The University of Michigan College of Engineering Curriculum Committee

Agenda
April 1, 2003
1:30-3:30 p.m.
GM ROOM
Fourth Floor Lurie Engineering Center

- 1. Approval of Minutes from March 4, 2003 Meeting
- 2. Change in CHEM 125/126 listing
- 3. CoE Bulletin 2002-03 HU/SS Requirement Kathleen Vargo
- 4. Policies for Bulletin Inclusion Jeanne Murabito
- 5. Course Approval Forms

University of Michigan College of Engineering Curriculum Committee Meeting Tuesday March 18, 2003 1:30-3:00 p.m. Lurie Engineering Center GM Room Minutes

Armin Troesch called the meeting to order at 1:45 p.m.

Members Present: A. Troesch, J.Fessler, P. Friedmann, G. Herrin, G.Hulbert, S.Montgomery, H. Peng, R. Robertson, S. Takayama

Members Absent: V. Chung W. Hansen (CEE), J. Holloway (NERS), S. Pang, P. Samson (AOSS), G.Tyson (EECS)

The minutes of the last meeting were approved

EE Degree Program Change

Jeff Fessler talked about the handout which was in the Meeting Packet.

EECS is required in CS and the Department would like to make it required in EE, also. This will cost the EE Program one tech elective and one free elective bringing the total free electives to 11. Armin Troesch asked for a motion to approve this EE Degree Program Change.

This was moved and seconded.

Motion Carried (approved)

Course Approvals

Tabled Courses: IOE 461(X-Listed with MFG 456) Modification – Adding Credit Restrictions (Not for Graduate Credit). *It was recommended to have the Department handle administratively.*

NAME 420(X-Listed with IOE 583, MFG 583 and EECS 583) Modification -- Adding CEE 420 X-Listing. Waiting for explanation from CEE regarding Why this is a good idea.

Armin Troesch called for a motion to approve the following courses. This was moved and seconded.

Motion Carried (approved)

EECS 496 Modification - Changed Title; Changed Description

IOE 452 (X-Listed with MFG 455) Modification – Changed Title; Changed Description; Changed Credit Hours.

IOE 452 (X-Listed with MFG 456) Changed Title; Changed Description; Added Credit Restrictions; Changed Credit Hours.

IOE 552 Modification – Added X-Listing with MATH 542; Changed Prerequisites.

IOE 553 Modification – Added X-Listing with MATH 543, Changed Prerequisites.

MSE 435 Modification – Changed Description Changed Prerequisites; Changed Terms.

MSE 470 Modification - Changed Title.

ME 513 (X-Listed with AUTO 513 and MFG 513)

New Course

approved with 3 abstaintions/5 in favor

ME 583 (X-Listed with IOE 583, MFG 583 and EECS 583) Modification – Removed EECS X-listing; Changed Title Abbreviation for Time Schedule and Transcript.

TECH COMM 380

New Course

The TECH COMM 380 Program change was also approved.

Jeanne Murabito handed out ballots for the position of the new chairperson of the CoE Curriculum Committee for the Academic Year 2003-2004.

The two choices on the ballot were: Greg Hulbert, and Write in Candidate.

The vote was unanimous for Greg Hulbert.

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

Next Meeting Tuesday, April 1, 2003 1:30-3:30 p.m. GM Room-LEC

Change in CHEM 125/126 Listing

Wolfe, Judy

To:

Rinker, Pam

Subject:

RE: Chem 125-126

----Original Message----

From:

Rinker, Pam

Sent:

Friday, March 28, 2003 11:50 AM

To:

Wolfe, Judy

Cc:

Judy Kulbicki (E-mail); Moody, Carole

Subject:

FW: Chem 125-126

Hi Judy. I'm forwarding the email I sent to Chem this morning. If these courses are approved by the CC next Tuesday, they'll go to Exec on April 8. If they say ok, I will take them down to Judy Kulbicki around 1pm w/ a request to enter them into MPathways ASAP. That means they could be in the system by that afternoon.

We've asked Chem to keep 125 closed until the change in credits has been made. Esrold Nurse & Chuck Judge were concerned about timing, but thought that having both courses open by April 8 would give most students time to add it before early registration ends April 11.

In order to keep confusion to a minimum and ward off lots of phone calls to Chem & Advising, I also suggested the possibility of adding a NOTE that will show up on Wolverine Access, something like "CHEM 125 IS TEMPORARILY CLOSED TO ENROLLMENT PENDING APPROVAL OF COURSE MODIFICATIONS. WE HOPE IT WILL BE OPEN BY 2 PM APRIL 8." [Carole, what do you think of this idea??)

Best, Pam

-----Original Message-----

From:

Rinker, Pam

Sent:

Friday, March 28, 2003 10:12 AM

To: Cc: Moody, Carole 'bcoppola@umich.edu'

Subject: Chem 125-126

Hi Carole. I've attached the revised course approval forms for Chem 125-126. I checked w/ Registrar's office about Brian's concerns. In terms of grading sheets for Chem 125 arriving in October, that seems to be something you'd have to request. The default is for all grade sheets to be delivered at the end of the term. If that's correct, that shouldn't be a problem. In terms of completion of both courses, I've copied below the latest email exchange w/ Evans Young. Obviously of key importance is the first statement under Chem 125. Given that Chem 126 is second in sequence, I wasn't sure if something similar needed to be included there as well. Your preference? I didn't get a clear answer from Registrar as to whether or not this can be enforced, but the hope is that it would serve as a deterrent to students bailing after Chem 125. Anything I'm forgetting? Regards, Pam

<< File: Chem 126 rv.pdf >> << File: chem 125-126 4+4.doc >> << File: Chem 125 rv.pdf >>

Hi Pam,

I think these texts will work, and are as good as we can get in terms of "enforcement"... --Evans

-----Original Message-----

From:

Rinker, Pam

Sent:

Thursday, March 27, 2003 4:01 PM

To:

Young, Evans Subject: Chem 125-126

Me again. Registrar's office says that Y grade is not an option in this case since it is meant to be for a single course that continues beyond one term. Judy said she did think we could put in some language about "no credit being granted" but I'm not sure what enforcement that would carry. Prereq statements now read:

CHEM 125

No credit granted without concurrent enrollment in and completion of CHEM 126. To be elected

by students who are eligible for (or enrolled in) CHEM 130. No credit granted to those who have completed CHEM 211. I, II, IIIa.

