. Cross-listed Dept.

Name, Signature & Department

Home Dept. Gary D. Herrin, Engineering Division

Cross-listed Dept(s): _____

SUPPORTING STATEMENT

see attached documentation.....

Ruled area with multiple horizontal lines for writing the supporting statement.

Are any special resources or facilities required for this course?

Yes No

Detail the Special requirements

Ruled area with multiple horizontal lines for detailing special requirements.

Background for Requested Change

Engineering 195 (Engineering the Future) was originally created by Professor Semyon Meerkov of the EECS Department. Prof. Meerkov assembled a team of senior faculty from each engineering department, the Vice President of Research and a past President of the University to create this course. The course was first offered Winter 2001 and has been offered semesters I and II, ever since.

The original impetus for the course was to provide a service to the first year and undecided students of the college to make better and more informed decisions as to a major within engineering. As of now, the current undecided undergraduate student population is greater than 1600. Eng 195 has consistently enrolled greater than 100 students in the fall semester and approximately 70 students in the winter semester. Current enrollments are 192 Fall (2003) and 152 (Winter 2004).

Beginning Fall 2003, Prof. Meerkov handed off the coordination of Eng 195 to Profs Gibala (MSE) and Meadows (NA & ME). They have continued with the same basic format of the course as originally developed. The first week and last week of the course are handled by Gibala and Meadows which serve as an introduction to the profession of engineering and the professional responsibilities of engineers. Each intermediate week of the semester is devoted to one engineering department within the College. Weekly homework assignments are given from each respective engineering department. Hence, students are exposed to a description of each engineering discipline as well as a fundamental concept underlying that discipline.

Student response has been excellent to this course. Elective enrollments have continued to rise. Instructor evaluations have consistently ranged between 3.8 to 4.3 for Q1 and Q2. Student open form responses have also been very good. College of Engineering support for this course now appears to have stabilized.

Hence, it is now requested that this course be given a permanent Engineering course number and become a formal but elective part of the first year program.

Current Listing:

Engineering the Future

ENG 195

Course description and organization (from current web site)

The goal of this course is two-fold: First, it is intended to expose students to all twelve engineering disciplines available at the College of Engineering and, thus, help undecided students to select a major in engineering. Second, is to teach fundamentals from each discipline by formulating and solving one of the central problems available in the field and, thus, provide the students with some knowledge in every engineering discipline.

Accordingly, each week will be devoted to a particular engineering field, and two lectures will be presented. The first one will provide a general description of the field, including its intellectual and technological foundations, job opportunities, course requirements, etc. The second lecture will be devoted to a specific problem from this discipline, including the problem formulation, methods for solution, and practical applications. Based on the second lecture, homework assignments will be made.

All lectures will be given by senior faculty from each Department at the College of Engineering. No exams are planned. Grades will be assigned based on homework performance and attendance.

Homework sets will be assigned each Thursday and are due in class the following Thursday. Homework problems should be worked individually by each student.

The course will be letter-graded, based on the average number of points over all homework sets times the fraction of the lectures attended by the student. The grade assigning scheme is as follows.

[97,100]	A+
[90,97)	A
[85,90)	A-
[75,85)	B
[65,75)	C
Below 65	D

For more information, please contact Professor Ronald Gibala (rgibala@umich.edu) or Professor Guy Meadows (gmeadows@engin.umich.edu).

The lectures are held on Tuesdays and Thursdays, 3:30pm - 4:30pm in Room 1013 H. H. Dow Building, North Campus.

Office hours will be held by the course GSI on Mondays, 3:30pm-5:30pm, in room 1210 Lurie Engineering Center, North Campus, and on Wednesdays, 5:00pm-7:00pm, in the basement of the UGLI, unless announced otherwise (tentative).

The course website will be maintained by the course GSI. If you have any questions regarding the website, please e-mail him.

SYLLABUS FOR WINTER 2004 (revised, Jan. 12, 2004) From Current Web site:

Lecture 1 (January 6): Introduction, Course Overview, and a Common Problem of Engineering (Profs. Ron Gibala and Guy Meadows)

Lecture 2 (January 8): How to become a successful engineer? (Professor Fawwaz Ulaby, Vice-President for Research, University of Michigan)

Lectures 3 and 4 (January 13 and 15): Naval Architecture and Marine Engineering
(Professor Guy A. Meadows)

Lectures 5 and 6 (January 20 and 22): Material Science and Engineering
(Professor Joanna Mirecki-Millunchick)

Lectures 7 and 8 (January 27 and 29): Civil Engineering (Professor Andrzej S. Nowak)

Lectures 9 and 10 (February 3 and 5): Nuclear Engineering and Radiological Sciences
(Professor Ronald Gilgenbach)

Lectures 11 and 12 (February 10 and 12): Chemical Engineering (Professor H. Scott Fogler)

Lectures 13 and 14 (February 17 and 19): Atmospheric, Oceanic and Space Sciences
(Professor Tony England)

Spring Recess

Lectures 15 and 16 (March 2 and 4): Aerospace Engineering (Professor Pierre T. Kabamba)

Lectures 17 and 18 (March 9 and 11):
Dean Stephen Director----Tentative
Professor Larry Hench

Lectures 19 and 20 (March 16 and 18): Industrial and Operations Engineering (Professor Romesh Saigal)

Lectures 21 and 22 (March 23 and 25): Mechanical Engineering (Professor: Panos Papalambros)

Lecture 23 and 24 (March 30 and April 1): Electrical Engineering (Professor TBA)

Lectures 25 and 26 (April 6 and 8): Computer Science and Engineering (Professor Elliot Soloway)

Lecture 27 (April 13): A View from Industry (Dr. Jody Hall, Manager, General Motors)----Tentative

Lecture 28 (April 15): The Future of Engineering (Professor James J. Duderstadt, President Emeritus, University of Michigan)----Tentative

Lecture 29 (April 20): Summary (Professors Ron Gibala and Guy Meadows)

Proposed Course Description:

ENG 110. Introduction to the Engineering Profession I, II (2 credits)

This course provides exposure to each engineering discipline and helps undecided students select a major. Fundamentals from each engineering discipline are provided through formulating and solving engineering problems. Through this approach, it is expected that first year students will make better, more informed and more stable choices of a major.

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Date 1/30/2004

Effective Fall 2004

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Cross Listed Course Information				Cross Listed Course Information			
				Stats			
				489 265			
Course Title				Course Title			
				PROBABILITY AND STATISTICS FOR ENGINEERS			
TITLE ABBRE- VIATION	Time Sched Max = 19 Spaces			TITLE ABBRE- VIATION	Time Sched Max = 19 Spaces		PROB/STAT FOR ENGRS
	Transcript Max = 20 Spaces				Transcript Max = 20 Spaces		
Course Description				Course Description for Official Publication (Max = 50 words)			
				Graphical Representation of Data; Axioms of Probability; Conditioning, Bayes Theorem; Discrete Distributions (Geometric, Binomial, Poisson); Continuous Distributions (Normal Exponential, Weibull) Point and Interval Estimation, Likelihood Functions, Test of Hypotheses for Means, Variances, and Proportions for One and Two Populations.			
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<input type="radio"/> Core Course <input type="radio"/> Tech Elective				<input checked="" type="radio"/> Core Course <input type="radio"/> Tech Elective			
Prerequisites Math 116 and Engr 101				Prerequisites Math 116 and Engr 101, C- or better			
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Credit Restrictions No credit to those who have completed or are enrolled in Stats 311, 400, 405 or Econ 405				Credit Restrictions No credit granted to those who have completed or are enrolled in Stats 350, 400, 405, or Econ 404, 405 or Engr/NRS 438.			
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<input type="checkbox"/> Rackham Grad				<input type="checkbox"/> Rackham Grad		4 4	
<input type="checkbox"/> Non-Rackhm Grad				<input type="checkbox"/> Non-Rackhm Grad			
<input type="checkbox"/> Ugrad or Rackhm Grad				<input type="checkbox"/> Ugrad or Rackhm Grad		Number of Wks 14	
Repeatability (Indic. Research, Dir. Study, Dissertation):				Printing Information			
Is this course repeatable? <input type="radio"/> Yes <input checked="" type="radio"/> No				<input checked="" type="checkbox"/> Print the course in the Bulletin			
Maximum Hours? _____ Maximum Times? _____				<input checked="" type="checkbox"/> Print the course in the Time Schedule			
Can it be repeated in the same term? <input type="radio"/> Yes <input type="radio"/> No				Terms & Freq. of Offering			
				<input checked="" type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> IIIa <input type="checkbox"/> IIIb <input type="checkbox"/> III			
				Half term <input type="checkbox"/> 1st <input type="checkbox"/> 2nd			
				<input type="checkbox"/> Yearly <input type="checkbox"/> Alter Years <input type="checkbox"/> Even Years <input type="checkbox"/> Odd Years			
Class Type(s)				Cognizant Faculty			
<input checked="" type="checkbox"/> Lec				Member: Gary Herrin Title Professor			
<input type="checkbox"/> Rec							
<input type="checkbox"/> Sem							
<input type="checkbox"/> Lab							
<input type="checkbox"/> Dis							
<input type="checkbox"/> Ind							
<input type="checkbox"/> Other _____							
Graded Section				Grad Course: Attach nomination if Cognizant Faculty is not a regular graduate faculty			
<input checked="" type="radio"/> Lec							
<input type="radio"/> Rec							
<input type="radio"/> Sem							
<input type="radio"/> Lab							
<input type="radio"/> Dis							
<input type="radio"/> Ind							
<input type="radio"/> Other _____							
Grading							
<input checked="" type="checkbox"/> A-E							
<input type="checkbox"/> CR/NC							
<input type="checkbox"/> S/U							
<input type="checkbox"/> P/F							
<input type="checkbox"/> Y							
Location							
<input checked="" type="checkbox"/> Ann Arbor							
<input type="checkbox"/> Biological Station							
<input type="checkbox"/> Camp Davis							
<input type="checkbox"/> Extension							

- Approval
- Curriculum Comm.
 - Faculty
 - Rackham
 - Cross listed Unit 1
 - Cross listed Unit 2

Submitted By: Home Dept. Cross-listed Dept.

