

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

Form Number

1358

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 2/24/2004

Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

Home Department <input type="checkbox"/>		Div #	Course Number	Home Department EECS		Div # 252	Course Number 385
Cross Listed Course Information <input type="checkbox"/>				Cross Listed Course Information			
Course Title <input type="checkbox"/>				Course Title Speed Programming			
TITLE ABBRE- VIATION	Time Sched Max = 19 Spaces			TITLE ABBRE- VIATION	Time Sched Max = 19 Spaces	Speed Programming	
	Transcript Max = 20 Spaces				Transcript Max = 20 Spaces	Speed Programming	
Course Description <input type="checkbox"/>				Course Description for Official Publication (Max = 50 words) A course to help students prepare for programming competitions such as the International Collegiate Programming competition. Students will learn fast problem solving and program writing techniques, quick classification of problems, common data structures and algorithms, team strategies, and standard libraries. Students will compete in weekly contests.			
PROGRAM OUTCOMES <input type="checkbox"/>				PROGRAM OUTCOMES <input checked="" 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="checkbox"/> Degree Requirement <input type="checkbox"/> Tech Elective <input type="checkbox"/> Core Course <input type="checkbox"/> Other <input type="checkbox"/> Free Elective				Degree Requirements <input checked="" type="checkbox"/> Degree Requirement <input checked="" type="checkbox"/> Tech Elective <input type="checkbox"/> Core Course <input type="checkbox"/> Other <input type="checkbox"/> Free Elective			
Prerequisites <input type="checkbox"/> Enforced <input type="checkbox"/> Advised				Prerequisites EECS 281 <input type="checkbox"/> Enforced <input type="checkbox"/> Advised			
Credit Restrictions <input type="checkbox"/>				Credit Restrictions <input type="checkbox"/>			
Level of Credit <input type="checkbox"/> Undergrad only <input type="checkbox"/> All Credit types <input type="checkbox"/> Rackham Grad <input type="checkbox"/> Rackham Grad w/add'l Work <input type="checkbox"/> Non-Rackham Grad <input type="checkbox"/> Ugrad or Rackham Grad <input type="checkbox"/> Ugrad or Non-Rackham Grad		Credit Hours Min Max	Contact Hrs/Wk Number of Wks	Level of Credit <input checked="" type="checkbox"/> Undergrad only <input type="checkbox"/> All Credit types <input type="checkbox"/> Rackham Grad <input type="checkbox"/> Rackham Grad w/add'l Work <input type="checkbox"/> Non-Rackham Grad <input type="checkbox"/> Ugrad or Rackham Grad <input type="checkbox"/> Ugrad or Non-Rackham Grad		Credit Hours Min Max	Contact Hrs/Wk Number of Wks
						1 1	1 14
C. Repeatability (Indi 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 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 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"/> CRNC <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 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	
						Half term <input type="checkbox"/> 1st <input type="checkbox"/> 2nd	
Approval <input type="checkbox"/> Curriculum Comm. _____ <input type="checkbox"/> Faculty _____ <input type="checkbox"/> Rackham _____ <input type="checkbox"/> Cross listed Unit 1 _____				Submitted By: <input type="checkbox"/> Home Dept. <input type="checkbox"/> Cross-listed Dept. Name, Signature & Department Home Dept. EECS <u>John J. Feeney</u> Cross-listed Dept(s). _____			
				Cognizant Faculty Member: Kevin Compton Title Assoc. Prof. Grad Course: Attach nomination if Cognizant Faculty is not a regular graduate faculty			

1358

This is a specialized course for the programming team members. The topics are specific to the competitive programming environment and are common to the other top schools. The course can only be taken once.

☐ Yes ☒ No[illegible]

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☒ Modification of Existing Course
☐ Deletion of Course

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New Courses - B & C completely

