

**The University of Michigan
College of Engineering
Curriculum Committee**

Agenda

April 20, 2004

1:30-3:00 p.m.

GM Room

Fourth Floor Lurie Engineering Center

1. Approval of Minutes from March 30, 2003 Meeting
2. Proposed SGUS Degrees from Macromolecular Science & Engineering
3. One College of Engineering Student Receiving More than 2 Undergraduate Degrees
4. Limits on Pass/Fail Option
5. Course Approval Forms
6. Nominations for New Chairperson for Committee

**University of Michigan
College of Engineering
Curriculum Committee Meeting
Tuesday March 30, 2004
1:30-3:00 p.m.
Lurie Engineering Center GM Room
Minutes**

Greg Hulbert called the meeting to order at 1:40 p.m.

Members Present: G. Hulbert, J. Bartlett, C. Cesnik, E. Chan, J. Fessler, G. Herrin, J. Holloway, S. Montgomery, J. Patel, S. Pang, M. Parsons, H. Peng, R. Robertson, P. Samson, S. Takayama,

Members Absent: W. Hansen (CEE), L. Thompson.

Guests: Stephanie Bulmon, Melissa Eljamal, Henia Kamil, Linda Nagy (for Will Hansen), Kathleen Vargo

Motion to approve the minutes of the last meeting

The minutes of the last meeting were approved

Melissa Eljamal – Course Approval: Directed Overseas Study

Melissa Eljamal presented the course approval form for Engineering 391 (Directed Overseas Study). This is a directed overseas study in an industrial placement that is overseen by a faculty member at a host institution in conjunction with academic courses taken as part of a study abroad program. Discussion. Greg Hulbert asked for a motion to approve ENGR 391. Moved and seconded. 1 abstention. **Motion Carried (approved).**

SGUS ME and Automotive Engineering

Huei Peng handed out information on the proposed SGUS (Sequential Graduate/Undergraduate Study) proposal. This is with Mechanical Engineering as the BS degree and Automotive Engineering as the Master of Engineering degree.

Greg Hulbert noted that what makes this SGUS different is that the Automotive Engineering degree typically requires 2 years work experience. That requirement is being modified as part of this SGUS program. The modification is that students must complete a minimum of 8 months of work experience.

Discussion

Greg Hulbert asked for a motion to approve the SGUS with ME and Automotive Engineering. Moved and seconded. **Motion Carried (approved)**

Limits on Pass/Fail Option

This topic was brought forward by Josh Bartlett. There was a one page handout from the College Bulletin related to this issue. Josh wants to remove the words: *“and will revert to the grade “earned”* from the beginning paragraph under **Pass/Fail Option**, which ends the sentence :

"Courses elected pass/fail which exceed the limitations stated above cannot be applied in any way to a degree program and will revert to the grade earned".

Kathleen Vargo from the Degree Progress office passed out copies of some memo's regarding modification of College Rules regarding Pass/Fail Options.

Greg Hulbert noted that Kathleen had mentioned that Levi has appointed an advisory committee and this Pass/Fail issue should be taken up by that committee. He noted that this issue will ultimately come before the College of Engineering Curriculum Committee since this is a curricular issue.

Greg stated that given the documentation brought by Kathleen Vargo and Stephanie Bulmon, it is important to look at why the rules are the way they are.

Electrical Engineering Program Change

Greg Hulbert asked for a motion to approve the program change for Electrical Engineering. Moved and Seconded.

Jeff Fessler talked about the proposed change which was included in the meeting packet: The EECS Department proposes to merge the current 3 credits of engineering breadth elective with the current 11 credits of flex. Technical electives to make it simply 14 credits of flex. technical electives, to give students more flexibility and simplify degree auditing. Discussion. 13 in favor; 2 opposed. **Motion Carried (approved)**