Name, Signature & Department

Home Dept. _____

Cross-listed Dept(s). _____

Julian Farney
(Sign on other sheet)

Feb-10-04 11:32am From-UM-IOE

+17347643451

T-784 P.02/03 F-355

THE UNIVERSITY OF MICHIGAN COLLEGE OF ENGINEERING
Course Approval Request
College Curriculum Committee 1420 Lane Engineering Center Building

1311

Action Requested

- New Course
- Modification of Existing Course
- Deletion of Course

Complete the following sections:

- New Courses - B & C completely
- Modifications - A modified information, B & C completely
- Deletions - A & C completely

Date 1/30/2004

Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

<p>Name Department: _____ Div #: _____ Course Number: _____</p> <p>Cross Listed Course Information:</p> <p>Course Title: _____</p> <p>TITLE ABBREVIATION: _____ Time Sched: _____ Max - 18 Spaces</p> <p>Transcript: _____ Max - 20 Spaces</p> <p>Course Description: _____</p>		<p>Name Department: IOE Div #: 272 Course Number: 265</p> <p>Cross Listed Course Information:</p> <p>Course Title: PROBABILITY AND STATISTICS FOR ENGINEERS</p> <p>TITLE ABBREVIATION: PROB/STAT FOR ENGRS Time Sched: _____ Max - 18 Spaces</p> <p>Transcript: _____ Max - 20 Spaces</p> <p>Course Description for Official Publication (Max = 20 words): Graphical Representation of Data, Axioms of Probability, Conditioning, Bayes Theorem, Discrete Distributions (Geometric, Binomial, Poisson); Continuous Distributions (Normal, Exponential, Weibull) Point and Interval Estimation, Likelihood Functions, Test of Hypotheses for Means, Variances, and Proportions for One and Two Populations.</p>	
<p>PROGRAM OUTCOMES:</p> <p><input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f <input type="checkbox"/> g <input type="checkbox"/> h <input type="checkbox"/> i <input type="checkbox"/> j <input type="checkbox"/> k</p> <p>Degree Requirements: <input type="checkbox"/> Degree Requirement <input type="checkbox"/> Free Elective <input type="checkbox"/> Other <input type="checkbox"/> Core Course <input type="checkbox"/> Tech Elective</p>		<p>PROGRAM OUTCOMES:</p> <p><input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f <input type="checkbox"/> g <input type="checkbox"/> h <input type="checkbox"/> i <input type="checkbox"/> j <input type="checkbox"/> k</p> <p>Degree Requirements: <input checked="" type="checkbox"/> Degree Requirement <input type="checkbox"/> Free Elective <input type="checkbox"/> Other <input type="checkbox"/> Core Course <input type="checkbox"/> Tech Elective</p>	
<p><input checked="" type="checkbox"/> Prerequisite: Main 116 and Engr 101 Enforced: Advised</p> <p><input checked="" type="checkbox"/> Credit: No credit to those who have completed or are enrolled in Stats 311, 400, 405 or 412 or Restrictions: Econ 405</p>		<p>Prerequisite: Main 116 and Engr 101, C or better Enforced: Adv 680</p> <p>Credit: No credit granted to those who have completed or are enrolled in Stats 350, 400, 405, or Restrictions: 412 or Econ 404, 405 or Engineering 438</p>	
<p>Level of Credit:</p> <p><input type="checkbox"/> Undergrad Only <input type="checkbox"/> Under or Non-Retum Grad</p> <p><input type="checkbox"/> Rackham Grad <input type="checkbox"/> All Credit Types</p> <p><input type="checkbox"/> Non-Retum Grad <input type="checkbox"/> Retum Grad w/2001 Work</p> <p><input type="checkbox"/> Ugrad or Retum Grad</p>		<p>Level of Credit:</p> <p><input checked="" type="checkbox"/> Undergrad Only <input type="checkbox"/> Under or Non-Retum Grad</p> <p><input type="checkbox"/> Rackham Grad <input type="checkbox"/> All Credit Types</p> <p><input type="checkbox"/> Non-Retum Grad <input type="checkbox"/> Retum Grad w/2001 Work</p> <p><input type="checkbox"/> Ugrad or Retum Grad</p>	
<p>Repeatability (Ind. Repeat, Di. Study, Discretion)</p> <p>Is this course repeatable? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> NO</p> <p>Maximum hours? _____ Maximum times? _____</p> <p>Can it be repeated in the same term? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> NO</p>		<p>Printing Information: <input checked="" type="checkbox"/> Print the course in the Bulletin (Optional) <input checked="" type="checkbox"/> Print the course in the Text Schedule</p>	
<p>Class Type(s): <input checked="" type="checkbox"/> Lec <input type="checkbox"/> Rec <input type="checkbox"/> Sem <input type="checkbox"/> Lab <input type="checkbox"/> Dis <input type="checkbox"/> Inv <input type="checkbox"/> Other</p> <p>Grading: <input checked="" type="checkbox"/> A-E <input type="checkbox"/> CR/NC <input type="checkbox"/> S/U <input type="checkbox"/> P/F</p> <p>Location: <input checked="" type="checkbox"/> Ann Arbor <input type="checkbox"/> Biological Station <input type="checkbox"/> Camp Davis <input type="checkbox"/> Eastman</p>		<p>Term & Frequency: <input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> III <input type="checkbox"/> III</p> <p>Offering: <input type="checkbox"/> Yearly <input type="checkbox"/> Alt. Years <input type="checkbox"/> Even Years <input type="checkbox"/> Odd Years</p> <p>Cognizant Faculty Member: _____ Gary Horn</p> <p>Grad Course: Attach non-tenured Cognizant Faculty of a regular 930-936 faculty</p>	

- Approval
- Curriculum Comm.
 - Faculty
 - Rackham
 - Cross listed Unit 1
 - Cross listed Unit 2

Submitted By: Home Dept Cross-listed Dept

Name, Signature & Department: _____
Home Dept: _____
Cross-listed Dept: _____

Julian Farney

SUPPORTING STATEMENT

This change will make the course prerequisites "mandatory".....

Prerequisite: Math 116 and Engr 101; C- or better.....

Prerequisite long description:.....

(Math 116 or Math 121 or Math 156 or Math 176 or Math 286 or Math 296); C- or better.....

and.....

(Engr 101 or Engr 104 or Engr 101X or EECS 100 or EECS 183 or Cmptsc 100 or Cmptsc 183); C- or better.....

Are any special resources or facilities required for this course?

Yes No

Detail the Special requirements

.....
.....
.....
.....
.....

Action Requested

- New Course
- Modification of Existing Course
- Deletion of Course

Complete the following sections:

- New Courses - B & C completely
- Modifications - A modified information, B & C completely
- Deletions - A & C completely