CHEM 126

Concurrent enrollment in CHEM 125. To be elected by students who are eligible for (or enrolled in) CHEM 130. No credit granted to those who have completed CHEM 211. I, II, IIIa.

Any suggestions? Pam

Pam Rinker, Program Associate LSA Undergraduate Education, 2552 LSA Bldg. University of Michigan, Ann Arbor MI 48109-1382 Phone: (734) 763-7139 Fax: (734) 764-2697



Action Requested:

COURSE APPROVAL REQUEST FORM

UNIVERSITY OF MICHIGAN

College of Literature, Science, & the Arts Rackham School of Graduate Studies

For Office Use -

To: LSA Curriculum Committee 2522 LSA Bldg 1382

or Course Approval Officer 1004 Rackham 1070

	Deletion of Existing Course	Received	i J	Date of Submission:	3/27/2003
\odot	Modification of Existing Course New Course	3/27/200 Office of the College of L	Dean	Fall 2003	
	CURRENT LISTING		REQUESTE	D LISTING	
	Home Department Subject (Division)	Course Number	Chemistry	tment (Owner) (Division)	Course Number
			Chem	(if applicable)	125
	Cross-listing (if applicable)		oruss-nsting	(п аррпсаме)	
X	Course Title General and Inorganic Chemistry: Laboratory Title Abbreviations Transcript (20 char) Time Sched (19 char) Gen Inorganic Lab Gen-Inorganic-Lab		Course Title General Che Title Abbrev Transcript (20 Time Sched	mistry Laboratory I viations O char) Gen Chem Lab I	
	Course Description		One four-hour	cription (Limit to 50 words laboratory and one discussion. I as to simple chemical systems.	
X	Prerequisites To be elected by students who are elibible for (or enro No credit granted to those who have completed CHE		completion o eligible for (s (Advisory) granted without concurre f CHEM 126. To be electe or enrolled in) CHEM 136 we completed CHEM 211. I, I	d by students who are). No credit granted to
	Distribution Comp/LR R& HU MSA Excl R&I NS CE Intro.Comp. QRI	l	General Req You MUST include requirements: http Distribution HU 1 NS 6 SS 1	le a supporting statement. See Gu://www.lse.umich.edu/dean/ug/index.html. Comp/LR MSA	idelines for specific R&E/QR R&E QR1 OR2

COURSE APPROVAL REQUEST FORM Page 2



3/27/2003

Modification of Existing Course

Class Components (Section Types) LEC REC SEM LAB DIS IND	Class Meeting Hours per Week	Graded Component (for Grade Sheet) LEC REC SEM LAB DIS IND	Class Components (Section Types) LEC REC SEM LAB DIS	Class Meeting Hours per Week 1 hpw for 7 wks 4 hpw for 7 wks	Graded Component (for Grade Sheet) LEC REC SEM LAB DIS IND Other
Other Credit Type Regular Tutorial Independent Experiential	Grading Scheme A-E Cr/NC Y P/F	Campus Location Ann Arbor Biological Station Camp Davis Study Abroad	☐ Other Credit Type ☐ Regular ☐ Tutorial ☐ Independent ☐ Experiential	Grading Scheme A-E Cr/NC Y P/F	Campus Location Ann Arbor Biological Station Camp Davis Study Abroad
Course Career (Cou Undergraduate Rackham Graduate Non-Rackham Grad	Undergrad or Rack	cham Grad Rackham Grad	Course Career (Co. Undergraduate Rackham Graduate Non-Rackham Grac Undergrad or Rack	O Undo O All C d O Rack	t Type) ergrad or Non-Rackham (Credit Types kham Grad w/ extra work
	dergrad in Max	Rackham Min Max	Credit Hours U	Indergrad lin Max 1 1	Rackham Min Max
•	mum times it can b mum total credit ho elected more than		If yes, state maxi	imum times it can imum total credit h elected more than	ours:
General Course Info Print the course in Print the course in Print the course ins Expected Class Siz	the LSA / Rackhan the Time Schedule structor in the Time	? Xes	□ No □ No □ No □ Official Title		
	ec	nitely erm Only Date	Approval of Departm William R. Roush, Ch		Date 3/27/2003

Course Approval Request Form Page 3



3/27/2003

Chem 125
Modification of Existing Course

Supporting Statement

As you know, UM has been under pressure to respond to its lack of a "4+4" course undergraduate chemistry program that meets the policy statements written by the majority of medical school admissions programs in the US.

I have conducted an informal telephone and e-mail survey of medical admissions Deans, and it turns out that medical admissions practices do not map onto their policies. Many of these "4+4" guidelines were written in the early 20th Century, and have not kept pace with the curricular practices of most institutions that produce the largest numbers of medical school candidates. Students with competitive records presenting non-traditional transcripts may actually constitute the majority of students admitted to US medical schools! The written policies allow the medical schools a terribly convenient "out" when declining less competitive candidates from non-"4+4" programs, permitting them to state that a student has not fulfilled the admissions requirements. As a result, nearly all UM undergraduates who applied to medical schools since we introduced our new program in 1989 have not had any problems with their admissions. At the margins, however, there have been students with non-competitive applications who have received rejections, and perhaps even fewer who have applied to schools whose practices match their policies.

That said, we respect the politically uncomfortable position that UM is currently in regarding our program. Our proposed solution is to take the current 2-credit Chem 125 (General Chemistry lab) and divide it into two half-semester courses with different titles and numbers. Student transcripts will reflect a prima facie compliance with the "4+4" policy statements of the medical schools. The course content in the new Chem 125 and 126 courses will be exactly the same as the current Chem 125 course. To the extent that we are able, we intend to require that students complete both or neither so as not to introduce too many administrative burdens to the teaching staff in this laboratory program. (See attached document titled "Meeting the '4+4' premedical admissions requirements at UM.)

Fill in only if you are adding a new discussion section to be led by a GSI. You MUST provide a statement justifying this request. Approval of the course does NOT imply approval for the required funding for GSIs. If approved, the request must then be submitted to the LSA Budget Office as usual.