Course Approvals

AERO 416	Modification – Added NAME as X-Listing, Changed Course Description	
AOSS 350	Modification – Changed Prerequisites from: Math 216 <i>to: Math 216 or equivalent, C or better. (8 in favor; 5 opposed)</i>	
AOSS 401	Modification – Changed Credit Hours and Contact Hours from 3 <i>to: 4. (10 in favor; 1 opposed; 2 abstained)</i>	
CHE 487	Modification – Changed Prerequisites from: ChE 360, MSE 250, preceded or accompanied by ChE 344 <i>to: ChE 360 and ChE 344 and (MSE 250 or MSE 220), C- or better in these courses.</i>	
CEE 332		Deletion
CEE 400		Deletion
CEE 470		Deletion
CEE 501		Deletion
CEE 532	Modification – Changed Title, Changed Description, Changed Prerequisites from: Preceded or accompanied by CEE 431 <i>to: Graduate Standing and Preceded or accompanied by CEE 431.</i>	
CEE 553		Deletion

CEE 560		Deletion
CEE 810	Modification – Changed Title	
EECS 230	Modification – Changed Description, Changed Prerequisites from: MATH 215, PHYS 240 (or 260) and EECS 215 <i>to: MATH 215, PHYS 240 (or 260). Co-requisite EECS 215.</i>	
EECS 314	Modification – Changed Title, Changed Description, Changed Prerequisites from: Math 216 and Physics 240 <i>to: Math 214 or Math 216, Physics 240</i> , Changed Credit Restrictions from: Credit for only one: EECS 210,215 or 314	
EECS 385		New Course
EECS 475		New Course
EECS 480		New Course
EECS 588		New Course
EECS 661	Modification – Changed Prerequisites from: EECS 560 or EECS 476 or equivalent <i>to: Grad Standing</i>	
EECS 691		New Course
ENGR 391		New Course
IOE 421	Modification – Changed Level of Credit from: Undergrad only, Rackham Grad to: Undergrad only, Rackham Grad, non-Rckhm Grad . Changed Credit Hours and Contact Hours from: 4 to: 3 .	
IOE 422	Modification – Changed Credit Hours and Contact Hours from: 4 to: 3 .	
IOE 432	Modification – Changed Level of credit from: Undergrad only, Rackham Grad to: Undergrad only, Rackham Grad, Non-Rckhm Grad , Changed Credit hours and Contact Hours from: 4 to: 3 .	
IOE 436	Modification – Changed Level of credit from: Undergrad only, Rackham Grad to: Undergrad only, Rackham Grad, Non-Rckhm Grad , Changed Credit hours and Contact Hours from: 4 to: 3 .	
IOE 441 (X-Listed with MFG 441)	Modification – Changed Credit hours and Contact Hours from: 4 to: 3 .	
IOE 447 (X-Listed with MFG 447)	Modification – Changed Level of Credit from: Undergrad only, Rackham Grad to: Undergrad only, Rackham Grad, Non-Rckhm Grad ; Changed Credit Hours and Contact Hours from: 4 to: 3 .	

IOE 461(X-Listed with MFG 461 Modification – Changed Level of Credit from: Undergrad only, Rackham Grad **to: Undergrad only, Rackham Grad, Non-Rckhm Grad**, Changed Credit Hours and Contact Hours Wk from: 3 **to: 4**.

IOE 465 Modification – Changed Level of Credit from: Undergrad only; Rackham Grad **to: Undergrad only, Rackham, Non-Rckhm Grad**. Changed Credit Hours and Contact Hours from: 4 **to: 3**.

IOE 466 (X-Listed with STATS 466 and MFG 466) Modification -- Changed Level of Credit from: Undergrad only, Rackham Grad **to: Undergrad only, Rackham Grad, Non-Rckhm Grad**. Changed Credit Hours and Contact hours from 4 **to: 3**.

IOE 518 New Course

IOE 519 New Course

IOE 549 (X-Listed with MFG 549) Modification – Changed Course Numbers from: IOE 547 and MFG 549 **to: IOE 549 and MFG 549**

IOE 551 New Course

MFG 505 New Course

ME 406 New Course

ME 450 Modification – Changed Description, Changed Prerequisites from: ME 350 and ME 360 **to: ME 350, ME 360 and ME 395**

ME 453 New Course

ME 581(X-Listed with MFG 574) New Course

ME 589 New Course

Greg Hulbert called for a motion to approve the following courses. This was moved and seconded.

Motion Carried (approved)

M.ENG Program in Space Engineering

Greg Hulbert asked for a motion to approve the M.ENG Program in Space Engineering. This was moved and seconded.

Motion Carried (approved)

SGUS for Space Engineering

Greg Hulbert asked for a motion to approve the SGUS for Space Engineering. This was moved and seconded.