Date 2/11/2004

Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

<p>Home Department _____ Div # _____ Course Number _____</p> <p>Cross Listed Course Information _____</p> <p>Course Title _____</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">TITLE ABBREVIATION</td> <td style="width: 15%;">Time Sched Max = 19 Spaces</td> <td style="width: 70%;"></td> </tr> <tr> <td></td> <td>Transcript Max = 20 Spaces</td> <td></td> </tr> </table> <p>Course Description _____</p> <p>PROGRAM OUTCOMES: <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f <input type="checkbox"/> g <input type="checkbox"/> h <input type="checkbox"/> i <input type="checkbox"/> j <input type="checkbox"/> k</p> <p>Degree Requirements <input type="radio"/> Degree Requirement <input type="radio"/> Free Elective <input type="radio"/> Other <input type="radio"/> Core Course <input type="radio"/> Tech Elective</p> <p>Prerequisites _____ <input type="radio"/> Enforced <input type="radio"/> Advised</p> <p>Credit Restrictions _____</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Level of Credit</td> <td style="width: 20%;">Credit Hours</td> <td style="width: 20%;">Contact Hrs/Wk</td> <td style="width: 30%;"></td> </tr> <tr> <td> <input checked="" type="checkbox"/> Undergrad only <input type="checkbox"/> Ugrad or Non-Rckhm Grad <input checked="" type="checkbox"/> Rackham Grad <input type="checkbox"/> All Credit types <input type="checkbox"/> Non-Rckhm Grad <input type="checkbox"/> Rckhm Grad w/add'l Work <input type="checkbox"/> Ugrad or Rckhm Grad </td> <td> Min Max 4 4 </td> <td> _____ Number of Wks 14 </td> <td></td> </tr> </table>	TITLE ABBREVIATION	Time Sched Max = 19 Spaces			Transcript Max = 20 Spaces		Level of Credit	Credit Hours	Contact Hrs/Wk		<input checked="" type="checkbox"/> Undergrad only <input type="checkbox"/> Ugrad or Non-Rckhm Grad <input checked="" type="checkbox"/> Rackham Grad <input type="checkbox"/> All Credit types <input type="checkbox"/> Non-Rckhm Grad <input type="checkbox"/> Rckhm Grad w/add'l Work <input type="checkbox"/> Ugrad or Rckhm Grad	Min Max 4 4	_____ Number of Wks 14		<p>Home Department IOE Div # 272 Course Number 421</p> <p>Cross Listed Course Information _____</p> <p>Course Title WORK ORGANIZATIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">TITLE ABBREVIATION</td> <td style="width: 15%;">Time Sched Max = 19 Spaces</td> <td style="width: 70%;">WORK ORGANIZATIONS</td> </tr> <tr> <td></td> <td>Transcript Max = 20 Spaces</td> <td>WORK ORGANIZATIONS</td> </tr> </table> <p>Course Description for Official Publication (Max = 50 words) Applications of organizational theory to the analysis and design of work organizations is taught through lectures, projects in real organizations, experiential exercises, and case studies. Topics include: open-systems theory, organizational structure, culture and power. A change strategy: current state analysis, future state vision, and strategies for organizational transformation.</p> <p>PROGRAM OUTCOMES: <input type="checkbox"/> a <input type="checkbox"/> b <input checked="" type="checkbox"/> c <input checked="" type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f <input checked="" type="checkbox"/> g <input type="checkbox"/> h <input type="checkbox"/> i <input checked="" type="checkbox"/> j <input checked="" type="checkbox"/> k</p> <p>Degree Requirements <input type="radio"/> Degree Requirement <input type="radio"/> Free Elective <input type="radio"/> Other <input type="radio"/> Core Course <input type="radio"/> Tech Elective</p> <p>Prerequisites IOE 201, 202 and Senior Standing <input type="radio"/> Enforced <input checked="" type="radio"/> Advised</p> <p>Credit Restrictions _____</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Level of Credit</td> <td style="width: 20%;">Credit Hours</td> <td style="width: 20%;">Contact Hrs/Wk</td> <td style="width: 30%;"></td> </tr> <tr> <td> <input checked="" type="checkbox"/> Undergrad only <input type="checkbox"/> Ugrad or Non-Rckhm Grad <input checked="" type="checkbox"/> Rackham Grad <input type="checkbox"/> All Credit types <input checked="" type="checkbox"/> Non-Rckhm Grad <input type="checkbox"/> Rckhm Grad w/add'l Work <input type="checkbox"/> Ugrad or Rckhm Grad </td> <td> Min Max 3 3 </td> <td> _____ Number of Wks 14 </td> <td></td> </tr> </table>	TITLE ABBREVIATION	Time Sched Max = 19 Spaces	WORK ORGANIZATIONS		Transcript Max = 20 Spaces	WORK ORGANIZATIONS	Level of Credit	Credit Hours	Contact Hrs/Wk		<input checked="" type="checkbox"/> Undergrad only <input type="checkbox"/> Ugrad or Non-Rckhm Grad <input checked="" type="checkbox"/> Rackham Grad <input type="checkbox"/> All Credit types <input checked="" type="checkbox"/> Non-Rckhm Grad <input type="checkbox"/> Rckhm Grad w/add'l Work <input type="checkbox"/> Ugrad or Rckhm Grad	Min Max 3 3	_____ Number of Wks 14	
TITLE ABBREVIATION	Time Sched Max = 19 Spaces																												
	Transcript Max = 20 Spaces																												
Level of Credit	Credit Hours	Contact Hrs/Wk																											
<input checked="" type="checkbox"/> Undergrad only <input type="checkbox"/> Ugrad or Non-Rckhm Grad <input checked="" type="checkbox"/> Rackham Grad <input type="checkbox"/> All Credit types <input type="checkbox"/> Non-Rckhm Grad <input type="checkbox"/> Rckhm Grad w/add'l Work <input type="checkbox"/> Ugrad or Rckhm Grad	Min Max 4 4	_____ Number of Wks 14																											
TITLE ABBREVIATION	Time Sched Max = 19 Spaces	WORK ORGANIZATIONS																											
	Transcript Max = 20 Spaces	WORK ORGANIZATIONS																											
Level of Credit	Credit Hours	Contact Hrs/Wk																											
<input checked="" type="checkbox"/> Undergrad only <input type="checkbox"/> Ugrad or Non-Rckhm Grad <input checked="" type="checkbox"/> Rackham Grad <input type="checkbox"/> All Credit types <input checked="" type="checkbox"/> Non-Rckhm Grad <input type="checkbox"/> Rckhm Grad w/add'l Work <input type="checkbox"/> Ugrad or Rckhm Grad	Min Max 3 3	_____ Number of Wks 14																											
<p>C. Repeatability (Indic Research, Dir. Study, Dissertation): Is this course repeatable? <input type="radio"/> Yes <input type="radio"/> No Maximum Hours? _____ Maximum Times? _____ Can it be repeated in the same term? <input type="radio"/> Yes <input type="radio"/> No</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Class Type(s)</td> <td style="width: 15%;">Graded Section</td> <td style="width: 15%;">Grading</td> <td style="width: 15%;">Location</td> <td style="width: 40%;"></td> </tr> <tr> <td> <input checked="" type="checkbox"/> Lec <input type="checkbox"/> Rec <input type="checkbox"/> Sem <input type="checkbox"/> Lab <input type="checkbox"/> Dis <input type="checkbox"/> Ind <input type="checkbox"/> Other _____ </td> <td> <input checked="" type="radio"/> Lec <input type="radio"/> Rec <input type="radio"/> Sem <input type="radio"/> Lab <input type="radio"/> Dis <input type="radio"/> Ind <input type="radio"/> Other _____ </td> <td> <input checked="" type="checkbox"/> A-E <input type="checkbox"/> CR/NC <input type="checkbox"/> S/U <input type="checkbox"/> P/F <input type="checkbox"/> Y </td> <td> <input checked="" type="checkbox"/> Ann Arbor <input type="checkbox"/> Biological Station <input type="checkbox"/> Camp Davis <input type="checkbox"/> Extension </td> <td></td> </tr> </table>	Class Type(s)	Graded Section	Grading	Location		<input checked="" type="checkbox"/> Lec <input type="checkbox"/> Rec <input type="checkbox"/> Sem <input type="checkbox"/> Lab <input type="checkbox"/> Dis <input type="checkbox"/> Ind <input type="checkbox"/> Other _____	<input checked="" type="radio"/> Lec <input type="radio"/> Rec <input type="radio"/> Sem <input type="radio"/> Lab <input type="radio"/> Dis <input type="radio"/> Ind <input type="radio"/> Other _____	<input checked="" type="checkbox"/> A-E <input type="checkbox"/> CR/NC <input type="checkbox"/> S/U <input type="checkbox"/> P/F <input type="checkbox"/> Y	<input checked="" type="checkbox"/> Ann Arbor <input type="checkbox"/> Biological Station <input type="checkbox"/> Camp Davis <input type="checkbox"/> Extension		<p>Printing Information <input checked="" type="checkbox"/> Print the course in the Bulletin (Optional) <input checked="" type="checkbox"/> Print the course in the Time Schedule</p> <p>Terms & Freq. of Offering <input checked="" type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> IIIa <input type="checkbox"/> IIIb <input type="checkbox"/> III Half term <input type="checkbox"/> 1st <input type="checkbox"/> 2nd <input checked="" type="checkbox"/> Yearly <input type="checkbox"/> Alter Years <input type="checkbox"/> Even Years <input type="checkbox"/> Odd Years</p> <p>Cognizant Faculty Member: <u>Jeff Liker</u> Title <u>Professor</u></p> <p>Grad Course: Attach nomination if Cognizant Faculty is not a regular graduate faculty</p>																		
Class Type(s)	Graded Section	Grading	Location																										
<input checked="" type="checkbox"/> Lec <input type="checkbox"/> Rec <input type="checkbox"/> Sem <input type="checkbox"/> Lab <input type="checkbox"/> Dis <input type="checkbox"/> Ind <input type="checkbox"/> Other _____	<input checked="" type="radio"/> Lec <input type="radio"/> Rec <input type="radio"/> Sem <input type="radio"/> Lab <input type="radio"/> Dis <input type="radio"/> Ind <input type="radio"/> Other _____	<input checked="" type="checkbox"/> A-E <input type="checkbox"/> CR/NC <input type="checkbox"/> S/U <input type="checkbox"/> P/F <input type="checkbox"/> Y	<input checked="" type="checkbox"/> Ann Arbor <input type="checkbox"/> Biological Station <input type="checkbox"/> Camp Davis <input type="checkbox"/> Extension																										

- Approval
- Curriculum Comm. _____
 - Faculty _____
 - Rackham _____
 - Cross listed Unit 1 _____
 - Cross listed Unit 2 _____

Submitted By: Home Dept. Cross-listed Dept.