Modifications - A modified information, B & C completely

Deletions - A & C completely

Date 2/9/2004

Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

<div style="border: 1px solid black; padding: 5px;"> <div style="display: flex; justify-content: space-between;"> Home Department Div # Course Number </div> <div style="border: 1px solid black; height: 80px; margin-top: 5px;"> <div style="position: absolute; top: 5px; left: 5px;">Cross Listed Course Information</div> </div> <div style="border: 1px solid black; height: 30px; margin-top: 5px;"> <div style="position: absolute; top: 5px; left: 5px;">Course Title</div> </div> <div style="display: flex; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px; font-size: 0.8em;">TITLE ABBRE- VIATION</div> <div style="border: 1px solid black; padding: 2px; font-size: 0.8em;">Time Sched Max = 19 Spaces</div> <div style="border: 1px solid black; padding: 2px; font-size: 0.8em;">Transcript Max = 20 Spaces</div> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>Course Description</p> <p>Basic techniques for analysis and design of controllers applicable in any industry (e.g., automotive, aerospace, semiconductor, bioengineering, power, etc.) are discussed. Both time and frequency domain methods are covered. Root locus, Nyquist stability criterion, and Bode plot-based techniques are used as tools for analysis and design.</p> </div> </div>	<div style="border: 1px solid black; padding: 5px;"> <div style="display: flex; justify-content: space-between;"> Home Department Div # Course Number </div> <div style="border: 1px solid black; height: 80px; margin-top: 5px;"> <div style="position: absolute; top: 5px; left: 5px;">Cross Listed Course Information</div> </div> <div style="border: 1px solid black; height: 30px; margin-top: 5px;"> <div style="position: absolute; top: 5px; left: 5px;">Course Title</div> </div> <div style="display: flex; margin-top: 5px;"> <div style="border: 1px solid black; padding: 2px; font-size: 0.8em;">TITLE ABBRE- VIATION</div> <div style="border: 1px solid black; padding: 2px; font-size: 0.8em;">Time Sched Max = 19 Spaces</div> <div style="border: 1px solid black; padding: 2px; font-size: 0.8em;">Transcript Max = 20 Spaces</div> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>Course Description for Official Publication (Max = 50 words)</p> <p>Basic techniques for analysis and design of controllers applicable in any industry (e.g., automotive, aerospace, computer, communication, bioengineering, power, chemical, etc.) are discussed. Both time- and frequency-domain methods are covered. Root locus, Nyquist- and Bode-plot techniques are outlined. Computer-based experiments and discussion sessions are included in the course.</p> </div> </div>						
<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</p> <div style="display: flex; justify-content: space-between;"> <div> <input type="radio"/> Degree Requirement <input type="radio"/> Core Course <input type="radio"/> Free Elective </div> <div> <input type="radio"/> Tech Elective <input type="radio"/> Other </div> </div>							
<p>Prerequisites (EECS 212/316 or EECS 306) or Graduate Standing</p> <p><input type="radio"/> Enforced <input type="radio"/> Advised</p>							
<p>Credit Restrictions</p> <div style="display: flex; justify-content: space-between;"> <div> <p>Level of Credit</p> <div style="display: flex;"> <div> <input type="checkbox"/> Undergrad only <input type="checkbox"/> Rackham Grad <input type="checkbox"/> Non-Rackham Grad <input checked="" type="checkbox"/> Ugrad or Rackham Grad <input type="checkbox"/> Ugrad or Non-Rackham Grad </div> <div> <input type="checkbox"/> All Credit types <input type="checkbox"/> Rackham Grad w/add'l Work </div> </div> </div> <div> <p>Credit Hours</p> <table border="1" style="font-size: 0.8em;"> <tr><th>Min</th><th>Max</th></tr> <tr><td>3</td><td>3</td></tr> </table> </div> <div> <p>Contact Hrs/Wk</p> <table border="1" style="font-size: 0.8em;"> <tr><td>3</td></tr> </table> <p>Number of Wks</p> <table border="1" style="font-size: 0.8em;"> <tr><td>14</td></tr> </table> </div> </div>		Min	Max	3	3	3	14
Min	Max						
3	3						
3							
14							
<p>Repeatability (Indl Research, Dir. Study, Dissertation):</p> <p>Is this course repeatable? <input type="radio"/> Yes <input checked="" type="radio"/> No</p> <p>Maximum Hours? _____ Maximum Times? _____</p> <p>Can it be repeated in the same term? <input type="radio"/> Yes <input checked="" type="radio"/> No</p>							
<div style="display: flex; justify-content: space-between;"> <div> <p>Class Type(s)</p> <div style="display: flex;"> <div> <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 </div> <div> <p>Graded Section</p> <div style="display: flex;"> <div> <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 </div> <div> <p>Grading</p> <div style="display: flex;"> <div> <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 </div> <div> <p>Location</p> <div style="display: flex;"> <div> <input checked="" type="checkbox"/> Ann Arbor <input type="checkbox"/> Biological Station <input type="checkbox"/> Camp Davis <input type="checkbox"/> Extension </div> </div> </div> </div> </div> </div> </div> </div></div></div>							
<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>							
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<p>Cognizant Faculty</p> <div style="display: flex; justify-content: space-between;"> <div> <p>Member: <u>S. Meerkov</u></p> <p><u>J. Grizzle</u></p> </div> <div> <p>Title: <u>Professor</u></p> <p><u>Professor</u></p> </div> </div> <p>Grad Course: Attach nomination if Cognizant Faculty is not a regular graduate faculty</p>							

Approval

☐ Curriculum Comm.

☐ Faculty

☐ Rackham

☐ Cross listed Unit 1

Submitted By: ☒ Home Dept. ☐ Cross-listed Dept.

Name, Signature & Department

Home Dept. EECS

Cross-listed Dept(s):

Form Number

1321

SUPPORTING STATEMENT

The prerequisites are modified because EECS 212 and EECS 316 are no longer offered. The credit hours are changed because the course requires a discussion section, which includes several computer-based controller design experiments.

Approved by ECE faculty, 2004-2-10.

Are any special resources or facilities required for this course?