Motion Carried (approved)

Nominations for New Chairperson for Committee

Greg Hulbert noted that he is stepping down as Chair of the College of Engineering Curriculum Committee.

He asked that any nominations be sent to either him or Jeanne Murabito.

Adjournment: Motion to adjourn was made and seconded
Motion carried (approved)

Next Meeting

Tuesday, April 20, 2004

1:30-3:00 p.m.

GM Room – Fourth Floor LEC



UNIVERSITY OF MICHIGAN
COLLEGE OF ENGINEERING
OFFICE OF ACADEMIC SUPPORT SERVICES

ROBERT H. LURIE ENGINEERING CENTER
1221 BEAL AVENUE
ANN ARBOR, MICHIGAN 48109-2102
FAX 734 647-7126

April 14, 2004

Dear College of Engineering Curriculum Committee:

The CoE 2003-04 Bulletin addresses opportunities available to students to pursue dual degrees (two degrees in CoE), combined degrees (joint degrees with CoE and another approved U-M school/college), LSA Minors, and Sequential Undergraduate/Graduate Studies.

For May 2004 degree list, for the first time, Degree/Diploma Applications were submitted for triple CoE undergraduate degrees. Would the CoE Curriculum Committee please provide an official requirement/policy on the awarding of triple CoE undergraduate degrees. This would be included in the 2004-05 CoE Bulletin under the appropriate section. The requirement/policy would also be brought to the attention of Program Advisors, staff, and continuing students.

2003-04 Bulletin, page 53, "Requirements for an Additional Bachelor's Degree" states:

"To obtain two bachelor's degrees (including prescribed) in the College of Engineering, a student must complete the requirements of both degree programs. In addition for the second degree, the student must complete at least a minimum of 14 credits hours in pertinent technical subjects over the number required for the first degree. The credit hours that are used to satisfy each of the two programs also must satisfy the cumulative grade point average requirement of 2.0 or more. Approval by involved departments is required."

The CoE undergraduate degrees involved in the triple submitting of Degree/Diploma Applications are: Computer Engr, Computer Sci-Engr, and Electrical Engr. The Program Advisors met and approved senior audits for the degrees. For your information, attached is a spreadsheet showing how the courses were used for one student on the three senior audits.

Another student is pursuing a combined degree in CoE(Engr Physics)/LSA(Astronomy and Astrophysics/General Physics) with a LSA Minor in Math. LSA's response follows:

"We don't generally worry about what program/concentrations our MDDP students are doing in the other schools. As for LSA, students are allowed to complete both Astronomy & Astrophysics and General Physics concentrations. Even though there is overlap, they are considered two different programs."

There is no requirement/policy on students receiving multiple undergraduate degrees at the University-level. Discussion at the Undergraduate Program Advisor's monthly meetings has not occurred on this subject.

For any future occurrences of students wishing to pursue more than two CoE undergraduate degrees, an official CoE requirement/policy is important.

Thank you for in advance for your consideration in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kathleen M. Vargo'.

Kathleen M. Vargo
Undergraduate Degree Progress Office
Office of Academic Support Services
College of Engineering

Attach.