Name, Signature & Department
 Home Dept. [Signature]
 Cross-listed Dept(s). _____

Action Requested

- New Course
- Modification of Existing Course
- Deletion of Course

Complete the following sections:

- New Courses - B & C completely
- Modifications - A modified information, B & C completely
- Deletions - A & C completely

Date 2/11/2004

Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

Home Department		Div #	Course Number		Home Department		Div #	Course Number			
					IOE		272	422			
Cross Listed Course Information					Cross Listed Course Information						
Course Title					Course Title						
					ENTREPRENEURSHIP						
TITLE	Time Sched				TITLE	Time Sched	ENTREPRENEURSHIP				
ABBREVIATION	Max = 19 Spaces				ABBREVIATION	Max = 19 Spaces	ENTREPRENEURSHIP				
	Transcript					Transcript	ENTREPRENEURSHIP				
	Max = 20 Spaces					Max = 20 Spaces	ENTREPRENEURSHIP				
Course Description					Course Description for Official Publication (Max = 50 words)						
					Engineering students will learn the dynamics of turning an innovative idea into a successful commercial venture, including the role of e-commerce. By creating an actual business plan they will learn about innovation and creativity, risk management, stress and failure, ethics and other necessary business skills.						
PROGRAM OUTCOMES:					PROGRAM OUTCOMES:						
<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f <input type="checkbox"/> g <input type="checkbox"/> h <input type="checkbox"/> i <input type="checkbox"/> j <input type="checkbox"/> k					<input checked="" type="checkbox"/> a <input type="checkbox"/> b <input checked="" type="checkbox"/> c <input checked="" type="checkbox"/> d <input type="checkbox"/> e <input checked="" type="checkbox"/> f <input checked="" type="checkbox"/> g <input checked="" type="checkbox"/> h <input checked="" type="checkbox"/> i <input checked="" type="checkbox"/> j <input checked="" type="checkbox"/> k						
Degree Requirements					Degree Requirements						
<input type="radio"/> Degree Requirement <input type="radio"/> Free Elective <input type="radio"/> Other <input type="radio"/> Core Course <input type="radio"/> Tech Elective					<input type="radio"/> Degree Requirement <input type="radio"/> Free Elective <input type="radio"/> Other <input type="radio"/> Core Course <input type="radio"/> Tech Elective						
Prerequisites					Prerequisites						
<input type="radio"/> Enforced <input type="radio"/> Advised					Senior Standing <input type="radio"/> Enforced <input checked="" type="radio"/> Advised						
Credit Restrictions					Credit Restrictions						
Level of Credit		Credit Hours		Contact Hrs/Wk		Level of Credit		Credit Hours		Contact Hrs/Wk	
<input checked="" type="checkbox"/> Undergrad only <input type="checkbox"/> Ugrad or Non-Rckhm Grad <input type="checkbox"/> Rackham Grad <input type="checkbox"/> All Credit types <input type="checkbox"/> Non-Rckhm Grad <input type="checkbox"/> Rckhm Grad w/add'l Work <input type="checkbox"/> Ugrad or Rckhm Grad		Min Max 4 4		4 4 Number of Wks 14		<input checked="" type="checkbox"/> Undergrad only <input type="checkbox"/> Ugrad or Non-Rckhm Grad <input type="checkbox"/> Rackham Grad <input type="checkbox"/> All Credit types <input type="checkbox"/> Non-Rckhm Grad <input type="checkbox"/> Rckhm Grad w/add'l Work <input type="checkbox"/> Ugrad or Rckhm Grad		Min Max 3 3		3 3 Number of Wks 14	
Repeatability (Ind. Research, Dir. Study, Dissertation):					Printing Information						
Is this course repeatable? <input type="radio"/> Yes <input type="radio"/> No Maximum Hours? _____ Maximum Times? _____ Can it be repeated in the same term? <input type="radio"/> Yes <input type="radio"/> No					<input checked="" type="checkbox"/> Print the course in the Bulletin (Optional) <input checked="" type="checkbox"/> Print the course in the Time Schedule						
Class Type(s)					Terms & Freq. of Offering						
<input checked="" type="checkbox"/> Lec <input type="checkbox"/> Rec <input type="checkbox"/> Sem <input type="checkbox"/> Lab <input type="checkbox"/> Dis <input type="checkbox"/> Ind <input type="checkbox"/> Other _____					<input checked="" type="checkbox"/> I <input checked="" type="checkbox"/> II <input type="checkbox"/> IIIa <input type="checkbox"/> IIIb <input type="checkbox"/> III <input checked="" type="checkbox"/> Yearly <input type="checkbox"/> Alter Years <input type="checkbox"/> Even Years <input type="checkbox"/> Odd Years						
Graded Section					Half term						
<input checked="" type="radio"/> Lec <input type="radio"/> Rec <input type="radio"/> Sem <input type="radio"/> Lab <input type="radio"/> Dis <input type="radio"/> Ind <input type="radio"/> Other _____					<input type="checkbox"/> 1st <input type="checkbox"/> 2nd						
Grading					Cognizant Faculty Member:						
<input checked="" type="checkbox"/> A-E <input type="checkbox"/> CR/NC <input type="checkbox"/> S/U <input type="checkbox"/> P/F <input type="checkbox"/> Y					Jeffrey Liker Title Professor						
Location					Grading Course: Attach nomination if Cognizant Faculty is not a regular graduate faculty						
<input checked="" type="checkbox"/> Ann Arbor <input type="checkbox"/> Biological Station <input type="checkbox"/> Camp Davis <input type="checkbox"/> Extension											

Approval

- Curriculum Comm.
- Faculty
- Rackham
- Cross listed Unit 1
- Cross listed Unit 2

Submitted By: Home Dept. Cross-listed Dept.

Name, Signature & Department: _____
 Home Dept. _____
 Cross-listed Dept(s). _____

Action Requested

- New Course
- Modification of Existing Course
- Deletion of Course

Complete the following sections:

- New Courses - B & C completely
- Modifications - A modified information, B & C completely
- Deletions - A & C completely

Date 2/11/2004

Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

Home Department		Div #	Course Number		Home Department		Div #	Course Number			
					IOE		272	432			
Cross Listed Course Information					Cross Listed Course Information						
Course Title					Course Title						
					Industrial Engineering Instrumentation Methods						
TITLE ABBREVIATION	Time Sched Max = 19 Spaces				TITLE ABBREVIATION	Time Sched Max = 19 Spaces	IE Instrumentation Meth				
	Transcript Max = 20 Spaces					Transcript Max = 20 Spaces	IE Instrumentation Meth				
Course Description					Course Description for Official Publication (Max = 50 words)						
					The characteristics and use of analog and digital instrumentation applicable to industrial engineering problems. Statistical methods for developing system specifications. Applications in physiological, human performance, and production process measurements are considered.						
PROGRAM OUTCOMES:					PROGRAM OUTCOMES:						
<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f <input type="checkbox"/> g <input type="checkbox"/> h <input type="checkbox"/> i <input type="checkbox"/> j <input type="checkbox"/> k					<input checked="" type="checkbox"/> a <input checked="" type="checkbox"/> b <input checked="" type="checkbox"/> c <input type="checkbox"/> d <input checked="" type="checkbox"/> e <input type="checkbox"/> f <input type="checkbox"/> g <input type="checkbox"/> h <input type="checkbox"/> i <input type="checkbox"/> j <input checked="" type="checkbox"/> k						
Degree Requirements					Degree Requirements						
<input type="radio"/> Degree Requirement <input type="radio"/> Free Elective <input type="radio"/> Other <input type="radio"/> Core Course <input type="radio"/> Tech Elective					<input type="radio"/> Degree Requirement <input type="radio"/> Free Elective <input type="radio"/> Other <input type="radio"/> Core Course <input type="radio"/> Tech Elective						
Prerequisites					Prerequisites						
<input type="radio"/> Enforced <input type="radio"/> Advised					IOE 265 <input type="radio"/> Enforced <input checked="" type="radio"/> Advised						
Credit Restrictions					Credit Restrictions						
Level of Credit		Credit Hours		Contact Hrs/Wk		Level of Credit		Credit Hours		Contact Hrs/Wk	
<input checked="" type="checkbox"/> Undergrad only <input type="checkbox"/> Ugrad or Non-Rckhm Grad <input checked="" type="checkbox"/> Rackham Grad <input type="checkbox"/> All Credit types <input type="checkbox"/> Non-Rckhm Grad <input type="checkbox"/> Rckhm Grad w/add'l Work <input type="checkbox"/> Ugrad or Rckhm Grad		Min Max 4 4		4 4 Number of Wks 14		<input checked="" type="checkbox"/> Undergrad only <input type="checkbox"/> Ugrad or Non-Rckhm Grad <input checked="" type="checkbox"/> Rackham Grad <input type="checkbox"/> All Credit types <input type="checkbox"/> Non-Rckhm Grad <input type="checkbox"/> Rckhm Grad w/add'l Work <input type="checkbox"/> Ugrad or Rckhm Grad		Min Max 3 3		3 3 Number of Wks 14	
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Is this course repeatable? <input type="radio"/> Yes <input type="radio"/> No Maximum Hours? _____ Maximum Times? _____ Can it be repeated in the same term? <input type="radio"/> Yes <input type="radio"/> No					<input checked="" type="checkbox"/> Print the course in the Bulletin (Optional) <input checked="" type="checkbox"/> Print the course in the Time Schedule						
Class Type(s)					Terms & Freq. of Offering						
<input checked="" type="checkbox"/> Lec <input type="checkbox"/> Rec <input type="checkbox"/> Sem <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Dis <input type="checkbox"/> Ind <input type="checkbox"/> Other _____					<input checked="" type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> IIIa <input type="checkbox"/> IIIb <input type="checkbox"/> III <input checked="" type="checkbox"/> Yearly <input type="checkbox"/> Alter Years <input type="checkbox"/> Even Years <input type="checkbox"/> Odd Years						
Graded Section					Location						
<input checked="" type="radio"/> Lec <input type="radio"/> Rec <input type="radio"/> Sem <input type="radio"/> Lab <input type="radio"/> Dis <input type="radio"/> Ind <input type="radio"/> Other _____					<input checked="" type="checkbox"/> A-E <input type="checkbox"/> CR/NC <input type="checkbox"/> S/U <input type="checkbox"/> P/F <input type="checkbox"/> Y <input checked="" type="checkbox"/> Ann Arbor <input type="checkbox"/> Biological Station <input type="checkbox"/> Camp Davis <input type="checkbox"/> Extension						
Cognizant Faculty Member:					Cognizant Faculty Member:						
Yili Liu					Yili Liu						
Title Professor					Title Professor						
Grad Course: Attach nomination if Cognizant Faculty is not a regular graduate faculty					Grad Course: Attach nomination if Cognizant Faculty is not a regular graduate faculty						