☐ Yes ☐ No

Detail the Special requirements

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



Form Number

1357

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 2/24/2004

Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

<div style="border: 1px solid black; padding: 5px;"> <div style="display: flex; justify-content: space-between;"> Home Department Div # Course Number </div> <div style="display: flex; justify-content: space-between;"> EECS 252 480 </div> </div> <div style="border: 1px solid black; padding: 5px; height: 80px;"> Cross Listed Course Information </div> <div style="border: 1px solid black; padding: 5px;"> Course Title </div> <div style="display: flex; border: 1px solid black;"> <div style="border-right: 1px solid black; padding: 5px; width: 15%;"> TITLE ABBRE- VIATION </div> <div style="border-right: 1px solid black; padding: 5px; width: 15%;"> Time Sched Max = 19 Spaces Transcript Max = 20 Spaces </div> <div style="padding: 5px; width: 70%;"> Logic Formal Verif Logic Formal Verif </div> </div> <div style="border: 1px solid black; padding: 5px; height: 150px;"> Course Description </div> <div style="background-color: #f0f0f0; padding: 5px;"> 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 </div> <div style="border: 1px solid black; padding: 5px;"> Degree Requirements <div style="display: flex; justify-content: space-between;"> <div> <input type="radio"/> Degree Requirement <input type="radio"/> Core Course <input type="radio"/> Free Elective </div> <div> <input type="radio"/> Tech Elective <input type="radio"/> Other </div> </div> </div> <div style="border: 1px solid black; padding: 5px;"> Prerequisites <input type="radio"/> Enforced <input type="radio"/> Advised </div> <div style="border: 1px solid black; padding: 5px;"> Credit Restrictions <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Level of Credit</th> <th>Credit Hours</th> <th>Contact</th> </tr> <tr> <td> <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> <div style="display: flex; justify-content: space-between;"> Min Max </div> </td> <td> <div style="display: flex; justify-content: space-between;"> Hrs/Wk Number of Wks </div> </td> </tr> <tr> <td> <input type="checkbox"/> All Credit types <input type="checkbox"/> Rackham Grad w/add'l Work </td> <td></td> <td></td> </tr> </table> </div>	Level of Credit	Credit Hours	Contact	<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	<div style="display: flex; justify-content: space-between;"> Min Max </div>	<div style="display: flex; justify-content: space-between;"> Hrs/Wk Number of Wks </div>	<input type="checkbox"/> All Credit types <input type="checkbox"/> Rackham Grad w/add'l Work			<div style="border: 1px solid black; padding: 5px;"> <div style="display: flex; justify-content: space-between;"> Home Department Div # Course Number </div> <div style="display: flex; justify-content: space-between;"> EECS 252 480 </div> </div> <div style="border: 1px solid black; padding: 5px; height: 80px;"> Cross Listed Course Information </div> <div style="border: 1px solid black; padding: 5px;"> Course Title Logic and Formal Verification </div> <div style="display: flex; border: 1px solid black;"> <div style="border-right: 1px solid black; padding: 5px; width: 15%;"> TITLE ABBRE- VIATION </div> <div style="border-right: 1px solid black; padding: 5px; width: 15%;"> Time Sched Max = 19 Spaces Transcript Max = 20 Spaces </div> <div style="padding: 5px; width: 70%;"> Logic Formal Verif Logic Formal Verif </div> </div> <div style="border: 1px solid black; padding: 5px; height: 150px;"> Course Description for Official Publication (Max = 50 words) An introduction to current methodologies for verifying computer systems. Topics covered include logic and theorem proving; transition systems; temporal logic and the mu-calculus; modeling sequential and concurrent systems; model checking methods; binary decision diagrams; and controlling state explosion. Students will complete a project using current model checking technology. </div> <div style="background-color: #f0f0f0; padding: 5px;"> PROGRAM OUTCOMES: <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 </div> <div style="border: 1px solid black; padding: 5px;"> Degree Requirements <div style="display: flex; justify-content: space-between;"> <div> <input type="radio"/> Degree Requirement <input type="radio"/> Core Course <input type="radio"/> Free Elective </div> <div> <input type="radio"/> Tech Elective <input type="radio"/> Other </div> </div> </div> <div style="border: 1px solid black; padding: 5px;"> Prerequisites EECS 281 and EECS 376 <input type="radio"/> Enforced <input type="radio"/> Advised </div> <div style="border: 1px solid black; padding: 5px;"> Credit Restrictions <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Level of Credit</th> <th>Credit Hours</th> <th>Contact</th> </tr> <tr> <td> <input type="checkbox"/> Undergrad only <input type="checkbox"/> Rackham Grad <input checked="" type="checkbox"/> Non-Rackham Grad <input checked="" type="checkbox"/> Ugrad or Rackham Grad <input type="checkbox"/> Ugrad or Non-Rackham Grad </td> <td> <div style="display: flex; justify-content: space-between;"> Min Max </div> </td> <td> <div style="display: flex; justify-content: space-between;"> Hrs/Wk Number of Wks </div> </td> </tr> <tr> <td> <input type="checkbox"/> All Credit types <input type="checkbox"/> Rackham Grad w/add'l Work </td> <td></td> <td></td> </tr> </table> </div>	Level of Credit	Credit Hours	Contact	<input type="checkbox"/> Undergrad only <input type="checkbox"/> Rackham Grad <input checked="" type="checkbox"/> Non-Rackham Grad <input checked="" type="checkbox"/> Ugrad or Rackham Grad <input type="checkbox"/> Ugrad or Non-Rackham Grad	<div style="display: flex; justify-content: space-between;"> Min Max </div>	<div style="display: flex; justify-content: space-between;"> Hrs/Wk Number of Wks </div>	<input type="checkbox"/> All Credit types <input type="checkbox"/> Rackham Grad w/add'l Work		
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<input type="checkbox"/> All Credit types <input type="checkbox"/> Rackham Grad w/add'l Work																			

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

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

Class Type(s) ☒ Lec ☐ Rec ☐ Sem ☐ Lab ☒ Dis ☐ Ind ☐ Other _____
Graded Section ☐ Lec ☐ Rec ☐ Sem ☐ Lab ☐ Dis ☐ Ind ☐ Other _____
Grading ☒ A-E ☐ CR/NC ☐ S/U ☐ P/F ☐ Y _____
Location ☒ Ann Arbor ☐ Biological Station ☐ Camp Davis ☐ Extension _____

Terms & Freq. of Offering ☐ I ☒ II ☐ IIIa ☐ IIIb ☐ III ☐ Half term ☐ 1st ☒ 2nd
☐ Yearly ☒ Alter Years ☐ Even Years ☐ Odd Years

Cognizant Faculty Member: _____ **Title:** Assoc. Prof

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

Approval

☐ Curriculum Comm.

☐ Faculty

☐ Rackham

☐ Cross listed Unit 1

Submitted By: ☐ Home Dept. ☒ Cross-listed Dept.

Name, Signature & Department

Home Dept. EECS

Cross-listed Dept(s).

Form Number

1357

SUPPORTING STATEMENT

This course covers various applications of logic in computer science. The largest application is formal resitoration of systems - very important to both hardware (Computer architecture) and software (applications) systemrs. It will have a small to moderate enrollment and wil be offered in alternate years.

Are any special resources or facilities required for this course?

☐ Yes ☐ No

Detail the Special requirements

THE UNIVERSITY OF MICHIGAN – COLLEGE OF ENGINEERING
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Form Number

1295

Action Requested

- ☐ New Course
☒ Modification of Existing Course
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Complete the following sections:

New Courses - B & C completely
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Date 1/23/2004

Effective Fall 2004

A. CURRENT LISTING

Home Department EECS		Div # 252	Course Number 487
Cross Listed Course Information			
Course Title			
TITLE ABBRE- VIATION	Time Sched Max = 19 Spaces Transcript Max = 20 Spaces	Interac Comp Graph Comp Graphics	
Course Description Computer graphics hardware, line drawing, rasterization, anti-aliasing, graphical user interface (GUI), affine geometry, projective geometry, geometric transformation, polygons, curves, splines, solid models, lighting and shading, image rendering, ray tracing, radiosity, hidden surface removal, texture mapping, animation, virtual reality, and scientific visualization.			
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 checked="" type="radio"/> Degree Requirement <input type="radio"/> Tech Elective <input type="radio"/> Core Course <input type="radio"/> Other <input type="radio"/> Free Elective			
Prerequisites (EECS 281 and senior standing) or Graduate Standing <input type="radio"/> Enforced <input type="radio"/> Advised			
Credit Restrictions			
Level of Credit <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		<input checked="" type="checkbox"/> All Credit types <input type="checkbox"/> Rackham Grad w/add'l Work Credit Hours Min <u>4</u> Max <u>4</u> Contact Hrs/Wk <u>4</u> Number of Wks <u>14</u>	