GSIs

Requested FTE



Action Requested:

COURSE APPROVAL REQUEST FORM

UNIVERSITY OF MICHIGAN

College of Literature, Science, & the Arts Rackham School of Graduate Studies

For Office Use -

To: LSA Curriculum Committee 2522 LSA Bldg 1382

> or Course Approval Officer 1004 Rackham 1070

> > 3/27/2003

0	Deletion of Existing Course Modification of Existing Course New Course CURRENT LISTING Home Department Subject (Division)	Receivee 3/27/200 Office of the College of I	Dean S&A REQUESTED LIS Home Department Chemistry	(Owner)	3/27/2003 Fall 2003 Course Number 126
	Cross-listing (if applicable) Department Subject (Div)	Course Number		pplicable) Subject (L	Div) Course Number
	Course Title		Course Title General Chemi	stry Laboratory II	
	Title Abbreviations Transcript (20 char)		Title Abbreviatio Transcript (20 char	10 01 T -	b II
	Time Sched (19 char)		Time Sched (19 ch	_{ar)} Gen Chem La	b II
	Course Description		One four-hour lab	on (Limit to 50 words) oratory and one discuss plications to simple che	sion. Basic laboratory
	Prerequisites		who are eligible	visory) nent in CHEM 125. To for (or enrolled in) C o have completed CHEM	CHEM 130. No credit
			General Requirem You MUST include specific requiremen Distribution HU MSA NS CE SS ID	a supporting statement. ts: http://www.lsa.umich.e 	eduldeanluglindex.html . R&E/QR & E PR1

COURSE APPROVAL REQUEST FORM Page 2



3/27/2003

New Course

Class Components (Section Types) Hours per Week (for LEC REC SEM LAB DIS IND Other	aded Component or Grade Sheet) LEC REC SEM LAB DIS	Class Components (Section Types) LEC REC SEM LAB DIS IND Other	Class Meeting Hours per Week 1 hpw for 7 wks 4 hpw for 7 wks	Graded Component (for Grade Sheet) LEC REC SEM LAB DIS IND Other
☐ Regular ☐ A-E ☐ Tutorial ☐ Cr/NC ☐ Independent ☐ Y	Ampus Location Ann Arbor Biological Station Camp Davis tudy Abroad	Credit Type Regular Tutorial Independent Experiential	Grading Scheme A-E Cr/NC Y P/F	Campus Location Ann Arbor Biological Station Camp Davis Study Abroad
Course Career (Course Level Credit Types Undergraduate Undergrad or Rackham Rackham Graduate Undergrad or Non-Rack Non-Rackham Grad All Credit Types Rackham Grad w/ extra	Grad ham Grad	Course Career (Cou Undergraduate Rackham Graduate Non-Rackham Grad Undergrad or Rackl	O Unde O All O I O Rack	Type) ergrad or Non-Rackham (eredit Types ham Grad w/ extra work
Credit Hours Undergrad Min Max Full Term Half Term	Rackham Min Max	Full Term	indergrad in Max 1 1	Rackham Min Max
If yes, state maximum times it can be ele If yes, state maximum total credit hours: If yes, can it be elected more than	Yes No	If yes, state maxi	mum times it can i mum total credit h elected more than	
General Course Information Print the course in the LSA / Rackham But Print the course in the Time Schedule? Print the course instructor in the Time Sch Expected Class Size:900 Instructor Namevaries	⊠ Yes	□ No		
Approval Indefinitely One Term Only cc xc rack		oval of Department Cl am R. Roush, Chemisti		Date 3-27-2003

COURSE APPROVAL REQUEST FORM Page 3



3/27/2003

Supporting Statement Expanded course description See Chem 125 This laboratory course can be elected with, or following, CHEM 130. It is intended that students planning to enroll in CHEM 130 who have had little or no previous chemistry laboratory enroll concurrently in CHEM 125 and CHEM 126. The focus of this guided-inquiry laboratory is to foster critical thinking that allows students to design, perform, and interpret experiments. In addition, the student acquires technical skills that are required for further advancement in experimental sciences. Although an ability to collect and analyze data in a quantitative manner is developed, the emphasis of the course is to provide a qualitative understanding of the basic concepts of chemistry. This is accomplished by demonstrating that chemical principles are derived from experimental data. The goal is to provide students both with a more accurate picture of the scientific process and also with skills that are relevant to solving real life problems. Much of the course work is done as a member of a team. Student groups each explore the same problem with each group using different reagents and/or conditions. A networked computer system is used to collect, pool, and summarize the largely qualitative class data. Student groups address questions which require them to organize the class data using commercial graphing software. Group answers are presented in discussion. Course requirements Intended audience There are two 1-hour written examinations that constitute 30% of the It is intended that students planning to enroll in CHEM 130 who have had grade. The remaining 70% of the grade is based on the points acquired little or no previous chemistry laboratory enroll concurrently in CHEM 125 through laboratory reports and discussion. and CHEM 126. Hours per week and format Pre-lab reading and questions are completed prior to each multi-period project lab. A problems that will be investigated in the lab. The second component is performance shared, analyst, and evaluated. The third begins in the first hour following completio communicate their findings during a student-led discussion. SUPPLEMENTARY QUESTIONS Equipment / Facilities GSIs Requested FTE 50% Nο Introducing and supervising laboratory procedures, attending lecture, leading discussions, grading lab reports, proctoring and grading exams.

Departmental GSI training, mentoring by GSM, weekly staff meetings.