Approval

Curriculum Comm. _____

Faculty _____

Rackham _____

Cross listed Unit 1 _____

Cross listed Unit 2 _____

Submitted By: Home Dept. Cross-listed Dept.

Name, Signature & Department

Home Dept. _____

Cross-listed Dept(s). _____

SUPPORTING STATEMENT

~~This change will increase the flexibility and breadth of exposure to advanced Industrial and Operations Engineering elective subjects in the IOE undergraduate program.~~

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Are any special resources or facilities required for this course? Yes No

Detail the Special requirements

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Action Requested

- New Course
- Modification of Existing Course
- Deletion of Course

Complete the following sections:
 New Courses - B & C completely
 Modifications - A modified information, B & C completely
 Deletions - A & C completely

Date 2/11/2004

Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

Home Department		Div #	Course Number
Cross Listed Course Information			
Course Title			
TITLE ABBREVIATION	Time Sched Max = 19 Spaces		
	Transcript Max = 20 Spaces		
Course Description			

Home Department		Div #	Course Number
IOE		272	436
Cross Listed Course Information			
Course Title			
Human Factors in Computer Systems			
TITLE ABBREVIATION	Time Sched Max = 19 Spaces	Human Factors	
	Transcript Max = 20 Spaces	Human Factors	
Course Description for Official Publication (Max = 50 words)			
This course discusses how to design and evaluate computer systems for ease of use. Topics to be covered include keyboards and how people type, vision and video display design, human body size and computer furniture, regulations concerning working conditions, software issues, methods for studying user performance, documentation, and information systems of the future.			

PROGRAM OUTCOMES:			
<input type="checkbox"/> a	<input type="checkbox"/> b	<input type="checkbox"/> c	<input type="checkbox"/> d
<input type="checkbox"/> e	<input type="checkbox"/> f	<input type="checkbox"/> g	<input type="checkbox"/> h
<input type="checkbox"/> i	<input type="checkbox"/> j	<input type="checkbox"/> k	
Degree Requirements <input type="radio"/> Degree Requirement <input type="radio"/> Free Elective <input type="radio"/> Other			
<input type="radio"/> Core Course <input type="radio"/> Tech Elective			
Prerequisites <input type="radio"/> Enforced <input type="radio"/> Advised			
Credit Restrictions			
Level of Credit	Credit Hours	Contact Hrs/Wk	
<input checked="" type="checkbox"/> Undergrad only	Min Max	4	
<input checked="" type="checkbox"/> Rackham Grad	4 4	Number of Wks	14
<input type="checkbox"/> Non-Rackham Grad			
<input type="checkbox"/> Ugrad or Rackham Grad			

PROGRAM OUTCOMES:			
<input checked="" type="checkbox"/> a	<input checked="" type="checkbox"/> b	<input checked="" type="checkbox"/> c	<input type="checkbox"/> d
<input checked="" type="checkbox"/> e	<input type="checkbox"/> f	<input checked="" type="checkbox"/> g	<input checked="" type="checkbox"/> h
<input checked="" type="checkbox"/> i	<input type="checkbox"/> j	<input checked="" type="checkbox"/> k	
Degree Requirements <input type="radio"/> Degree Requirement <input type="radio"/> Free Elective <input type="radio"/> Other			
<input type="radio"/> Core Course <input type="radio"/> Tech Elective			
Prerequisites IOE 333 <input type="radio"/> Enforced <input checked="" type="radio"/> Advised			
Credit Restrictions			
Level of Credit	Credit Hours	Contact Hrs/Wk	
<input checked="" type="checkbox"/> Undergrad only	Min Max	3 3	
<input checked="" type="checkbox"/> Rackham Grad	3 3	Number of Wks	14
<input checked="" type="checkbox"/> Non-Rackham Grad			
<input type="checkbox"/> Ugrad or Rackham Grad			

C.

Repeatability (Indic Research, Dir. Study, Dissertation):
 Is this course repeatable? Yes No
 Maximum Hours? _____ Maximum Times? _____
 Can it be repeated in the same term? Yes No

Class Type(s)	<input checked="" type="checkbox"/> Lec	<input type="checkbox"/> Rec	<input type="checkbox"/> Sem	<input type="checkbox"/> Lab	<input type="checkbox"/> Dis	<input type="checkbox"/> Ind	<input type="checkbox"/> Other
Graded Section	<input type="checkbox"/> Lec	<input type="checkbox"/> Rec	<input type="checkbox"/> Sem	<input type="checkbox"/> Lab	<input type="checkbox"/> Dis	<input type="checkbox"/> Ind	<input type="checkbox"/> Other
Grading	<input checked="" type="checkbox"/> A-E	<input type="checkbox"/> CR/NC	<input type="checkbox"/> S/U	<input type="checkbox"/> P/F	<input type="checkbox"/> Y		
Location	<input checked="" type="checkbox"/> Ann Arbor	<input type="checkbox"/> Biological Station	<input type="checkbox"/> Camp Davis	<input type="checkbox"/> Extension			

Printing Information Print the course in the Bulletin (Optional) Print the course in the Time Schedule

Terms & Freq. of Offering I II IIIa IIIb III

Half term 1st 2nd

Yearly Alter Years Even Years Odd Years

Cognizant Faculty Member: Yili Liu Title Assoc. Professor

Grad Course: Attach nomination if Cognizant Faculty is not a regular graduate faculty

Approval

Curriculum Comm. _____

Faculty _____

Rackham _____

Cross listed Unit 1 _____

Cross listed Unit 2 _____

Submitted By: Home Dept. Cross-listed Dept.

Name, Signature & Department _____

Home Dept. _____

Cross-listed Dept(s). _____

SUPPORTING STATEMENT

~~This change will increase the flexibility and breadth of exposure to advanced Industrial and Operations Engineering elective subjects in the JOE undergraduate program.~~

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Are any special resources or facilities required for this course? Yes No

Detail the Special requirements

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Action Requested

- New Course
- Modification of Existing Course
- Deletion of Course

Complete the following sections:

- New Courses - B & C completely
- Modifications - A modified information, B & C completely
- Deletions - A & C completely