B. REQUESTED LISTING

Home Department EECS		Div # 252	Course Number 487
Cross Listed Course Information			
Course Title Interactive Computer Graphics			
TITLE ABBRE- VIATION	Time Sched Max = 19 Spaces Transcript Max = 20 Spaces	Interac Comp Graph Comp Graphics	
Course Description for Official Publication (Max = 50 words) Computer graphics hardware, line drawing, rasterization, anti-aliasing, graphical user interface (GUI), affine geometry, projective geometry, geometric transformation, polygons, curves, splines, solid models, lighting and shading, image rendering, ray tracing, radiosity, hidden surface removal, texture mapping, animation, virtual reality, and scientific visualization.			
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C. Repeatability (Indi Research, Dir. Study, Dissertation):
 Is this course repeatable? ☐ Yes ☐ No
 Maximum Hours? _____ Maximum Times? _____
 Can it be repeated in the same term? ☐ Yes ☐ No

Printing Information (Optional) <input checked="" type="checkbox"/> Print the course in the Bulletin <input checked="" type="checkbox"/> Print the course in the Time Schedule	
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Cognizant Faculty Member: <u>John Laird</u> Title <u>Professor</u>	
Grad Course: Attach nomination if Cognizant Faculty is not a regular graduate faculty	

Approval

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

Submitted By: ☒ Home Dept. ☐ Cross-listed Dept.
 Name, Signature & Department: John Laird 2004-1-23
 Home Dept. _____
 Cross-listed Dept(s). _____

Form Number

1295

SUPPORTING STATEMENT

This unnecessary prereq creates unnecessary work in the advising office processing over-rides.

Approved 2004-1-20 by EECS curr comm

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 1/19/2004

Effective Winter 2004

A. CURRENT LISTING

B. REQUESTED LISTING

<div style="border: 1px solid black; padding: 5px;"> <div style="display: flex; justify-content: space-between;"> Home Department EECS Div # 252 Course Number 495 </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> Cross Listed Course Information </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> Course Title Patent Fundamentals for Engineers </div> <div style="display: flex; justify-content: space-between; border: 1px solid black; padding: 5px; margin-top: 5px;"> <div style="width: 30%;"> TITLE ABBRE- VIATION </div> <div style="width: 30%;"> Time Sched Max = 19 Spaces Patent Fund Eng </div> <div style="width: 30%;"> Transcript Max = 20 Spaces Patent Fund Eng </div> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> Course Description This course covers the fundamentals of patents for Engineers. The first part of the course focuses on the rules and codes that govern patent prosecution, and the second part focuses on claim drafting and amendment writing. Other topics covered include litigation, ethics and licensing. </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> PROGRAM OUTCOMES: <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input checked="" type="checkbox"/> d <input type="checkbox"/> e <input checked="" type="checkbox"/> f <input checked="" type="checkbox"/> g <input type="checkbox"/> h <input type="checkbox"/> i <input type="checkbox"/> j <input checked="" type="checkbox"/> k </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> Degree Requirements <input type="radio"/> Degree Requirement <input type="radio"/> Tech Elective <input type="radio"/> Core Course <input type="radio"/> Other <input checked="" type="radio"/> Free Elective </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> Prerequisites (Junior or Senior Standing) or Graduate Standing <input type="radio"/> Enforced <input checked="" type="radio"/> Advised </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> Credit Restrictions </div> <div style="display: flex; justify-content: space-between; border: 1px solid black; padding: 5px; margin-top: 5px;"> <div style="width: 40%;"> Level of Credit <input type="checkbox"/> Undergrad only <input type="checkbox"/> Rackham Grad <input type="checkbox"/> Non-Rackham Grad <input checked="" type="checkbox"/> Ugrad or Rackham Grad <input type="checkbox"/> Ugrad or Non-Rackham Grad </div> <div style="width: 20%;"> <input type="checkbox"/> All Credit types <input type="checkbox"/> Rackham Grad w/add'l Work </div> <div style="width: 20%;"> Credit Hours Min Max 4 4 </div> <div style="width: 20%;"> Contact Hrs/Wk 4 Number of Wks 14 </div> </div> </div>	<div style="border: 1px solid black; padding: 5px;"> <div style="display: flex; justify-content: space-between;"> Home Department EECS Div # 252 Course Number 495 </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> Cross Listed Course Information </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> Course Title Patent Fundamentals for Engineers </div> <div style="display: flex; justify-content: space-between; border: 1px solid black; padding: 5px; margin-top: 5px;"> <div style="width: 30%;"> TITLE ABBRE- VIATION </div> <div style="width: 30%;"> Time Sched Max = 19 Spaces Patent Fund Eng </div> <div style="width: 30%;"> Transcript Max = 20 Spaces Patent Fund Eng </div> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> Course Description for Official Publication (Max = 50 words) This course covers the fundamentals of patents for Engineers. 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C.

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

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

Class Type(s)
☒ Lec
☐ Rec
☐ Sem
☐ Lab
☐ Dis
☐ Ind
☐ Other

Graded Section
☐ Lec
☐ Rec
☐ Sem
☐ Lab
☐ Dis
☐ Ind
☐ Other

Grading
☒ A-E
☐ CR/NC
☐ S/U
☐ P/F
☐ Y

Location
☒ Ann Arbor
☐ Biological Station
☐ Camp Davis
☐ Extension

Terms & Freq. of Offering
☒ I ☐ II ☐ IIIa ☐ IIIb ☐ III
☐ Yearly ☒ Alter Years ☐ Even Years ☐ Odd Years
Half term ☐ 1st ☐ 2nd

Cognizant Faculty Member: Mohammed Islam Title: Professor

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

Approval

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

Submitted By: ☒ Home Dept. ☐ Cross-listed Dept.

Name, Signature & Department

Home Dept. EECS

Cross-listed Dept(s).

2004-1-20

Form Number

1284

SUPPORTING STATEMENT

Correcting previous error.

we do want to allow all credit types.

Approved 2004-1-20 by EACS Curr Comm

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 2/5/2004

Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

<div style="border: 1px solid black; padding: 5px;"> <div style="display: flex; justify-content: space-between;"> Home Department Div # Course Number </div> <div style="border: 1px solid black; height: 100px; margin-top: 5px;"></div> </div>	<div style="border: 1px solid black; padding: 5px;"> <div style="display: flex; justify-content: space-between;"> Home Department Div # Course Number </div> <div style="border: 1px solid black; height: 100px; margin-top: 5px;"></div> </div>																
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<div style="display: flex; justify-content: space-between;"> Class Type(s) </div>	<div style="display: flex; justify-content: space-between;"> Graded Section </div>	<div style="display: flex; justify-content: space-between;"> Grading </div>	<div style="display: flex; justify-content: space-between;"> Location </div>														
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Approval

☐ Curriculum Comm. _____

☐ Faculty _____

☐ Rackham _____

☐ Cross listed Unit 1 _____

Submitted By: ☒ Home Dept. ☐ Cross-listed Dept.