Meeting the "4+4" premedical admissions requirements at UM

Currently	Proposed
Chem 130 (3 cr; Gen Chem I)* Chem 125 (2 cr; Gen Chem Lab)*	Chem 130 (3 cr; Gen Chem I)** Chem 125 (1 cr; Gen Chem Lab I)** Chem 126 (1 cr; Gen Chem Lab II)**
Chem 210 (4 cr; Org Chem I) Chem 211 (1 cr; Org Chem Lab I) Chem 215 (3 cr; Org Chem II) Chem 216 (2 cr; Org Chem Lab II)	Chem 210 (4 cr; Org Chem I) Chem 211 (1 cr; Org Chem Lab I) Chem 210 (3 cr; Org Chem II) Chem 211 (2 cr; Org Chem Lab II)
Chem 230 (3 cr; intro P-Chem)	Chem 230 (3 cr; intro P-Chem)

* notes:

- students with AP 4/5 in chemistry may begin in Chem 210/211 & receive credit for Chem 130/125;
- students with AP 3 <u>AND</u> placement (testing) into Chem 210/211 receive credit for Chem 130/125;
- students without AP but who place into Chem 210/211 receive a waiver letter that permits them to say they have satisfied the Chem 130/125 requirement by testing, and this is acceptable to the medical admissions process

Major client departments for Chem 125/126 are students in Engineering and LSA (mainly future EEB & MCDB concentrators)

^{**} the credit and waiver formally associated with Chem 125 needs to apply to Chem 125/126

Course Approval Forms

COURSE APPROVAL FORMS

For April 1, 2003 CoE CC Meeting

- AERO 215 Modification Changing Course Number from 285, Changing Title; Changing Course Description; Changing Prerequisites from: Preceded by Math 215 and MSE 220. Preceded or accompanied by Aero 245. to: Preceded by Math 216 and MSE 220. Preceded or accompanied by Aero 245; Changing Contact hrs/wk from 5.0 to: 4.5.
- AUTO 503 Modification Changing Course Description; Changing Level of Credit from: Non-Rackham Grad and Undergrad or Rackham Grad to: Non-Rackham Grad.
- EECS 584(X-Listed with CS 584) Modification Changing Course Description; Changing Credit hours and Contact Hours from: 3 to: 4.
- ENGR 302 Modification Changing Course Title; Changing Course Description
- ENGR 401(X-Listed with MFG 401)

Deletion

IOE 623 (X-Listed with MATH 623) MATH HOME DEPT.

New Course

MFG 503(X-Listed with OM 703) Modification – Changing Course Description; Changing grading from: S/U to: A-E.

THE UNIVERSITY OF MICHIGAN -- COLLEGE OF ENGINEERING Course Approval Request

College Curriculum Committee, 1420 Lurie Engineering Center Building



Form Number

Action Requested

New CourseModification of Existing CourseDeletion of Course

Complete the following sections:

New Courses - B & C completely

Modifications - A modified information, B & C completely

Deletions - A & C completely

Date 1/22/2003

Effective Fall 2003

	A. CURRENT LISTING	В. R	EQUESTED LIS	STING		
х	Home Department Div # Course Number Aerospace Engineering 235 285	Home Dep Aerospace	e Engineering		Div# 235	Course Number 215
	Cross Listed Course Information	Cross Listed	Course Information			
х	Course Title Introduction to Solid Mechanics and Design	Course Title	tion to Solid Mecha	anics and Aeros	pace Struc	tures
	TITLE ABBRE-	TITLE ABBRE-	Time Sched Max = 19 Spaces	Solid Mech&AE	Struc	
	VIATION Transcript Max = 20 Spaces Solid Mech&Des	VIATION	Transcript Max = 20 Spaces	Solid Mech&AE	E Struct	
х	Course Description An introduction to the fundamental phenomena of solid and structural mechanics in Aerospace systems. Includes analysis, numerical simulation and experiments and an introduction to design.	An introd structure and num Aerospa	ription for Official Publication duction to the funda al mechanics in Aenerical methods of ice structures. Emr particular to thin-	amental phenomerospace systemesolutions used for aphasis is placed	ns. Include or design o I on unders	s analysis f thin-walled
	PROGRAM OUTCOMES:		RAM OUTCOM			
	□ a □ b □ c □ d □ e □ f □ g □ h □ i □ j □ k Degree Requirements O Degree Requirement O Tech Elective	⊠ a □		e f g		□ j ⊠ k
	O Core Course O Other O Free Elective		O Free Elec	· · · · · · · · · · · · · · · · · · ·		
х	Prerequisites Preceded by Math 215 and MSE 220. Preceded or accompanied by Aero 245 Enforced Advised	Prerequisites	Preceded by Math 216 and ○ Enforced ⊙ Advised		accompanied by	Aero 245
Ш	Credit Restrictions	Credit Restrictions				
х	Level of Credit Undergrad only Rackham Grad Rokhm Grad w/add* Work Ugrad or Non-Rekhm Grad Ugrad or Non-Rekhm Grad Ugrad or Non-Rekhm Grad	Level of Cr Undergrad Rackham Non-Rckh Ugrad or F	l only □ All Cre Grad □ Rckhm m Grad	idit types n Grad w/add'l Work	Credit Hours Min Max	Contact Hrs/Wk 4.5 Number of Wks
C.	Repeatability (Indi Research, Dir. Study, Dissertation: Is this course repeatable?	Printing I	nformation Print the co (Optional) Print the co	ourse in the Bulletin ourse in the Time Schedu	ıle	
	Class Type(s)	Freq. of	I ■ II □ IIIa □ IIIb Yearly □ Alter Years □			lalf term 1st 2nd
	Lab	Cognizant Fa Member:	culty Antho	ony M. Waas	Title Profe	ssor
		<u> </u>	Attach nomination if Cognize		r graduate facult	,
	Approval Curriculum Comm.	Name, Signatu	Submitted By: Home Department	0	ovd Aerospa	ce Engineering
	Faculty Rackham Cross listed Unit 1 Cross listed Unit 2	Home De	ept(s).	iaiii be		20 Engineering

Form Number
1018

SUPPORTING STATEMENT

The present AE 285 curriculum was put into effect in Winter 1999 in connection with the CoE 2000 curriculum reform. Faculty members in the structural and solid mechanics (SSM) group revisited the contents of the advertised curriculum over the past several semesters and felt that the course needed reorganization
Are any special resources or facilities required for this course?
Detail the Special requirements

THE UNIVERSITY OF MICHIGAN -- COLLEGE OF ENGINEERING **Course Approval Request**

College Curriculum Committee, 1420 Lurie Engineering Center Building



Form Number 1088

Action Requested

New CourseModification of Existing CourseDeletion of Course

Complete the following sections:

