

Missouri University of Science and Technology

Formerly University of Missouri-Rolla

Agenda
Campus Curricula Committee Meeting
December 5, 2012
12 pm, Room 117 Fulton Hall

Review of submitted DC forms:

DC #0432, Business and Information Technology, Minor in Sustainable Business, effective Fall 2013.

DC #0433, Electrical and Computer Engineering, Minor in Computer Engineering, effective Fall 2013.

Review of submitted CC forms:

CC #8305, Petroleum Engineering 366, Mechanical Earth Modeling, effective Fall 2013.

CC #8306, Petroleum Engineering 232, Well Logging, effective Spring 2013.

CC #8307, Explosives Engineering 411, Research Methods, effective Fall 2013.

CC #8308, Technical Communication 325, Help Authoring, effective Fall 2013.

CC #8309, Chemical Engineering 433, Advanced Transport Phenomena, effective Spring 2013.

Review of submitted EC forms:

EC #2438, Geological Engineering 301, Hydrologic Flow Reaction and Transport Modeling, effective Spring 2013.

EC #2440, Petroleum Engineering 401, Advanced Mechanical Earth Modeling, effective Spring 2013.

EC #2442, Electrical Engineering 401, Power Transmission and Distribution, effective Spring 2013.

EC #2444, Mining Engineering 301, Mining Industry Economics II, effective Spring 2013.

Tabled Items:

DC #0417, Engineering Management, Bachelor of Science, effective Fall 2013.

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Missouri University of Science and Technology

Formerly University of Missouri-Rolla

- DC #0419, Engineering Management, Bachelor of Science, Industrial Engineering Emphasis, effective Fall 2013.
- DC #0420, Engineering Management, Bachelor of Science, General Engineering Emphasis, effective Fall 2013.
- DC #0429, Engineering Management, Bachelor of Science, effective Fall 2013.
- DC #0430, History, Bachelor of Arts/History Teacher Education Program, effective Fall 2013.
- CC #8280, Computer Engineering 416, Advanced Computer Architecture II, effective Spring 2013.
- CC #8281, History 396, History Research Seminar, effective Fall 2013.
- CC #8282, Engineering Management 482, Financial Engineering II, effective Spring 2013.
- CC #8284, Systems Engineering 378, Introduction to Neural Networks & Applications, effective Fall 2013.
- CC #8285, Engineering Management 481, Financial Engineering, effective Spring 2013.

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From: 573 341 4362 Page: 1/13 Date: 11/2/2012 4:12:54 PM

Effective Year: 2013 DC # 0432-2012-BIT-000-00 Effective Term: Summer Fail Spring (Creating or modifying a degree program must be effective for a Fall term)
Degree Change Form (DC)
This form is to be used for creating or modifying degree programs, emphasis areas, and minors.
Title of degree program, emphasis area, or minor: Minor in Sustainable Business
Department: Business and Information Technology
Briefly describe action requested (Attach documentation as appropriate):
The minor in Sustainable Business is being changed to add BUS 340 to the list of required courses and to move BUS 315 to the list of elective courses. All other required and elective courses remain the same. The new requirements are: 1) BUS 110 - Management and Organizational Behavior 2) BUS 330 - Foundations of Sustainable Business 3) BUS 340 - Introduction to Business Innovation for Sustainability 4) and two courses from the following: ERP 348 - Strategic Enterprise Management Systems EnvE 360 - Environmental Law and Regulations EnvE 365 - Sustainability, Population, Energy, Water, and Materials Psych 315 - Environmental Psychology Econ 340 - Environmental And Natural Resource Economics Econ 355 - Energy Economics Pol Sci 350 - The Politics of the Third World Hist 361 - American Environmental History BUS 315 - Introduction to Teambuilding and Leadership in a Business Setting At least 6 hours of the minor course work must be taken in residence at Missouri S&T.
Recommended by Department: (Chair signature) Date: 10/24/12
Recommended by:
Approved by Curricula Committee: Date: (Chair signature)
Approved by Faculty Senate: Date: Chair signature)

(Revised 9/12/2011)

From: 573 341 4362 Page: 2/13 Date: 11/2/2012 4:12:54 PM

Effective Year: FS2013 Effective Term: Summer F (Creating or modifying a degree pr			1.CpE-00000
	_	 	

Degree Change Form (DC)

This form is to be used for creating or modifying degree programs, emphasis areas, and minors.