Name, Signature & Department

Home Dept. EECS Jeff Fessler 2004-2-23

Cross-listed Dept(s). _____

Form Number

1317

SUPPORTING STATEMENT

EECS 551 used to be called "deterministic signal processing" and was the leader course for graduate SP courses. Around 1998 we changed the title to "wavelets and time frequency distributions" to emphasize the wavelet topic which was particularly popular at the time. We have since found that students need more linear algebra preparation for subsequent signal processing topics (including wavelets) so we wish to return to having 551 serve as the leader course that introduces the mathematical foundations for graduate signal processing courses. We very much wish to use the same course number (551) because there are many undergrad/graduate course pairs (401/501 451/551 460/560 455/555) on related topics in the Systems area and it is desirable to preserve this symmetry for advising purposes.

Approved by ECE Faculty 2004-2-10

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 2/5/2004

Effective Winter 2005

A. CURRENT LISTING

B. REQUESTED LISTING

Home Department EECS		Div # 252	Course Number 556
Cross Listed Course Information			
Course Title Image Processing			
TITLE ABBRE- VIATION	Time Sched Max = 19 Spaces Transcript Max = 20 Spaces	Image Processing Image Proc	
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"/> Tech Elective <input type="radio"/> Core Course <input type="radio"/> Other <input type="radio"/> Free Elective			
Prerequisites: EECS 451 and EECS 501 <input type="radio"/> Enforced <input type="radio"/> Advised			
Credit Restrictions			
Level of Credit <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	<input type="checkbox"/> All Credit types <input type="checkbox"/> Rackham Grad w/add'l Work	Credit Hours Min Max	Contact Hrs/Wk Number of Wks
Repeatability (Indl Research, Dir. Study, Dissertation): Is this course repeatable? <input type="radio"/> Yes <input checked="" type="radio"/> No Maximum Hours? _____ Maximum Times? _____ Can it be repeated in the same term? <input type="radio"/> Yes <input checked="" type="radio"/> No			
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Home Department EECS		Div # 252	Course Number 556
Cross Listed Course Information			
Course Title Image Processing			
TITLE ABBRE- VIATION	Time Sched Max = 19 Spaces Transcript Max = 20 Spaces	Image Processing Image Processing	
Course Description for Official Publication (Max = 50 words) Theory and application of digital image processing. Random field models of images. Sampling, quantization, image compression, enhancement, restoration, segmentation, shape description, reconstruction of pictures from their projections, pattern recognition. Applications include biomedical images, time varying imagery, robotics, and optics.			
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"/> Tech Elective <input type="radio"/> Core Course <input type="radio"/> Other <input type="radio"/> Free Elective			
Prerequisites: EECS 551 and EECS 501 <input type="radio"/> Enforced <input checked="" type="radio"/> Advised			
Credit Restrictions			
Level of Credit <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	<input checked="" type="checkbox"/> All Credit types <input type="checkbox"/> Rackham Grad w/add'l Work	Credit Hours Min Max 3 3	Contact Hrs/Wk Number of Wks 3 14
Printing Information (Optional) <input type="checkbox"/> Print the course in the Bulletin <input type="checkbox"/> Print the course in the Time Schedule			
Terms & Freq. of Offering: <input 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: J. Fessler Title Prof. Member: D. Neuhoff Prof.			
Grad Course: Attach nomination if Cognizant Faculty is not a regular graduate faculty			

Approval

☐ Curriculum Comm.

☐ Faculty

☐ Rackham

☐ Cross listed Unit 1

Submitted By: ☐ Home Dept. ☐ Cross-listed Dept.

Name, Signature & Department

Home Dept. EECS

Cross-listed Dept(s).

Form Number

1318

SUPPORTING STATEMENT

The revised EECS 551 will become the leader course for graduate signal processing courses.

Approved by ECE faculty 2004-2-10

Are any special resources or facilities required for this course?

☐ Yes ☐ No

Detail the Special requirements

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

Form Number

1319

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 2/5/2004

Effective Winter 2005

A. CURRENT LISTING

B. REQUESTED LISTING

Home Department EECS		Div # 252	Course Number 559
Cross Listed Course Information			
Course Title			
TITLE ABBRE- VIATION	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	
<input type="radio"/> Tech Elective <input type="radio"/> Other			
Prerequisites EECS 451 and EECS 501			
<input type="radio"/> Enforced <input type="radio"/> Advised			
Credit Restrictions			
Level of Credit	<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	<input type="checkbox"/> All Credit types <input type="checkbox"/> Rackham Grad w/add'l Work	Credit Hours Min Max _____ Number of Wks _____
Repeatability (Indi Research, Dir. Study, Dissertation): Is this course repeatable? <input type="radio"/> Yes <input checked="" type="radio"/> No Maximum Hours? _____ Maximum Times? _____ Can it be repeated in the same term? <input type="radio"/> Yes <input checked="" type="radio"/> 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="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			

Home Department EECS		Div # 252	Course Number 559
Cross Listed Course Information			
Course Title Advanced Signal Processing			
TITLE ABBRE- VIATION	Time Sched Max = 19 Spaces	Adv Signal Process	
	Transcript Max = 20 Spaces	Adv Sig Proc	
Course Description for Official Publication (Max = 50 words) Estimators of second order properties of random processes: nonparametric and model-based techniques of spectral estimation, characterization of output statistics for nonlinear systems, time-frequency representations. Performance evaluation using asymptotic techniques and Monte Carlo simulation. Applications include speech processing, signal extrapolation, multidimensional spectral estimation, and beamforming.			
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	
<input type="radio"/> Tech Elective <input type="radio"/> Other			
Prerequisites EECS 551 and EECS 501			
<input type="radio"/> Enforced <input checked="" type="radio"/> Advised			
Credit Restrictions			
Level of Credit	<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	<input checked="" type="checkbox"/> All Credit types <input type="checkbox"/> Rackham Grad w/add'l Work	Credit Hours Min Max 3 3 Number of Wks 14
Printing Information (Optional) <input type="checkbox"/> Print the course in the Bulletin <input type="checkbox"/> Print the course in the Time Schedule			
Terms & Freq. of Offering	<input 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:	A. Hero G. Wakefield V. Solo		Title Professor Associate Professor Professor
Grad Course: Attach nomination if Cognizant Faculty is not a regular graduate faculty			

Approval

☐ Curriculum Comm.