New Courses - B & C completely

Modifications - A modified information, B & C completely

Deletions - A & C completely

Date 3/25/2003

Effective Winter 2003

	A. CURRENT LISTING		В. R	EQUESTED LIS	STING		
	Home Department	Div # Course Number	Home Dep	artment		Div #	Course Number
	AUTO Cross Listed Course Information	240 503	Cross Listed	Course Information		240	503
	Course Title Automotive Capstone Project		Course Title	ive Capstone Proj	ect		
	TITLE Time Sched Automotive En	a Project	TITLE	Time Sched	Automotive En	a Proiect	
	ABBRE- VIATION Max = 19 Spaces Transcript Max = 20 Spaces AUTOENG Pro	 	ABBRE- VIATION	Max = 19 Spaces Transcript Max = 20 Spaces	AUTOENG Pro	<u> </u>	
х	Course Description This capstone project course is intended to an industrially-relevant team project experiengineering		This pro	ription for Official Publication ject course is inde .lly-relevant team p	nted to provide		
	PROGRAM OUTCOMES:			RAM OUTCOM			
	Degree Requirements	h i j k	Degree Re	quirements O Degree Re	equirement O Tech Ele	ctive	∐j ∐k
	Core Course Free Elective Prerequisites permission of the department		Prerequisites	O Core Cou O Free Elect permsisson of the departm	tive		
ᅴ	○ Enforced ○ Advised Credit none		Credit	 ⊙ Enforced ○ Advised none 	<u> </u>		
	Restrictions	Land	Restrictions Level of Cr				
х	Level of Credit □ Undergrad only □ All Credit types □ Rackham Grad □ Rckham Grad w/add'l Work ☒ Non-Rckhm Grad □ Ugrad or Rckhm Grad □ Ugrad or Non-Rckhm Grad □ Ugrad or Non-Rckhm Grad	Credit Hours Contact Min Max 3 4 Number of Wks 14	☐ Undergrad ☐ Rackham ☒ Non-Rckh ☐ Ugrad or F	only □ All Cre Grad □ Rckhm m Grad	dit types Grad w/add'l Work	Credit Hours Min Max 3 4	Contact Hrs/Wk 3 Number of Wks 14
C.	Repeatability (Indi Research, Dir. Study, Dissertation: Is this course repeatable? O Yes O No Maximum Hours? Maximum Times? Can it be repeated in the same term? O Yes O No		Printing I	nformation ⊠ Print the α (Optional) ⊠ Print the α	ourse in the Bulletin ourse in the Time Schedi	ule	
	Class	Location ⊠ Ann Arbor	Freq. of Offering	II ■ II □ IIIa □ IIIb I Yearly □ Alter Years □			alf term 1st 2nd
	□ Dis □ Dis □ S/O ☑ Dis □ Olnd □ P/F ☑ Ind □ Other □ Y	☐ Biological Station ☐ Camp Davis ☐ Extension	Cognizant Fac Member: Grad Course:	Attach nomination if Cogniza	uei Peng ant Faculty is not a regula		ciate Professor
Į	Approval			submitted By: Home Dep	ot.		
	Curriculum Comm.		Name, Signatur Home De	e & Department pt. <u>Huei Peng</u>	Jerei Penel	he	
	Faculty Rackham Cross listed Unit 1		Cross-listed D	ept(s).	1 0		

Form Number
1000
e used for curriculum pra
Se.

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THE UNIVERSITY OF MICHIGAN - COLLEGE OF ENGINEERING **Course Approval Request**

College Curriculum Committee, 1420 Lurie Engineering Center Building



Form Number 1070

Action Requested

New CourseModification of Existing CourseDeletion of Course

Complete the following sections:

New Courses - B & C completely

Modifications - A modified information, B & C completely

Deletions - A & C completely

Date 3/4/2003 Effective Fall 2003

	A. CI	URRENT LISTII	NG			B. RE	QUESTED L	ISTING		
	Home Depar	rtment		Div#	Course Number 584	Home Depa EECS	rtment		Div #	Course Number
		Course Information		353	584		Course Information		353	584
					7.76-3.					
	Advance	d Database Syste	ems			Course Title Advanced	d Database Syst	tems		
	TITLE ABBRE-	Time Sched Max = 19 Spaces	Adv Database	Sys		TITLE	Time Sched Max = 19 Spaces	Adv Database	Sys	
	VIATION	Transcript Max = 20 Spaces	Adv Dbase S	ys		ABBRE- VIATION	Transcript Max = 20 Spaces	Adv Dbase Sy	S	
х	database data mod architect organiza data mai	infibion of advanced topics es, query process dels: object-orien cures: main-memo ations: client-serve nagement for eme aing. Case studies	sing, transaction ted and deduct ory and parallel or and heteroge orging areas: in	n processi ive databa repositorio eneous sys ternet app	ng. Effects of ses; es; distributed stems. Basic lications, OLAP,	Advanced systems. query pro architectu including	Distributed data cessing, transacures. Data mana bioinformatics, t	on (Max = 50 words) earch issues in deabases, advance ction processing, gement for emery the internet, OLA allows in-depth	d query opt data mode ging applica P, and data	imization, Is and Ition areas, mining. A
	PROG	b 🗆 c 🗆 d 🗀	e f g Requirement O Tech E O Other		i 🗆 j 🗆 k	PROGF		e f g Requirement O Tech Ele	h i	□j
	Prerequisites	EECS 484 Enforced © Advised				Prerequisites	EECS 484 or permission • Enforced • Advise	of instructor		
	Restrictions	none				Credit Restrictions				
х	Level of Cre ☐ Undergrad ☐ Rackham (☐ Non-Rckhr ☒ Ugrad or R ☐ Ugrad or N	only □ All Cre Grad □ Rckhri m Grad	edit types n Grad w/add'l Work	Credit Hours Min Max 3 3	Contact Hrs/Wk 3 Number of Wks 14	Level of Cred Undergrad of Rackham G Non-Rckhm Ugrad or Ro Ugrad or No	niy □ AliCi rad □ Rckh Grad khm Grad	redit types nn Grad w/add'l Work	Credit Hours Min Max 4 4	Contact Hrs/Wk 4 Number of Wks 14
C.	Is this cours Maximun	ppeatability (Indi Research, I de repeatable? Yes © n Hours? Maxin de repeated in the same term	No mum Times?			Printing Inf	3-41II W D-1-14	course in the Bulletin course in the Time Sched	ule	
		Rec Section O Sem O Lab O	Lec Grading Rec Sem ⊠ A-E Lab □ CR/N0 Dis □ S/U	Lo C ⊠A	cation nn Arbor iological Station	Freq. of Offering		Even Years Odd Y	ears	alf term
			Ind P/F Other Y	□ c	amp Davis xtension	Cognizant Facu Member:		ignesh Patel	Title Profe	
	Approval							zant Faculty is not a regula		
		ım Comm	***			Name, Signature	& Department	ept. 🗖 Cross-listed Dept.	- ,	03-3-25
	_	m sted Unit 1 ——sted Unit 2 ——				Home Dep Cross-listed Dep		TYP /	-gr-> 60	V/-) - L J