Date 2/11/2004

Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

Home Department		Div #	Course Number	Home Department		Div #	Course Number
				IOE		272	441
Cross Listed Course Information				Cross Listed Course Information			
				Mfg			
Course Title				Course Title			
				PRODUCTION AND INVENTORY CONTROL			
TITLE ABBREVIATION	Time Sched Max = 19 Spaces			TITLE ABBREVIATION	Time Sched Max = 19 Spaces	PROD & INV CONTROL	
	Transcript Max = 20 Spaces				Transcript Max = 20 Spaces	PROD & INV CONTROL	
Course Description				Course Description for Official Publication (Max = 50 words)			
				Basic models and techniques for managing inventory systems and for planning production. Topics include deterministic and probabilistic inventory models, production planning and scheduling; and introduction to factory physics.			
PROGRAM OUTCOMES:				PROGRAM OUTCOMES:			
<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f <input type="checkbox"/> g <input type="checkbox"/> h <input type="checkbox"/> i <input type="checkbox"/> j <input type="checkbox"/> k				<input checked="" type="checkbox"/> a <input checked="" type="checkbox"/> b <input checked="" type="checkbox"/> c <input type="checkbox"/> d <input checked="" type="checkbox"/> e <input type="checkbox"/> f <input type="checkbox"/> g <input type="checkbox"/> h <input type="checkbox"/> i <input checked="" type="checkbox"/> j <input checked="" type="checkbox"/> k			
Degree Requirements <input type="radio"/> Degree Requirement <input type="radio"/> Free Elective <input type="radio"/> Other <input type="radio"/> Core Course <input type="radio"/> Tech Elective				Degree Requirements <input type="radio"/> Degree Requirement <input type="radio"/> Free Elective <input type="radio"/> Other <input type="radio"/> Core Course <input type="radio"/> Tech Elective			
Prerequisites <input type="radio"/> Enforced <input type="radio"/> Advised				Prerequisites IOE 310 and IOE 316 <input type="radio"/> Enforced <input checked="" type="radio"/> Advised			
Credit Restrictions				Credit Restrictions Not for IOE Graduate Credit			
Level of Credit		Credit Hours	Contact Hrs/Wk	Level of Credit		Credit Hours	Contact Hrs/Wk
<input checked="" type="checkbox"/> Undergrad only <input type="checkbox"/> Ugrad or Non-Rckhm Grad <input checked="" type="checkbox"/> Rackham Grad <input type="checkbox"/> All Credit types <input checked="" type="checkbox"/> Non-Rckhm Grad <input type="checkbox"/> Rckhm Grad w/add'l Work <input type="checkbox"/> Ugrad or Rckhm Grad		Min Max	4	<input checked="" type="checkbox"/> Undergrad only <input type="checkbox"/> Ugrad or Non-Rckhm Grad <input checked="" type="checkbox"/> Rackham Grad <input type="checkbox"/> All Credit types <input checked="" type="checkbox"/> Non-Rckhm Grad <input type="checkbox"/> Rckhm Grad w/add'l Work <input type="checkbox"/> Ugrad or Rckhm Grad		Min Max	3 3
			Number of Wks				Number of Wks
			14				14
Repeatability (Indl. Research, Dir. Study, Dissertation): Is this course repeatable? <input type="radio"/> Yes <input type="radio"/> No Maximum Hours? _____ Maximum Times? _____ Can it be repeated in the same term? <input type="radio"/> Yes <input type="radio"/> No				Printing Information <input checked="" type="checkbox"/> Print the course in the Bulletin (Optional) <input checked="" type="checkbox"/> Print the course in the Time Schedule			
Class Type(s)		Graded Section	Grading	Terms & Freq. of Offering		Half term <input type="checkbox"/> 1st <input type="checkbox"/> 2nd	
<input checked="" type="checkbox"/> Lec <input type="checkbox"/> Rec <input type="checkbox"/> Sem <input type="checkbox"/> Lab <input type="checkbox"/> Dis <input type="checkbox"/> Ind <input type="checkbox"/> Other _____		<input type="radio"/> Lec <input type="radio"/> Rec <input type="radio"/> Sem <input type="radio"/> Lab <input type="radio"/> Dis <input type="radio"/> Ind <input type="radio"/> Other	<input checked="" type="checkbox"/> A-E <input type="checkbox"/> CR/NC <input type="checkbox"/> S/U <input type="checkbox"/> P/F <input type="checkbox"/> Y	<input checked="" type="checkbox"/> I <input checked="" type="checkbox"/> II <input type="checkbox"/> IIIa <input type="checkbox"/> IIIb <input type="checkbox"/> III		<input type="checkbox"/> Yearly <input type="checkbox"/> Alter Years <input type="checkbox"/> Even Years <input type="checkbox"/> Odd Years	
Location		Cognizant Faculty Member:		Goker Aydin		Title Assistant Professor	
<input checked="" type="checkbox"/> Ann Arbor <input type="checkbox"/> Biological Station <input type="checkbox"/> Camp Davis <input type="checkbox"/> Extension							

Approval

- Curriculum Comm.
- Faculty
- Rackham
- Cross listed Unit 1
- Cross listed Unit 2

Submitted By: Home Dept. Cross-listed Dept.

Name, Signature & Department: _____
 Home Dept. _____
 Cross-listed Dept(s): _____

Cognizant Faculty Member: _____ Title Assistant Professor

Grad Course: Attach nomination if Cognizant Faculty is not a regular graduate faculty

Action Requested

- New Course
- Modification of Existing Course
- Deletion of Course

Complete the following sections:

- New Courses - B & C completely
- Modifications - A modified information, B & C completely
- Deletions - A & C completely

Date 2/11/2004

Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

Home Department		Div #	Course Number	Home Department		Div #	Course Number
				IOE		272	447
Cross Listed Course Information				Cross Listed Course Information			
				Mfg			
				275 447			
Course Title				Course Title			
				FACILITY PLANNING			
TITLE ABBREVIATION	Time Sched Max = 19 Spaces			TITLE ABBREVIATION	Time Sched Max = 19 Spaces	FACILITY PLANNING	
	Transcript Max = 20 Spaces				Transcript Max = 20 Spaces	FACILITY PLANNING	
Course Description				Course Description for Official Publication (Max = 50 words)			
				Fundamentals in developing efficient layouts for single-story and multi-story production and service facilities. Manual procedures and microcomputer-based layout algorithms. Algorithms to determine the optimum location of facilities. Special considerations for multi-periods, dynamic layout problems.			
PROGRAM OUTCOMES:				PROGRAM OUTCOMES:			
<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f <input type="checkbox"/> g <input type="checkbox"/> h <input type="checkbox"/> i <input type="checkbox"/> j <input type="checkbox"/> k				<input checked="" type="checkbox"/> a <input type="checkbox"/> b <input checked="" type="checkbox"/> c <input type="checkbox"/> d <input checked="" type="checkbox"/> e <input type="checkbox"/> f <input type="checkbox"/> g <input type="checkbox"/> h <input type="checkbox"/> i <input checked="" type="checkbox"/> j <input checked="" type="checkbox"/> k			
Degree Requirements				Degree Requirements			
<input type="radio"/> Degree Requirement <input type="radio"/> Free Elective <input type="radio"/> Other <input type="radio"/> Core Course <input type="radio"/> Tech Elective				<input type="radio"/> Degree Requirement <input type="radio"/> Free Elective <input type="radio"/> Other <input type="radio"/> Core Course <input type="radio"/> Tech Elective			
Prerequisites				Prerequisites			
<input type="radio"/> Enforced <input type="radio"/> Advised				IOE 310 and IOE 316 <input type="radio"/> Enforced <input checked="" type="radio"/> Advised			
Credit Restrictions				Credit Restrictions			
Level of Credit		Credit Hours	Contact Hrs/Wk	Level of Credit		Credit Hours	Contact Hrs/Wk
<input checked="" type="checkbox"/> Undergrad only <input type="checkbox"/> Ugrad or Non-Rckhm Grad <input checked="" type="checkbox"/> Rackham Grad <input type="checkbox"/> All Credit types <input type="checkbox"/> Non-Rckhm Grad <input type="checkbox"/> Rckhm Grad w/add'l Work <input type="checkbox"/> Ugrad or Rckhm Grad		Min Max	4	<input checked="" type="checkbox"/> Undergrad only <input type="checkbox"/> Ugrad or Non-Rckhm Grad <input checked="" type="checkbox"/> Rackham Grad <input type="checkbox"/> All Credit types <input checked="" type="checkbox"/> Non-Rckhm Grad <input type="checkbox"/> Rckhm Grad w/add'l Work <input type="checkbox"/> Ugrad or Rckhm Grad		Min Max	3 3
			Number of Wks				Number of Wks
			14				14
Repeatability (Indl Research, Dir. Study, Dissertation)				Printing Information			
Is this course repeatable? <input type="radio"/> Yes <input type="radio"/> No Maximum Hours? _____ Maximum Times? _____ Can it be repeated in the same term? <input type="radio"/> Yes <input type="radio"/> No				<input checked="" type="checkbox"/> Print the course in the Bulletin (Optional) <input checked="" type="checkbox"/> Print the course in the Time Schedule			
Class Type(s)		Graded Section	Grading	Terms & Freq. of Offering		Half term	
<input checked="" type="checkbox"/> Lec <input type="checkbox"/> Rec <input type="checkbox"/> Sem <input type="checkbox"/> Lab <input type="checkbox"/> Dis <input type="checkbox"/> Ind <input type="checkbox"/> Other _____		<input type="radio"/> Lec <input type="radio"/> Rec <input type="radio"/> Sem <input type="radio"/> Lab <input type="radio"/> Dis <input type="radio"/> Ind <input type="radio"/> Other _____	<input checked="" type="checkbox"/> A-E <input type="checkbox"/> CR/NC <input type="checkbox"/> S/U <input type="checkbox"/> P/F <input type="checkbox"/> Y	<input checked="" type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> IIIa <input type="checkbox"/> IIIb <input type="checkbox"/> III <input checked="" type="checkbox"/> Yearly <input type="checkbox"/> Alter Years <input type="checkbox"/> Even Years <input type="checkbox"/> Odd Years		<input type="checkbox"/> 1st <input type="checkbox"/> 2nd	
Location		Cognizant Faculty Member:		Yavuz Bozer		Title Professor	
<input checked="" type="checkbox"/> Ann Arbor <input type="checkbox"/> Biological Station <input type="checkbox"/> Camp Davis <input type="checkbox"/> Extension							
Grad Course: Attach nomination if Cognizant Faculty is not a regular graduate faculty				Submitted By: <input checked="" type="checkbox"/> Home Dept. <input type="checkbox"/> Cross-listed Dept.			