☐ Faculty

☐ Rackham

☐ Cross listed Unit 1

Submitted By: ☐ Home Dept. ☒ Cross-listed Dept.

Name, Signature & Department

Home Dept. **EECS**

Cross-listed Dept(s).

2004-2-12

Form Number

1319

SUPPORTING STATEMENT

The revised EECS 551 will become the leader course for graduate signal processing courses.

Approved by ECE Faculty 2004-2-10

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 2/23/2004

Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

Home Department		Div #	Course Number
EECS		252	574
Cross Listed Course Information			
Course Title			
Theoretical Computer Science			
TITLE ABBRE- VIATION	Time Sched Max = 19 Spaces	Theo Comp Sci	
	Transcript Max = 20 Spaces	Theo Comp Sci	
Course Description			
Course Description for Official Publication (Max = 50 words) Fundamentals of the theory of computation and complexity theory. Computability, undecidability, and logic. Relations between complexity classes, NP-completeness, P-completeness, and randomized computation. Applications in selected areas such as cryptography, logic programming, theorem proving, approximation of optimization problems, or parallel computing.			
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"/> Tech Elective <input type="radio"/> Core Course <input type="radio"/> Other <input type="radio"/> Free Elective			
Prerequisites <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"/> All Credit types <input type="checkbox"/> Rackham Grad <input type="checkbox"/> Rackham Grad w/add'l Work <input type="checkbox"/> Non-Rackham Grad <input type="checkbox"/> Ugrad or Rackham Grad <input type="checkbox"/> Ugrad or Non-Rackham Grad		Min Max	Number of Wks
Repeatability (Indi Research, Dir. Study, Dissertation): Is this course repeatable? <input type="radio"/> Yes <input checked="" type="radio"/> No Maximum Hours? _____ Maximum Times? _____ Can it be repeated in the same term? <input type="radio"/> Yes <input checked="" type="radio"/> No			
Printing Information (Optional) <input type="checkbox"/> Print the course in the Bulletin <input type="checkbox"/> Print the course in the Time Schedule			
Terms & Freq. of Offering <input 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			
Half term <input type="checkbox"/> 1st <input type="checkbox"/> 2nd			
Cognizant Faculty Member: W. Rounds S. Lokam Title Prof Asst. Prof.			
Grad Course: Attach nomination if Cognizant Faculty is not a regular graduate faculty			

Approval

☐ Curriculum Comm.

☐ Faculty

☐ Rackham

☐ Cross listed Unit 1

Submitted By: ☒ Home Dept. ☐ Cross-listed Dept.

Name, Signature & Department

Home Dept. EECS

Cross-listed Dept(s).

1343

~~This is a Simple title change based on the actual content of the course.~~

This is a Simple title change based on the actual content of the course.

☐ Yes ☒ No[illegible]

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 2/23/2004

Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

Home Department		Div #	Course Number
EECS		252	586
Cross Listed Course Information		Cross Listed Course Information	
Course Title		Course Title	
Design and Analysis of Algorithms		Design and Analysis of Algorithms	
TITLE	Time Sched	TITLE	Time Sched
ABBREVIATION	Max = 19 Spaces	ABBREVIATION	Max = 19 Spaces
	Transcript		Transcript
	Max = 20 Spaces		Max = 20 Spaces
Course Description		Course Description for Official Publication (Max = 50 words)	
		Design of algorithms for nonnumeric problems involving sorting, searching, scheduling, graph theory, and geometry. Design techniques such as approximation, branch-and-bound, divide-and-conquer dynamic programming, greed, and randomization applied to polynomial and NP-hard problems. Analysis of time and space utilization.	
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 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		Degree Requirements	
<input type="radio"/> Degree Requirement <input type="radio"/> Core Course <input type="radio"/> Free Elective		<input type="radio"/> Degree Requirement <input type="radio"/> Core Course <input type="radio"/> Free Elective	
Tech Elective <input type="radio"/> Other		Tech Elective <input type="radio"/> Other	
Prerequisites		Prerequisites	
<input type="radio"/> Enforced <input type="radio"/> Advised		EECS 281 <input type="radio"/> Enforced <input checked="" type="radio"/> Advised	
Credit Restrictions		Credit Restrictions	
Level of Credit		Level of Credit	
<input type="checkbox"/> Undergrad only <input type="checkbox"/> Rackham Grad <input type="checkbox"/> Non-Rackham Grad <input checked="" type="checkbox"/> Ugrad or Rackham Grad <input type="checkbox"/> Ugrad or Non-Rackham Grad		<input type="checkbox"/> Undergrad only <input type="checkbox"/> Rackham Grad <input type="checkbox"/> Non-Rackham Grad <input checked="" type="checkbox"/> Ugrad or Rackham Grad <input type="checkbox"/> Ugrad or Non-Rackham Grad	
All Credit types <input type="checkbox"/> Rackham Grad w/add'l Work		All Credit types <input type="checkbox"/> Rackham Grad w/add'l Work	
Credit Hours		Credit Hours	
Min Max		Min Max	
3 3		4 4	
Contact Hrs/Wk		Contact Hrs/Wk	
3		4	
Number of Wks		Number of Wks	
15		15	
Repeatability (Indi Research, Dir. Study, Dissertation):		Printing Information (Optional)	
Is this course repeatable? <input type="radio"/> Yes <input checked="" type="radio"/> No		<input type="checkbox"/> Print the course in the Bulletin <input type="checkbox"/> Print the course in the Time Schedule	
Maximum Hours? _____ Maximum Times? _____			
Can it be repeated in the same term? <input type="radio"/> Yes <input checked="" type="radio"/> No			
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 checked="" type="checkbox"/> Dis <input type="checkbox"/> Ind <input type="checkbox"/> Other		<input 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		Half term <input type="checkbox"/> 1st <input type="checkbox"/> 2nd	
<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			
Grading		Cognizant Faculty	
<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		Q. Stout	
Location		Title 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

Submitted By: ☒ Home Dept. ☐ Cross-listed Dept.

Name, Signature & Department

Home Dept. EECS

Cross-listed Dept(s).

Form Number

1344

SUPPORTING STATEMENT

This is a very intensive theory course that has traditionally had a high workload and continuous student complaints about it. The homework involves 10 take-home problems, each requiring many hours to solve and derives proofs. Professor Stout is willing to teach a weekly discussion section for the class.