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ecial resources or facilities required for this course?	·	or this course?	□ Yes ⊠ No		

## THE UNIVERSITY OF MICHIGAN -- COLLEGE OF ENGINEERING **Course Approval Request**

College Curriculum Committee, 1420 Lurie Engineering Center Building



Form	Number
1092	

## Action Requested

O 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 3/28/2003

Effective Sp-Su 2003

	A. CURRENT LISTING			B. REQUESTED LISTING							
	Home Department	Div #	Course Number	Home Dep	partment		Div #	Course Number			
	Engineering	290	302	Engineeri	ing		290	302			
	Cross Listed Course Information			Cross Listed	Course Information						
				i							
Х	Course Title		7.00	Course Title							
	Study at Hertfordshire, England			Study Abroad at Shanghai Jiao Tong University, China							
	TITLE Time Sched			TITLE	Time Sched	Study Abroad a	t S.ITLI				
	ABBRE- Max = 19 Spaces			ABBRE-	Max = 19 Spaces						
	VIATION Iranscript Max = 20 Spaces			VIATION	Transcript Max = 20 Spaces	Study Abroad a	it SJTU				
Х	Course Description			Course Descr	ription for Official Publication	n (Max = 50 words)					
	Study abroad for one semester or entire ac	ademic ye	ar at University		road for one seme		ademic yea	r at Shanghai			
	of Hertfordshire, England			Jiao Ton	g University , Chin	na					
				i							
	PROGRAM OUTCOMES:			PROC	GRAM OUTCOME	g.					
	a b c d e f g	□h □i	□i □k		b c d		⊠h □i	⊠j □k			
	Degree Requirements O Degree Requirement O Free E						ective <b>©</b> Other				
	O Core Course O Tech E		O.	O Core Course O Tech Elective							
	Prerequisites			Prerequisites Chinese language proficiency if taking Chinese engineering classes							
一	Counts			○ Enforced ⊙ Advised  Credit							
	Credit Restrictions			Restrictions							
	Level of Credit	Credit Hours	Contact	Level of Credit  ☐ Undergrad only ☐ Ugrad or Non-Rickhm Grad  ☐ Undergrad only ☐ Ugrad or Non-Rickhm Grad  ☐ Undergrad only ☐ Ugrad or Non-Rickhm Grad							
	☐ hackitatii Grad ☐ All Credit types	Min Max	Hrs/Wk	Rackham	Grad 🗌 All Credit t	types	Min Max	Hrs/Wk 3			
	☐ Non-Rckhm Grad ☐ Rckhm Grad w/add'l Work ☐ Ugrad or Rckhm Grad		Number of Wks	☐ Non-Rckhi ☑ Ugrad or F		rad w/add'l Work	1 16	Number 12			
								of Wks 12			
C.	Repeatability (Indi Research, Dir. Study, Dissertation: Is this course repeatable? ① Yes ① No			Printing I	nformation ⊠ Print the o (Optional) ⊠ Print the o		ule	and the same of th			
	Maximum Hours? Maximum Times?										
	Can it be repeated in the same term? O Yes O No										
	Class Graded ⊕ Lec Grading				I 🗷 II 🙀 illa 🖼 ilib	<b>1</b> 11	Н	alf term 1st			
	Rec Sem 🛭 A-E		ation	Freq. of Offering	Yearly    Alter Years	☐ Even Years ☐ Odd Y	rears .	□ 2nd			
	☐ Sem		in Arbor ological Station	Cognizant Fac	ulty	tella Pang	Title Profe	noor EECS			
	☐ Dis ☐ Ind ☐ P/F☐ Ind ☐ Other☐ Y		imp Davis tension	Member:		10.10	THE FIOIS	SSUI, EECS			
	Other			Grad Course:	Attach nomination if Cognize	ant Faculty is not a legula	r graduate facult				
	Approval			<u></u>							
Г	Curriculum Comm.		,		Submitted By: 🔳 Home De e & Department	pt. Li Cross-listed Dept.	//				
_				Home De		ary Herrin	The	<u>.</u>			
	Faculty			Cross-listed De	P		-				
	] Rackham ] Cross listed Unit 1										
F	Cross listed Unit 1					<b></b>					
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## **SUPPORTING STATEMENT**

engineering courses in Chinese. Chinese language courses and culture of choose will be approved by the department at UM that would normally tea advisors will determine whether or not those courses could apply to the strouves in the major, or free/technical electives and HU/SS requirements, foreign culture, learn to adapt their communication skills and become mor cultures, both inside and outside the classroom. They will learn other pers that will help them be better prepared for functioning as an engineer in a g	ourses in English. The syllabi of the courses these students of that course. Upon course approval, individual program udent's degree requirements, including core engineering.  When studying abroad students immerse themselves in a seaware of the communication and behavior skills of other pectives on teaching. Jearning, and practicing engineering ulobal community.
8	
	*** *** *** *** *** *** *** *** *** **
** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***	
	***************************************
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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
1083	

## Action Requested

O New Course O 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 3/21/2003 Effective_