TRIPLE DEGREE -- USE OF COURSES

Sample of One Student

4/14/2004

CREDIT TOWARD PROGRAM(CTP): 139 + 17(WT04) = 156 - 128 = 28 credits

Courses (based on CE audit)	ComputerEngr	ComputerSci-Engr	ElectricalEngr
CoE Core			
Chemistry 125	X	X	X
Chemistry 130	X	X	X
Engr 100	X	X	X
Engr 101	X	X	X
Math 120 (for 115)	X	X	X
Math 121 (for 116)	X	X	X
Math 412 (for 215)	X	X	X
Math 450 (for 216)	X	X	X
Physics 140	X	X	X
Physics 141	X	X	X
Physics 240	X	X	X
Physics 241	X	X	X
Hum/SS			
Engl 1x1	X	X	X
German 101	X	X	X
Econ 101	X	X	X
Econ 102	X	X	X
Econ 310	X	X	X
Tech Com			
Tech Com 215	X	X	X
Tech Com 496	X	X	X
Program Core			
203	X	X	Flex Tech Elec
206	X	Engr Breadth Elec	X
210(for 215)	X	Flex Tech Elec	X
270	X	Flex Tech Elec	Core Tech Elec
280	X	X	X
370	X	X	Core Tech Elec
401/MA425/ST412	X	X	X
496	X	X	Flex Tech Elec
TechElects(EECS) Core			
281	X	Prgm Core	Flex Tech Elec
312	X	Unrestricted Elec	Core Tech Elec
Upper-Level Elect(*MDE)			
470	X	Upper-Level CS Elec	Tech Elec*
482	X	Upper-Level CS Elec	Engr Breadth Elec
427	X	Upper-Level Flex Tech	Upper-Level Elec
497*	X*	Upper-Level CS Elec*	Flex Tech Elec
FlexTech			
320	X	Unrestricted Elec	Prgm Core
376	X	Prgm Core	Engr Breadth Elec
Non-Prgm TE			
230	X	Flex Tech Elec	Prgm Core
Unrestricted			
Engr 1X1	X	X	X
EECS 478	X	Upper-Level Flex Tech	X
EECS 499	X	Unrestricted Elec	Flex Tech Elec
EECS 373	X	Upper-Level Flex Tech	Upper-Level Elec
EECS 499	X	Unrestricted Elec	X
EECS 575	X	Unrestricted Elec	X
EECS 586	X	Unrestricted Elec	X
EECS 598	X	Unrestricted Elec	X

COURSE APPROVAL FORMS

For April 20, 2004 CoE CC Meeting

AERO 245 Modification – Changing Description

AERO 345 Modification – Changing Description

AOSS 304 (X-Listed with ENSCEN 304)

Deletion

AOSS 495 (X-Listed with ENSCEN 495) Modification – Changing Title; Changing Description; Changing Level of Credit from: Ugrad or Rckhm Grad *to: All Credit Types*; Changing Credit Hours and Contact Hours from: 3 *to: 4*.

EECS 486 Modification – Changing Terms : *EECS 486 is now being taught in roughly alternate years and at a random time (fall or winter). Therefore having a specific term designation is misleading to students.*

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 4/1/2004

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> </td> <td> </td> <td> </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"> </td> </tr> <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> <tr> <td colspan="3">Course Description</td> </tr> <tr> <td colspan="3"> <input checked="" type="checkbox"/> An introduction to the aerospace field. Introduces students to steady motion of aircraft and spacecraft and to methods for evaluating performance of aircraft and spacecraft systems. Students learn basic aerodynamics, propulsion, and orbital mechanics. 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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: N.H. McClamroch, Aero

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 4/1/2004
 Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

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Submitted By: Home Dept. Cross-listed Dept.

Name, Signature & Department: N.H. McClamroch, Aero

Home Dept. N.H. McClamroch, Aero

Cross-listed Dept(s): _____

SUPPORTING STATEMENT

The statement "Involves a team design project." is incorrect is is being removed from the course description.....
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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 12/5/2003

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 Atmospheric, Oceanic & Space Sciences</td> <td style="width: 10%;">Div # AOSS</td> <td style="width: 60%;">Course Number 304</td> </tr> <tr> <td colspan="3">Cross Listed Course Information ENSCEN</td> </tr> <tr> <td colspan="3">Course Title The Atmospheric and Oceanic Environment</td> </tr> <tr> <td style="width: 15%;">TITLE ABBREVIATION</td> <td style="width: 15%;">Time Sched Max = 19 Spaces</td> <td style="width: 70%;">Atmos & Ocean Envir</td> </tr> <tr> <td></td> <td>Transcript Max = 20 Spaces</td> <td>Atm & Ocn Envir</td> </tr> <tr> <td colspan="3">Course Description Morphology of the atmosphere and oceans ranging from global to local scales, and the physical processes responsible for temperature, winds, currents, composition, and heat transport. 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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. AOSS Pery Samson
 Cross-listed Dept(s). ENSCEN

[Signature]

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 12/22/2003
 Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

<input type="checkbox"/> Home Department Div # Course Number	Home Department Atmospheric, Oceanic, & Space Sciences Div # Course Number AOSS 495												
<input type="checkbox"/> Cross Listed Course Information	Cross Listed Course Information ENSCEN ENSC 495												
<input checked="" type="checkbox"/> Course Title Thermosphere and Ionosphere	Course Title Upper Atmosphere and Ionosphere												
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Cognizant Faculty Member: _____ Title Professor	Cognizant Faculty Member: <u>Andrew F. Nagy</u> Title Professor												

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. AOSS Perry Samson
 Cross-listed Dept(s). ENSCEN

SUPPORTING STATEMENT

The reason for the change is to include material from AOSS 564, "Stratosphere and Mesosphere" to allow the elimination of that course. The major topics to be discussed in this course are:

Derivation of the transport equations from first principle and discussion of their limitations.