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 2/24/2004

Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

<div style="border: 1px solid black; padding: 5px;"> <div style="display: flex; justify-content: space-between;"> <div>Home Department</div> <div>Div #</div> <div>Course Number</div> </div> <div style="border: 1px solid black; height: 80px; margin-top: 5px;"></div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <div style="display: flex; justify-content: space-between;"> <div>Course Title</div> <div>Course Title</div> </div> <div style="display: flex; justify-content: space-between;"> <div> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;">TITLE</td> <td style="width:30%;">Time Sched</td> <td style="width:40%;"></td> </tr> <tr> <td>ABBREVIATION</td> <td>Max = 19 Spaces</td> <td></td> </tr> <tr> <td></td> <td>Transcript</td> <td></td> </tr> <tr> <td></td> <td>Max = 20 Spaces</td> <td></td> </tr> </table> </div> <div> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;">TITLE</td> <td style="width:30%;">Time Sched</td> <td style="width:40%;"></td> </tr> <tr> <td>ABBREVIATION</td> <td>Max = 19 Spaces</td> <td></td> </tr> <tr> <td></td> <td>Transcript</td> <td></td> </tr> <tr> <td></td> <td>Max = 20 Spaces</td> <td></td> </tr> </table> </div> </div> </div> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>Course Description</p> <p>The development of programs for parallel computers. Basic concepts such as speedup, load balancing, latency, system taxonomies. Design of algorithms for idealized models. Programming on parallel systems such as shared or distributed memory machines, networks. Performance analysis. Course includes a substantial term project.</p> </div>	TITLE	Time Sched		ABBREVIATION	Max = 19 Spaces			Transcript			Max = 20 Spaces		TITLE	Time Sched		ABBREVIATION	Max = 19 Spaces			Transcript			Max = 20 Spaces		<div style="border: 1px solid black; padding: 5px;"> <div style="display: flex; justify-content: space-between;"> <div>Home Department</div> <div>Div #</div> <div>Course Number</div> </div> <div>EECS</div> <div>252</div> <div>587</div> </div> <div style="border: 1px solid black; height: 80px; margin-top: 5px;"></div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>Course Description for Official Publication (Max = 50 words)</p> <p>The development of programs for parallel computers. Basic concepts such as speedup, load balancing, latency, system taxonomies. Design of algorithms for idealized models. Programming on parallel systems such as shared or distributed memory machines, networks. Grid computing. Performance analysis. Course includes a substantial term project.</p> </div>
TITLE	Time Sched																								
ABBREVIATION	Max = 19 Spaces																								
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ABBREVIATION	Max = 19 Spaces																								
	Transcript																								
	Max = 20 Spaces																								
<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="radio"/> Degree Requirement <input type="radio"/> Tech Elective <input type="radio"/> Core Course <input type="radio"/> Other <input type="radio"/> Free 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:30%;">All Credit types</td> <td style="width:20%;">Credit Hours</td> <td style="width:20%;">Contact Hrs/Wk</td> </tr> <tr> <td> <input type="checkbox"/> Undergrad only <input type="checkbox"/> Rackham Grad <input type="checkbox"/> Non-Rackham Grad <input checked="" type="checkbox"/> Ugrad or Rackham Grad <input type="checkbox"/> Ugrad or Non-Rackham Grad </td> <td> <input type="checkbox"/> All Credit types <input type="checkbox"/> Rackham Grad w/add'l Work </td> <td> <div style="display: flex; justify-content: space-between;"> <div>Min</div> <div>Max</div> </div> <div style="display: flex; justify-content: space-between;"> <div>3</div> <div>3</div> </div> </td> <td> <div style="display: flex; justify-content: space-between;"> <div>Hrs/Wk</div> <div>3</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Number of Wks</div> <div>14</div> </div> </td> </tr> </table>		Level of Credit	All Credit types	Credit Hours	Contact Hrs/Wk	<input type="checkbox"/> Undergrad only <input type="checkbox"/> Rackham Grad <input type="checkbox"/> Non-Rackham Grad <input checked="" type="checkbox"/> Ugrad or Rackham Grad <input type="checkbox"/> Ugrad or Non-Rackham Grad	<input type="checkbox"/> All Credit types <input type="checkbox"/> Rackham Grad w/add'l Work	<div style="display: flex; justify-content: space-between;"> <div>Min</div> <div>Max</div> </div> <div style="display: flex; justify-content: space-between;"> <div>3</div> <div>3</div> </div>	<div style="display: flex; justify-content: space-between;"> <div>Hrs/Wk</div> <div>3</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Number of Wks</div> <div>14</div> </div>																
Level of Credit	All Credit types	Credit Hours	Contact Hrs/Wk																						
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<p>Repeatability (Indl Research, Dir. Study, Dissertation):</p> <p>Is this course repeatable? <input type="radio"/> Yes <input checked="" 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> <td style="width:20%;">Class Type(s)</td> <td style="width:20%;">Graded Section</td> <td style="width:20%;">Grading</td> <td style="width:40%;">Location</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 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="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> </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 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"/> 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																
Class Type(s)	Graded Section	Grading	Location																						
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<p>Printing Information (Optional) <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 <input checked="" type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> IIIa <input type="checkbox"/> IIIb <input type="checkbox"/> III</p> <p><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>Q. Stout</u> Title: <u>Prof.</u></p> <p>Grad Course: Attach nomination if Cognizant Faculty is not a regular graduate faculty</p>																									

Approval

☐ Curriculum Comm.

☐ Faculty

☐ Rackham

☐ Cross listed Unit 1

Submitted By: ☒ Home Dept. ☐ Cross-listed Dept.

Name, Signature & Department

Home Dept. EECS

Cross-listed Dept(s):

Form Number

1359

SUPPORTING STATEMENT

The new topic "grid computing" will add substantial material to the course since there is a considerable software learning curve, and the projects require quite a bit of time to get all the details correct.

Are any special resources or facilities required for this course?