	A. CURRENT LISTING			B. <b>R</b>	EQUESTED LISTING					
_	Home Department Engineering	Div #	Course Number	Home De	partment	Div #	Course Number			
_	Cross Listed Course Information		401							
	Manufacturing	275	401	i Cross Listed	Course Information					
٦	Course Title									
_	Total Quality Management			Course Title						
	TITLE Time Sched Max = 19 Spaces TQM			TITLE	Time Sched					
	ABBRE- VIATION Transcript Max = 20 Spaces TQM			ABBRE- VIATION	Max = 19 Spaces Transcript					
٦	Course Description			Course Desc	Max = 20 Spaces iption for Official Publication (Max = 50 words)					
	The technical and management aspects of tot management. Topics include voice of the cust cross-functional teams, and systems aspects. engineering and business operations such as tolerancing, quality function deployment, procesimultaneous engineering, lean production, purcontrol, and scheduling systems.	tomer, Exam dimens ess con	metrics, ples from ional trol,							
j	PROGRAM OUTCOMES:			PROC	RAM OUTCOMES:		<del></del>			
	☐a ☐b ☐c ☐d ☐e ☐f ☐g ☐l	h 🗌 i	□j		b c d e f	g □h □i	□j			
_	Degree Requirements O Degree Requirement O Free Electiv O Core Course O Tech Electiv		er	Degree Red		e Elective O Other				
إل	Prerequisites None C Enforced Advised			Prerequisites	○ Enforced ○ Advised					
	Credit Restrictions			Credit Restrictions						
ן	Level of Credit  ☐ Undergrad only ☐ Rackham Grad ☐ Non-Rckhm Grad ☐ Non-Rckhm Grad ☐ Rockham Grad ☐ Rockhm Grad w/add'l Work ☐ Ugrad or Rckhm Grad	Max	Contact Hrs/Wk 3 Number of Wks 13	Level of Cre Undergrad Rackham ( Non-Rckhr	only Ugrad or Non-Rckhm Grad Grad All Credit types Grad Rckhm Grad w/add'l Work	Credit Hours Min Max	Contact Hrs/Wk  Number of Wks			
	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 Ir	formation Print the course in the Bulletin (Optional) Print the course in the Time Sc	hedule				
]	Class		ation n Arbor	Freq. of	I III IIIa IIIIb IIIII Yearly III Alter Years III Even Years III C		ulf term			
	☐ Lab	☐ Bio ☐ Ca	ological Station p Davis Pension	Cognizant Faculty Walton M. Hancock Title Professor Member:						
	Approval		-		ttach nomination if Cognizant Faculty is not a re					
<b>=</b>	Curriculum Comm.		····	Name, Signature		- L	·			
	Faculty Rackham Cross listed Unit 1			Home Dep Cross-listed Dep			Hilak			
لــ	Cross listed Unit 2									

Form	Number
1083	

SUPPORTING STATEMENT  The majority of the content in this course is now provided in IOE 461		
	***************************************	
	·	
*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***		
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
975	

25

## Action Requested

☐ Cross listed Unit 1☐ Cross listed Unit 2☐

New Course Complete the following sections: Modification of Existing Course Date 10/7/2002 New Courses - B & C completely Deletion of Course Modifications - A modified information, B & C completely Effective_ Deletions - A & C completely **CURRENT LISTING** B. REQUESTED LISTING Home Department Course Number Div# Home Department Div # Course Number MATH 429 623 MATH 428 623 Cross Listed Course Information Cross Listed Course Information 272 623 Course Title Course Title Computational Finance Computational Finance Time Sched Time Sched TITLE COMPUTATIONAL FINANCE Max = 19 Spaces Max = 19 Spaces ABBBE-ABBRE-Transcript Transcript VIATION COMPUTATIONAL FINANCE Max = 20 Spaces Max = 20 Spaces Course Description Course Description for Official Publication (Max = 50 words) This is a course in computational methods in finance and financial modelling. Particular emphasis will be put on interest rate models and interest rate derivatives. The specific topics include: Black-Scholes theory, no arbitrage and complete markets theory, term structure models: Hull and White models and Heath Jarrow Morton models, the stochastic differential equations and martingale approach: multinomial tree and Monte Carlo methods, the partial differential equations approach: finite difference methods. PROGRAM OUTCOMES: **PROGRAM OUTCOMES:** □ b □ c □ d □ e □ f □ g □ h □ i □ j □ k Degree Requirements O Free Elective O Other O Degree Requirement O Free Elective O Other O Degree Requirement Degree Requirements Core Course Tech Elective O Core Course O Tech Elective Prerequisites Prerequisites Math 316 and Math 425/525 or IOE 552 ○ Enforced ○ Advised ( ) Enforced ( ) Advised Credit Credit Restrictions Restrictions Level of Credit Level of Credit Contact Credit Hours Credit Hours Contact Undergrad only Ugrad or Non-Richm Grad Hrs/Wk Undergrad only Ugrad or Non-Rckhm Grad Hrs/Wk Min Max Rackham Grad All Credit types All Credit types Rackham Grad ☐ Non-Rckhm Grad
☐ Ugrad or Rckhm Grad Non-Rokhm Grad Rckhm Grad w/add'l Work Rckhm Grad w/add'l Work 3 3 of Wks Ugrad or Rokhm Grad of Wks Repeatability (Indi Research, Dir. Study, Dissertation: Print the course in the Bulletin Printing Information Is this course repeatable? O Yes O No (Optional) Print the course in the Time Schedule __ Maximum Times? Maximum Hours? Can it be repeated in the same term? O Yes O No 🗇 1 📆 11 🗇 111a 🔘 111b 🔘 111 Half term | 1st Class Terms & Graded ● Lec Location □ 2nd Type(s) Section Rec Freq. of Rec ⊠ A-E Yearly Alter Years Even Years Odd Years Offering Sem CR/NC Ann Arbor ☐ Sem O Lab Biological Station ☐ Lab ☐ S/∪ Cognizant Faculty Mattias Jonsson Title Assistant Professor ☐ P/F Camp Davis Dis 🗌 Member: Jussi Keppo Assistant Professor Extension ☐ Ind Other Other Grad Course: Attach nomination if Cognizant Faculty is not a regular graduate faculty Submitted By: Home Dept. Cross-listed Dept. Curriculum Comm. Name, Signature & Department **Math** Home Dept. ☐ Faculty IIOE Cross-listed Dept(s). ☐ Rackham