Approval

- Curriculum Comm.
- Faculty
- Rackham
- Cross listed Unit 1
- Cross listed Unit 2

Name, Signature & Department
 Home Dept. _____ [IOE]
 Cross-listed Dept(s). _____ [PIM]

Action Requested

- New Course
- Modification of Existing Course
- Deletion of Course

Complete the following sections:
 New Courses - B & C completely
 Modifications - A modified information, B & C completely
 Deletions - A & C completely

Date 2/11/2004

Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

Home Department		Div #	Course Number		Home Department		Div #	Course Number	
					IOE		272	461	
Cross Listed Course Information					Cross Listed Course Information				
					Mfg				
					275 461				
Course Title					Course Title				
					Quality Engineering Principles and Analysis				
TITLE ABBREVIATION	Time Sched Max = 19 Spaces				TITLE ABBREVIATION	Time Sched Max = 19 Spaces	Qual Engin Prin		
	Transcript Max = 20 Spaces					Transcript Max = 20 Spaces	Qual Engin Prin Anal		
Course Description					Course Description for Official Publication (Max = 50 words)				
					This course provides students with the analytical and management tools necessary to solve manufacturing quality problems and implement effective quality systems. Topics include voice of the customer analysis, the Six Sigma problem solving methodology, process capability analysis, measurement system analysis, design of experiments, statistical process control, failure mode and effects analysis, quality function deployment and reliability analysis.				
PROGRAM OUTCOMES:					PROGRAM OUTCOMES:				
<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f <input type="checkbox"/> g <input type="checkbox"/> h <input type="checkbox"/> i <input type="checkbox"/> j <input type="checkbox"/> k					<input checked="" type="checkbox"/> a <input checked="" type="checkbox"/> b <input checked="" type="checkbox"/> c <input type="checkbox"/> d <input checked="" type="checkbox"/> e <input type="checkbox"/> f <input type="checkbox"/> g <input type="checkbox"/> h <input type="checkbox"/> i <input type="checkbox"/> j <input checked="" type="checkbox"/> k				
Degree Requirements					Degree Requirements				
<input type="radio"/> Degree Requirement <input type="radio"/> Free Elective <input type="radio"/> Other <input type="radio"/> Core Course <input type="radio"/> Tech Elective					<input type="radio"/> Degree Requirement <input type="radio"/> Free Elective <input type="radio"/> Other <input type="radio"/> Core Course <input type="radio"/> Tech Elective				
Prerequisites					Prerequisites				
<input type="radio"/> Enforced <input type="radio"/> Advised					IOE 366 <input type="radio"/> Enforced <input checked="" type="radio"/> Advised				
Credit Restrictions					Credit Restrictions				
Not for IOE Graduate Credit									
Level of Credit		Credit Hours		Contact Hrs/Wk	Level of Credit		Credit Hours		Contact Hrs/Wk
<input checked="" type="checkbox"/> Undergrad only	<input type="checkbox"/> Ugrad or Non-Rokhm Grad	Min	Max	4	<input checked="" type="checkbox"/> Undergrad only	<input type="checkbox"/> Ugrad or Non-Rokhm Grad	Min	Max	3
<input checked="" type="checkbox"/> Rackham Grad	<input type="checkbox"/> All Credit types				<input checked="" type="checkbox"/> Rackham Grad	<input type="checkbox"/> All Credit types			
<input type="checkbox"/> Non-Rokhm Grad	<input type="checkbox"/> Rokhm Grad w/add'l Work	4	4	Number of Wks 14	<input checked="" type="checkbox"/> Non-Rokhm Grad	<input type="checkbox"/> Rokhm Grad w/add'l Work	3	3	Number of Wks 14
<input type="checkbox"/> Ugrad or Rokhm Grad					<input type="checkbox"/> Ugrad or Rokhm Grad				
Repeatability (Ind. Research, Dir. Study, Dissertation):					Printing Information				
Is this course repeatable? <input type="radio"/> Yes <input type="radio"/> No Maximum Hours? _____ Maximum Times? _____ Can it be repeated in the same term? <input type="radio"/> Yes <input type="radio"/> No					<input checked="" type="checkbox"/> Print the course in the Bulletin (Optional) <input checked="" type="checkbox"/> Print the course in the Time Schedule				
Class Type(s)		Graded Section		Grading		Terms & Freq. of Offering		Half term	
<input checked="" type="checkbox"/> Lec	<input type="checkbox"/> Rec	<input checked="" type="radio"/> Lec	<input type="radio"/> Rec	<input checked="" type="checkbox"/> A-E	<input type="checkbox"/> I	<input type="checkbox"/> II	<input type="checkbox"/> IIIa	<input type="checkbox"/> IIIb	<input type="checkbox"/> III
<input type="checkbox"/> Sem	<input type="checkbox"/> Lab	<input type="radio"/> Sem	<input type="radio"/> Lab	<input type="checkbox"/> CR/NC	<input checked="" type="checkbox"/> Yearly	<input type="checkbox"/> Alter Years	<input type="checkbox"/> Even Years	<input type="checkbox"/> Odd Years	<input type="checkbox"/> 1st
<input type="checkbox"/> Lab	<input type="checkbox"/> Dis	<input type="radio"/> Lab	<input type="radio"/> Dis	<input type="checkbox"/> S/U	<input type="checkbox"/> Ann Arbor	<input type="checkbox"/> Biological Station	<input type="checkbox"/> Camp Davis	<input type="checkbox"/> Extension	<input type="checkbox"/> 2nd
<input type="checkbox"/> Dis	<input type="checkbox"/> Ind	<input type="radio"/> Dis	<input type="radio"/> Ind	<input type="checkbox"/> P/F	Cognizant Faculty Member: <u>Gary Herrin</u> Title <u>Professor</u>				
<input type="checkbox"/> Ind	<input type="checkbox"/> Other	<input type="radio"/> Ind	<input type="radio"/> Other	<input type="checkbox"/> Y	Grad Course: Attach nomination if Cognizant Faculty is not a regular graduate faculty				
<input type="checkbox"/> Other		<input type="radio"/> Other							

Approval

- Curriculum Comm.
- Faculty
- Rackham
- Cross listed Unit 1
- Cross listed Unit 2

Submitted By: Home Dept. Cross-listed Dept.
 Name, Signature & Department: [Signature]
 Home Dept. _____
 Cross-listed Dept(s): _____
 _____ PIM

SUPPORTING STATEMENT

This change will increase the flexibility and breadth of exposure to advanced Industrial and Operations Engineering elective subjects in the IOE undergraduate program.....

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Are any special resources or facilities required for this course?

Yes No

Detail the Special requirements

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Action Requested

- New Course
- Modification of Existing Course
- Deletion of Course

Complete the following sections:

- New Courses - B & C completely
- Modifications - A modified information, B & C completely
- Deletions - A & C completely