Collision processes relevant to the neutral atmosphere and ionosphere.

Relevant chemical processes: Two and three body reactions and rates; recombination; charge exchange; negative ions; excited state chemistry; optical emissions.

Natural and anthropogenic chemistry of the middle atmosphere.

Energy deposition into the atmosphere by photons and particles; ionization; heating and cooling processes.

Atmospheric waves (gravity waves and tides); neutral gas density and temperature structure of the middle and upper atmosphere; atmospheric escape; corona.

The terrestrial middle and low latitude ionosphere; geomagnetic field; ionospheric layers.

The terrestrial high latitude ionosphere; plasma convection; polar wind.

The atmospheres and ionospheres of planets, moons and comets.

Measurement techniques.

Energy deposition in the atmosphere and ionosphere; ionization.

Each student is also required to make a half hour presentation on a relevant spacecraft project.

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

Detail the Special requirements

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Program Outcomes:

- a) Fundamental mathematical chemical and physical principles are used to understand and interpret observed phenomena, as well as predict future observational results.
- b) In order to be able to design instruments/experiments and to interpret observational data students are taught to be able to understand what the already observed and/or anticipated parameters are.
- c) Basically the same as in b).
- d) The students are introduced through both lecture and their preparation for a seminar presentation, that modern space exploration is conducted by teams.
- g) Students are required to collect material from various sources and present this information in an oral presentation.
- h) The material covered in this course introduces students to the fact that our understanding of our environment is changing rapidly and continuously and thus in order to stay up-to-date they need to continue to learn and be informed.
- i) As indicated above, our knowledge of the terrestrial and solar system atmospheres and ionospheres is changing/growing and this course exposes them to the current issues and outstanding problems.

Action Requested

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

Complete the following sections:

- New Courses - B & C completely
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- Deletions - A & C completely