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the field of computational finance is a rapidly rising field in academic and industry circles. There is a growing need for students with such skills. This course will fill this demand and fits into the interdisciplinary program in Financial Engineering.
The FE curriculum committee has suggested that we cross-list this course in IQE because there is a high demand for this course and because this course fits well into IQE department. Math 623 considers numerical methods in finance and many IQE and FE students are interested in this course. The course is a natural extension to IQE552. FE is one area in IQE and the demand is high among IQE students.
Are any special resources or facilities required for this course?
Detail the Special requirements

## THE UNIVERSITY OF MICHIGAN -- COLLEGE OF ENGINEERING **Course Approval Request**

College Curriculum Committee, 1420 Lurie Engineering Center Building



Form Number 1087

## Action Requested

○ New Course② 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** 3/25/2003

Effective Winter 2003

	A. CI	URRENT LIST	ING		7. a o oompie	-	EQUESTED LI	STING			
_	Home Department			Div#	Course Number				Div#	Course Number	
<u> </u>	MFG			275	275 503				275	503	
	OM	Course Information		081	703	Cross Listed OM	Course Information		081	703	
	1										
<u>L</u>	Course Title Manufacturing Project					Course Title Manufacturing Project					
	TITLE ABBRE-	Time Sched Max = 19 Spaces	Manufacturir	ng Project		TITLE	Time Sched Max = 19 Spaces	Manufacturing	Project		
	VIATION	Transcript Max = 20 Spaces	Mfg Project			ABBRE- VIATION	Transcript	Mfg. Project			
х	Course Descr This proj industrial	·	nted to provide project experie	e students w ence in man	ith an ufacturing.	This proj	Max = 20 Spaces  ption for Official Publication  ect course is inter  ly-relevant team p  turing.	(Max = 50 words)	students wit xperience in	h an	
	PROGF	RAM OUTCOM	ES:			PROGRAM OUTCOMES:					
	□a □ b	o 🗆 c 🗆 d 🖂	e ☐f ☐g		□j □k						
	Degree Requ	O Core Cou	Requirement O Tech urse Other	Elective		Degree Requirements  O Degree Requirement O Tech Elective O Other					
Prerequisites MFG 501						Prerequisites MFG 501					
	○ Enforced ○ Advised  Credit						© Enforced © Advised Credit				
	Restrictions Level of Cred	it		Credit Hours	Contact	Restrictions  Level of Cree	lit .	<del> </del>			
	☐ Undergrad or ☐ Rackham Gr	rad ☐ Rckhm	dit types Grad w/add'l Work	Min Max	Hrs/Wk3	☐ Undergrad or ☐ Rackham G	nky □ All Cred	it types Grad w/add'l Work	Credit Hours Min Max	Contact Hrs/Wk 3	
	<ul><li>☒ Non-Rckhm</li><li>☐ Ugrad or Rci</li><li>☐ Ugrad or No</li></ul>	khm Grad		33	Number of Wks14	<ul> <li>Non-Rckhm</li> <li>Ugrad or Rc</li> <li>Ugrad or No</li> </ul>	Grad khm Grad	Ciud Waddi Wolk	3 3	Number 14	
C.	Repeatability (Indi Research, Dir. Study, Dissertation:					print the couptional)  Print the couptional)	urse in the Bulletin urse in the Time Sched	uie	of Wks14		
х	Class	Graded O	Lec Gradin			Terms & ■	■ II □ IIIa □ IIIb ■	<u> </u>	– Ha	If term 🗖 1st	
	Type(s)	em 🥇	Rec Sem ⊠ A-E Lab □ CR/No	Loca	ation	Freq. of	Yearly □ Alter Years □			□ 2nd	
		ab O	is S/U Biological Station Cognizant Faculty S. J	ack Hu Title Professor							
	□ Other □ Other □ Y □ Extension					Member: C. dack to Title Professor					
Ĺ	Approval					Grad Course: Attach nomination if Cognizant Faculty is not a regular graduate faculty					
	Curriculun	n Comm.					mitted By: Home Dept.			<u> </u>	
							Iame, Signature & Department Home Dept. S. Jack Hu S Tack Hu   We				
	Faculty Rackham					•	(s). James Reece	James R	ecco / he		
	Cross liste	ed Unit 1			<del></del>		***************************************	~~~~~	~~~~~		

Cross listed Unit 2	······································
	Form Number
	1087
SUPPORTING STATEMENT	
1. The following course description modifcation is requsted to allow this course to b	
the program requirement for graduation.	
2. The following grading modification is requested from S/U to graded A-E.We bel	lieve the overall level of project effort and
accomplishment will be enhanced with letter-graded projects. Our belief is base	ed on feedback we obtained from faculty
co-advisors and TMI students after completion of their projectsLetter-graded	projects give faculty co-advisors a better
mechanism to distinguish between outstanding versus fair/poor project reports.	which also gives the students an opportun
recognition of good work and further motivation to submit better reports. Othen years is that all the project reports receive a pass. and there is less motivati	wise, the tendency we have observed over
years is that all the project reports receive a pass to allo there is less motivation formal mechanism to recognize outstanding reports. The reaction to our propose	sal from faculty who served in the past as
summer project co-advisors was positive.	***************************************
Letter-graded project reports also have a secondary benefit. They allow co-adv	visors to assign different grades to different
members of the same team, when such action is justified. In cases of unprofes	isional behavior by an <i>individual</i> team memb
for example, this person may be given a grade lower than that awarded the pro based on team members evaluating themselves and each other as well as inpu	t from faculty co-advisors Unprofessional
behavior, includes (but is not limited to) not carrying a fair share of the teams	s workload, creating substantial dissonance
the team, and interacting with sponsor personnel in a discourteous or immature.	manner. On the other hand, if in addition to
performing his/her own share of the work a team member ends up doing a subs	
assigned to someone else, that person can be recommended for a grade higher reports allow for such differences in team members, grades while the pas/fail sy	r than that given the project/team. Letter gr
reports allow for such officeroces in team members, grades while the pashall sy	VSIEIII GOES LIGI.
······································	
Are any appoint required or facilities required for this source?	
Are any special resources or facilities required for this course?	⊠ No
Are any special resources or facilities required for this course?	⊠ No