Date 2/11/2004

Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

Home Department		Div #	Course Number		Home Department		Div #	Course Number	
					IOE		272	465	
Cross Listed Course Information					Cross Listed Course Information				
Course Title					Course Title				
					Design and Analysis of Experiments				
TITLE ABBREVIATION	Time Sched Max = 19 Spaces				TITLE ABBREVIATION	Time Sched Max = 19 Spaces	Design of Experiments		
	Transcript Max = 20 Spaces					Transcript Max = 20 Spaces	Design of Experiments		
Course Description					Course Description for Official Publication (Max = 50 words)				
					Linear models, Multi-collinarity and rogust regression, comparative experiments, randomized blocks and latin squares, factorial designs, confounding, mixed level fractional factorials, random and mixed models, nesting and split plots, response surface methods, Taguchi contributions to experimental design.				
PROGRAM OUTCOMES:					PROGRAM OUTCOMES:				
<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f <input type="checkbox"/> g <input type="checkbox"/> h <input type="checkbox"/> i <input type="checkbox"/> j <input type="checkbox"/> k					<input checked="" type="checkbox"/> a <input checked="" type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input checked="" type="checkbox"/> e <input type="checkbox"/> f <input type="checkbox"/> g <input type="checkbox"/> h <input type="checkbox"/> i <input type="checkbox"/> j <input checked="" type="checkbox"/> k				
Degree Requirements <input type="radio"/> Degree Requirement <input type="radio"/> Free Elective <input type="radio"/> Other <input type="radio"/> Core Course <input type="radio"/> Tech Elective					Degree Requirements <input type="radio"/> Degree Requirement <input type="radio"/> Free Elective <input type="radio"/> Other <input type="radio"/> Core Course <input type="radio"/> Tech Elective				
Prerequisites <input type="radio"/> Enforced <input type="radio"/> Advised					Prerequisites IOE 366 <input type="radio"/> Enforced <input checked="" type="radio"/> Advised				
Credit Restrictions					Credit Restrictions				
Level of Credit		Credit Hours		Contact Hrs/Wk	Level of Credit		Credit Hours		Contact Hrs/Wk
<input checked="" type="checkbox"/> Undergrad only <input type="checkbox"/> Ugrad or Non-Rckhm Grad <input checked="" type="checkbox"/> Rackham Grad <input type="checkbox"/> All Credit types <input type="checkbox"/> Non-Rckhm Grad <input type="checkbox"/> Rckhm Grad w/add'l Work <input type="checkbox"/> Ugrad or Rckhm Grad		Min Max 4 4		4	<input checked="" type="checkbox"/> Undergrad only <input type="checkbox"/> Ugrad or Non-Rckhm Grad <input checked="" type="checkbox"/> Rackham Grad <input type="checkbox"/> All Credit types <input type="checkbox"/> Non-Rckhm Grad <input type="checkbox"/> Rckhm Grad w/add'l Work <input type="checkbox"/> Ugrad or Rckhm Grad		Min Max 3 3		3
				Number of Wks 14					Number of Wks 14
Repeatability (Indl Research, Dir. Study, Dissertation): Is this course repeatable? <input type="radio"/> Yes <input type="radio"/> No Maximum Hours? _____ Maximum Times? _____ Can it be repeated in the same term? <input type="radio"/> Yes <input type="radio"/> No					Printing Information <input checked="" type="checkbox"/> Print the course in the Bulletin (Optional) <input checked="" type="checkbox"/> Print the course in the Time Schedule				
Class Type(s) <input checked="" type="checkbox"/> Lec <input type="checkbox"/> Rec <input type="checkbox"/> Sem <input type="checkbox"/> Lab <input type="checkbox"/> Dis <input type="checkbox"/> Ind <input type="checkbox"/> Other _____ Graded Section <input checked="" type="radio"/> Lec <input type="radio"/> Rec <input type="radio"/> Sem <input type="radio"/> Lab <input type="radio"/> Dis <input type="radio"/> Ind <input type="radio"/> Other _____ Grading <input checked="" type="checkbox"/> A-E <input type="checkbox"/> CR/NC <input type="checkbox"/> S/U <input type="checkbox"/> P/F <input type="checkbox"/> Y Location <input checked="" type="checkbox"/> Ann Arbor <input type="checkbox"/> Biological Station <input type="checkbox"/> Camp Davis <input type="checkbox"/> Extension					Terms & Freq. of Offering <input checked="" type="checkbox"/> I <input checked="" type="checkbox"/> II <input type="checkbox"/> IIIa <input type="checkbox"/> IIIb <input type="checkbox"/> III <input checked="" type="checkbox"/> Yearly <input type="checkbox"/> Alter Years <input type="checkbox"/> Even Years <input type="checkbox"/> Odd Years Half term <input type="checkbox"/> 1st <input type="checkbox"/> 2nd Cognizant Faculty Member: Gary Herrin Title Professor Grad Course: Attach nomination if Cognizant Faculty is not a regular graduate faculty				

Approval

- Curriculum Comm.
- Faculty
- Rackham
- Cross listed Unit 1
- Cross listed Unit 2

Submitted By: Home Dept. Cross-listed Dept.

Name, Signature & Department: _____

Home Dept. _____

Cross-listed Dept(s). _____

Action Requested

- New Course
- Modification of Existing Course
- Deletion of Course

Complete the following sections:
 New Courses - B & C completely
 Modifications - A modified information, B & C completely
 Deletions - A & C completely

Date 2/11/2004

Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

Home Department		Div #	Course Number	Home Department		Div #	Course Number
				IOE		272	466
Cross Listed Course Information				Cross Listed Course Information			
				Stats			
				Mfg			
				489 466			
				275 466			
Course Title				Course Title			
				STATISTICAL QUALITY CONTROL			
TITLE ABBREVIATION	Time Sched Max = 19 Spaces			TITLE ABBREVIATION	Time Sched Max = 19 Spaces	STAT QUALITY CONTROL	
	Transcript Max = 20 Spaces				Transcript Max = 20 Spaces	STAT QUALITY CONTROL	
Course Description				Course Description for Official Publication (Max = 50 words)			
				Quality Improvement Philosophies; Modeling Process Quality, Statistical Process Control, Control Charts for Variables and Attributes, CUSUM and EWMA, Short Production Runs, Multivariate Quality Control, Auto Correlation, Engineering Process Control, Economic Design of Charts, Fill Control, Precontrol, Adaptive Schemes, Process Capability, Specifications and Tolerances, Gage Capability Studies, Acceptance Sampling by Attributes and Variables, International Quality Standards.			
PROGRAM OUTCOMES:				PROGRAM OUTCOMES:			
<input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input type="checkbox"/> e <input type="checkbox"/> f <input type="checkbox"/> g <input type="checkbox"/> h <input type="checkbox"/> i <input type="checkbox"/> j <input type="checkbox"/> k				<input type="checkbox"/> a <input checked="" type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d <input checked="" type="checkbox"/> e <input type="checkbox"/> f <input checked="" type="checkbox"/> g <input checked="" type="checkbox"/> h <input type="checkbox"/> i <input type="checkbox"/> j <input checked="" type="checkbox"/> k			
Degree Requirements				Degree Requirements			
<input type="radio"/> Degree Requirement <input type="radio"/> Free Elective <input type="radio"/> Other <input type="radio"/> Core Course <input type="radio"/> Tech Elective				<input type="radio"/> Degree Requirement <input type="radio"/> Free Elective <input type="radio"/> Other <input type="radio"/> Core Course <input type="radio"/> Tech Elective			
Prerequisites				Prerequisites			
<input type="radio"/> Enforced <input type="radio"/> Advised				IOE/STATS 265 and IOE 366 or Stat 403 <input type="radio"/> Enforced <input checked="" type="radio"/> Advised			
Credit Restrictions				Credit Restrictions			
Level of Credit		Credit Hours	Contact Hrs/Wk	Level of Credit		Credit Hours	Contact Hrs/Wk
<input checked="" type="checkbox"/> Undergrad only <input type="checkbox"/> Ugrad or Non-Rckhm Grad <input checked="" type="checkbox"/> Rackham Grad <input type="checkbox"/> All Credit types <input type="checkbox"/> Non-Rckhm Grad <input type="checkbox"/> Rckhm Grad w/add'l Work <input type="checkbox"/> Ugrad or Rckhm Grad		Min Max	4	<input checked="" type="checkbox"/> Undergrad only <input type="checkbox"/> Ugrad or Non-Rckhm Grad <input checked="" type="checkbox"/> Rackham Grad <input type="checkbox"/> All Credit types <input type="checkbox"/> Non-Rckhm Grad <input type="checkbox"/> Rckhm Grad w/add'l Work <input type="checkbox"/> Ugrad or Rckhm Grad		Min Max	3 3
			Number of Wks				Number of Wks
			14				14
C. Repeatability (Incl Research, Dir. Study, Dissertation):				Printing Information			
Is this course repeatable? <input type="radio"/> Yes <input type="radio"/> No Maximum Hours? _____ Maximum Times? _____ Can it be repeated in the same term? <input type="radio"/> Yes <input type="radio"/> No				<input checked="" type="checkbox"/> Print the course in the Bulletin (Optional) <input checked="" type="checkbox"/> Print the course in the Time Schedule			
Class Type(s)		Graded Section	Grading	Terms & Freq. of Offering		Half term	
<input checked="" type="checkbox"/> Lec <input type="checkbox"/> Rec <input type="checkbox"/> Sem <input type="checkbox"/> Lab <input type="checkbox"/> Dis <input type="checkbox"/> Ind <input type="checkbox"/> Other		<input checked="" type="radio"/> Lec <input type="radio"/> Rec <input type="radio"/> Sem <input type="radio"/> Lab <input type="radio"/> Dis <input type="radio"/> Ind <input type="radio"/> Other	<input checked="" type="checkbox"/> A-E <input type="checkbox"/> CR/NC <input type="checkbox"/> S/U <input type="checkbox"/> P/F <input type="checkbox"/> Y	<input checked="" type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> IIIa <input type="checkbox"/> IIIb <input type="checkbox"/> III <input checked="" type="checkbox"/> Yearly <input type="checkbox"/> Alter Years <input type="checkbox"/> Even Years <input type="checkbox"/> Odd Years		<input type="checkbox"/> 1st <input type="checkbox"/> 2nd	
Location		Cognizant Faculty Member:		Jan Shi		Title Professor	
<input checked="" type="checkbox"/> Ann Arbor <input type="checkbox"/> Biological Station <input type="checkbox"/> Camp Davis <input type="checkbox"/> Extension							
Approval				Submitted By: <input checked="" type="checkbox"/> Home Dept. <input type="checkbox"/> Cross-listed Dept.			
<input type="checkbox"/> Curriculum Comm. _____ <input type="checkbox"/> Faculty _____ <input type="checkbox"/> Rackham _____ <input type="checkbox"/> Cross listed Unit 1 _____ <input type="checkbox"/> Cross listed Unit 2 _____				Name, Signature & Department Home Dept. _____ Cross-listed Dept(s). _____ <i>Candy J. Ellis - Statistics</i> PIM			