Date 3/30/2004

Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">Home Department</td> <td>Div #</td> <td>Course Number</td> </tr> <tr> <td colspan="2"></td> <td></td> <td></td> </tr> <tr> <td colspan="4">Cross Listed Course Information</td> </tr> <tr> <td colspan="4"></td> </tr> <tr> <td colspan="4">Course Title</td> </tr> <tr> <td colspan="4"></td> </tr> <tr> <td>TITLE ABBREVIATION</td> <td>Time Sched Max = 19 Spaces</td> <td colspan="2"></td> </tr> <tr> <td></td> <td>Transcript Max = 20 Spaces</td> <td colspan="2"></td> </tr> <tr> <td colspan="4">Course Description</td> </tr> <tr> <td colspan="4"></td> </tr> <tr> <td colspan="4">PROGRAM OUTCOMES:</td> </tr> <tr> <td colspan="4"> <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 </td> </tr> <tr> <td colspan="2">Degree Requirements</td> <td colspan="2"> <input type="radio"/> Degree Requirement <input type="radio"/> Core Course <input type="radio"/> Free Elective </td> </tr> <tr> <td colspan="2">Prerequisites</td> <td colspan="2"> <input type="radio"/> Tech Elective <input type="radio"/> Other </td> </tr> <tr> <td colspan="4"> <input type="radio"/> Enforced <input type="radio"/> Advised </td> </tr> <tr> <td colspan="4">Credit Restrictions</td> </tr> <tr> <td colspan="2">Level of Credit</td> <td>Credit Hours</td> <td>Contact Hrs/Wk</td> </tr> <tr> <td colspan="2"> <input type="checkbox"/> Undergrad only <input type="checkbox"/> Rackham Grad <input type="checkbox"/> Non-Rackham Grad <input type="checkbox"/> Ugrad or Rackham Grad <input type="checkbox"/> Ugrad or Non-Rackham Grad </td> <td>Min Max</td> <td>_____</td> </tr> <tr> <td colspan="2"> <input type="checkbox"/> All Credit types <input type="checkbox"/> Rackham Grad w/add'l Work </td> <td colspan="2">Number of Wks _____</td> </tr> </table>	Home Department		Div #	Course Number					Cross Listed Course Information								Course Title								TITLE ABBREVIATION	Time Sched Max = 19 Spaces				Transcript Max = 20 Spaces			Course Description								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"/> Core Course <input type="radio"/> Free Elective		Prerequisites		<input type="radio"/> Tech Elective <input type="radio"/> Other		<input type="radio"/> Enforced <input type="radio"/> Advised				Credit Restrictions				Level of Credit		Credit Hours	Contact Hrs/Wk	<input type="checkbox"/> Undergrad only <input type="checkbox"/> Rackham Grad <input type="checkbox"/> Non-Rackham Grad <input type="checkbox"/> Ugrad or Rackham Grad <input type="checkbox"/> Ugrad or Non-Rackham Grad		Min Max	_____	<input type="checkbox"/> All Credit types <input type="checkbox"/> Rackham Grad w/add'l Work		Number of Wks _____		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">Home Department</td> <td>Div #</td> <td>Course Number</td> </tr> <tr> <td colspan="2">EECS</td> <td>252</td> <td>486</td> </tr> <tr> <td colspan="4">Cross Listed Course Information</td> </tr> <tr> <td colspan="4"></td> </tr> <tr> <td colspan="4">Course Title</td> </tr> <tr> <td colspan="4">Object-Oriented Methodology</td> </tr> <tr> <td>TITLE ABBREVIATION</td> <td>Time Sched Max = 19 Spaces</td> <td colspan="2">O-O Soft Meth</td> </tr> <tr> <td></td> <td>Transcript Max = 20 Spaces</td> <td colspan="2">O-O Soft Meth</td> </tr> <tr> <td colspan="4">Course Description for Official Publication (Max = 50 words)</td> </tr> <tr> <td colspan="4">Object-based requirement analysis and design concepts such as program abstraction, encapsulation, polymorphism, inheritance, generalization, and reusability. 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<p>C.</p> <p>Repeatability (Indl Research, Dir. Study, Dissertation):</p> <p>Is this course repeatable? <input type="radio"/> Yes <input type="radio"/> No</p> <p>Maximum Hours? _____ Maximum Times? _____</p> <p>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> <th>Class Type(s)</th> <th>Graded Section</th> <th>Lec</th> <th>Grading</th> <th>Location</th> </tr> <tr> <td> <input checked="" type="checkbox"/> Lec <input type="checkbox"/> Rec <input type="checkbox"/> Sem <input type="checkbox"/> Lab <input checked="" 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	Lec	Grading	Location	<input checked="" type="checkbox"/> Lec <input type="checkbox"/> Rec <input type="checkbox"/> Sem <input type="checkbox"/> Lab <input checked="" 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 (Optional)</p> <p><input type="checkbox"/> Print the course in the Bulletin <input type="checkbox"/> Print the course in the Time Schedule</p> <p>Terms & Freq. of Offering</p> <p> <input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> IIIa <input type="checkbox"/> IIIb <input type="checkbox"/> III </p> <p> <input type="checkbox"/> Yearly <input type="checkbox"/> Alter Years <input type="checkbox"/> Even Years <input type="checkbox"/> Odd Years </p> <p>Cognizant Faculty Member: _____</p> <p> Cognizant Faculty: <u>Toby Teorey</u> Title: <u>Prof.</u> </p> <p> Grad Course: Attach nomination if Cognizant Faculty is not a regular graduate faculty </p> <p>Submitted By: <input type="checkbox"/> Home Dept. <input checked="" type="checkbox"/> Cross-listed Dept.</p> <p>Name, Signature & Department: _____</p> <p>Home Dept. <u>EECS</u></p> <p>Cross-listed Dept(s): _____</p>																																																																																																																																														
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Approval

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

See supporting

Systemad

Toby Teorey

SUPPORTING STATEMENT

EECS 486 is now being taught in roughly alternate years, and at a random time (fall or winter). Therefore having a specific term designation is misleading to students.

Lined area for supporting statement.

Are any special resources or facilities required for this course?

Yes No

Detail the Special requirements

Lined area for special requirements.