☐ Yes ☐ No

Detail the Special requirements

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

Form Number

1320

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 2/5/2004

Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

Home Department		Div #	Course Number	Home Department		Div #	Course Number
				EECS		252	659
Cross Listed Course Information				Cross Listed Course Information			
Course Title Adaptive Signal Processing				Course Title Adaptive Signal Processing			
TITLE ABBRE- VIATION	Time Sched Max = 19 Spaces	Adapt Sig Process		TITLE ABBRE- VIATION	Time Sched Max = 19 Spaces	Adapt Signal Proc	
	Transcript Max = 20 Spaces	Adp Sig Proc			Transcript Max = 20 Spaces	Adapt Signal Proc	
Course Description				Course Description for Official Publication (Max = 50 words) Theory and applications of adaptive filtering in systems and signal processing. Iterative methods of optimization and their convergence properties: transversal filters; LMS (gradient) algorithms. Adaptive Kalman filtering and least-squares algorithms. Specialized structures for implementation; e.g., least-squares lattice filters, systolic arrays. Applications to detection, noise cancelling, speech processing, and beam forming.			
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				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				Degree Requirements <input type="radio"/> Degree Requirement <input type="radio"/> Core Course <input type="radio"/> Free Elective <input type="radio"/> Tech Elective <input type="radio"/> Other			
Prerequisites EECS 559 <input type="radio"/> Enforced <input type="radio"/> Advised				Prerequisites EECS 564 or EECS 559 <input type="radio"/> Enforced <input type="radio"/> Advised			
Credit Restrictions				Credit Restrictions			
Level of Credit <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		All Credit types <input type="checkbox"/> Rackham Grad w/add'l Work		Level of Credit <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		All Credit types <input type="checkbox"/> Rackham Grad w/add'l Work	
Credit Hours Min Max		Contact Hrs/Wk		Credit Hours Min Max		Contact Hrs/Wk	
				3 3		3 14	
Repeatability (Indi Research, Dir. Study, Dissertation): Is this course repeatable? <input type="radio"/> Yes <input checked="" type="radio"/> No Maximum Hours? Maximum Times? Can it be repeated in the same term? <input type="radio"/> Yes <input checked="" type="radio"/> No				Printing Information (Optional) <input type="checkbox"/> Print the course in the Bulletin <input 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 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 type="checkbox"/> I <input 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				Half term <input type="checkbox"/> 1st <input type="checkbox"/> 2nd			
Cognizant Faculty Member: A. Hero G. Wakefield A. Yagle				Title Prof. Asso. Prof. Prof.			
Grad Course: Attach nomination if Cognizant Faculty is not a regular graduate faculty							

Approval

☐ Curriculum Comm.

☐ Faculty

☐ Rackham

☐ Cross listed Unit 1

Name, Signature & Department

Home Dept. EECS

Cross-listed Dept(s).

Submitted By: ☐ Home Dept. ☐ Cross-listed Dept.

2004-2-12

Form Number

1320

SUPPORTING STATEMENT

Both 559 and 564 are acceptable paths to 659.

Approved by ECE for 2004-2-10

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 1/13/2004

Effective Fall 2004

A. CURRENT LISTING

B. REQUESTED LISTING

Home Department		Div #	Course Number	Home Department		Div #	Course Number
				EECS		252	691
Cross Listed Course Information				Cross Listed Course Information			
Course Title				Course Title			
				Mobile Computing			
TITLE	Time Sched			TITLE	Time Sched	Mobile Computing	
ABBRE-	Max = 19 Spaces			ABBRE-	Max = 19 Spaces		
VIATION	Transcript			VIATION	Transcript	Mobile Computing	
	Max = 20 Spaces				Max = 20 Spaces		
Course Description				Course Description for Official Publication (Max = 50 words)			
				In-depth study of research issues in mobile and pervasive computing systems. Topics include location and context awareness, mobile data access, resource management, consistency protocols, mobile and ad-hoc networking, networked sensors, security and privacy.			
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 checked="" type="checkbox"/> h <input type="checkbox"/> i <input checked="" type="checkbox"/> j <input checked="" type="checkbox"/> k			
Degree Requirements				Degree Requirements			
<input type="checkbox"/> Degree Requirement <input type="checkbox"/> Tech Elective				<input type="checkbox"/> Degree Requirement <input type="checkbox"/> Tech Elective			
<input type="checkbox"/> Core Course <input type="checkbox"/> Other				<input type="checkbox"/> Core Course <input type="checkbox"/> Other			
<input type="checkbox"/> Free Elective				<input type="checkbox"/> Free Elective			
Prerequisites				Prerequisites			
<input type="checkbox"/> Enforced <input type="checkbox"/> Advised				EECS 582 or EECS 589 or EECS 591 or equivalent <input type="checkbox"/> Enforced <input type="checkbox"/> Advised			
Credit Restrictions				Credit Restrictions			
Level of Credit				Level of Credit			
<input type="checkbox"/> Undergrad only <input type="checkbox"/> All Credit types				<input type="checkbox"/> Undergrad only <input type="checkbox"/> All Credit types			
<input type="checkbox"/> Rackham Grad <input type="checkbox"/> Rackham Grad w/add'l Work				<input type="checkbox"/> Rackham Grad <input type="checkbox"/> Rackham Grad w/add'l Work			
<input type="checkbox"/> Non-Rackham Grad				<input type="checkbox"/> Non-Rackham Grad			
<input type="checkbox"/> Ugrad or Rackham Grad				<input type="checkbox"/> Ugrad or Rackham Grad			
<input type="checkbox"/> Ugrad or Non-Rackham Grad				<input type="checkbox"/> Ugrad or Non-Rackham Grad			
Credit Hours		Contact		Credit Hours		Contact	
Min Max		Hrs/Wk		Min Max		Hrs/Wk	
				3 3		3	
		Number				of Wks	
		of Wks				15	
C. Repeatability (Indl Research, Dir. Study, Dissertation):				Printing Information (Optional)			
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 checked="" type="radio"/> No							
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 type="checkbox"/> I <input 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			
Graded Section				Half term <input type="checkbox"/> 1st <input type="checkbox"/> 2nd			
<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				Cognizant Faculty			
<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				Jason Flinn			
Location				Title Asst. Prof.			
<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			

Approval

☐ Curriculum Comm.

☐ Faculty

☐ Rackham

☐ Cross listed Unit 1

Submitted By: ☐ Home Dept. ☐ Cross-listed Dept.

Name, Signature & Department

Home Dept. EECS

Cross-listed Dept(s)

Form Number

1282

SUPPORTING STATEMENT

Mobile computing is a very important new research area and critical to have students learn about it as soon as possible. The course has been taught once with an enrollment of 15. It will be offered in alternate years.

Are any special resources or facilities required for this course?

☐ Yes ☒ No

Detail the Special requirements