Title of degree program, emphasis area, or minor:

Minor in Computer Engineering

Department: Electrical & Computer Engineering

Briefly describe action requested (Attach documentation as appropriate): Create a Minor in Computer Engineering with the requirements noted below.

The Cp Eng Minor will be noted on the student's transcript.

The catalog description for the CpE Eng Minor is given in the attached document.

Minor was approved by the Cp Eng Curriculum Committee on August 31, 2012.

Recommended by Department: Recommended by Department:	(Chair signature)	Date: 290ctlou
Recommended by Discipline Specific Curricula	Committee: Aph o 1960 (Chair signature)	Date: 3//ad/12
Approved by Curricula Committee:	(Chair signature)	Date:
Approved by Faculty Senate:	(Chair signature)	Date:

(Revised 1/31/2008)

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The catalog description for the minor will be added as follows.

minor advisor.

Computer Engineering Minor Curriculum A minor in Computer Engineering will require the following: Pass the El Eng Advancement Exam I (El Eng 151 Final) with a C or better* Pass the Cp Eng Advancement Exam (Cp Eng 111) with a C or better** Pass Cp Eng 213 with a C or better Pass El Eng 121 or Cp Eng 215 with a C or better Pass Cp Eng 319 or Cmp Sc 365 with a C or better Pass 3 hours of 3xx Cp Eng or El Eng or Cmp Sc coursework with a C or better, excluding special problems and undergraduate research. Transfer courses cannot be used to satisfy

*One opportunity will be given to pass the El Eng Advancement Exam I if a student has prior course or experience in circuits. Otherwise, the student must pass El Eng 151. **One opportunity will be given to pass the Cp Eng Advancement Exam if a student has prior course or experience in digital circuits. Otherwise, the student must pass Cp Eng 111.

this requirement. The course choice for this requirement is subject to the approval of the

From: 573 341 4362 Page: 4/13

Date: 11/2/2012 4:12:55 PM

Effective Year: Term: Summer [CC File #	8305-2012-R+Eng	g 366-32
	This form is for a	Change F	-	—	
Course Chang	es (Check all changes.)				
New Course 🗌	Course Deletion \Box	Credit Ho	ours 🗌	Prerequisites $oxtimes$	
Course Title 🗌	Catalog Description	☐ Course N	lumber 🗌	Co-listing 🗌	
Course Inform	nation (1-9 Must Be Com	pleted. Leave "Propo	osed" items blar	nk if no change is being ma	de.)
1. Department:	: GSE				•
2. Discipline an	d Course Number: P	resent : Pet Eng 36	6 Prop a	sed:	•
3. Course Title:		arth Modeling			
	Proposed:	_			
Abbreviated					:
	(24 Spaces or Less. On		Courses or Titl	e Changes.)	
- .	ption (300 Character Space	es or Less.)			
Present:					!
					İ
Proposed:					i :
-					
<u>-</u>	ires field trip check box:				:
6. Credit Hours:	Present:	Lecture: 3	Lab: <i>O</i>	Total: 3	
7. Prerequisites:	Proposed:	Lecture:	Lab:	Total:	
	Pet Eng 232 or Geology	220 or Min Eng 232	2		
		_			!
Proposed:	Pet Eng 232 and Geolog	y 220			
8. Required for M	lajors: 🗵 💢 Elective fo	or Majors: 🗌			
9. Justification:	Min Eng 232 is not offe	ered anymore. Both	Pet Eng 232 a	and Geology 220 provide	2
	crucial introductions to	this class.			
10. 0			/404 304 34	04 4045-	
-	reviously offered as an e	•	•	•	
	ted courses, initialed by	· -	iture does not	appear below.	
1)	2)	3)			
4)	5)	6)			
	y Department	and Man		Date: 10-	2-12-
Recommended by	y Department	(Shair signature)	عد حارب	Date: 10-	
Recommended b	y Discipline Specific Curr	icula Committee 👱	Kt to r akods	Date: <u>/ 0 -</u>	25-12
Appeared by Co-	ricula Committoo	(Chair signature)	•	Date:	
Approved by Cur	ricula Committee:	(Chair signature)			
Approved by Fac	ulty Senate:	/ Chair stanes		Date:	
		(Chair signature)			

From: 573 341 4362 Page: 5/13 Date: 11/2/2012 4:12:55 PM CC File # 8306-2012-Peteng-232-32 Effective Year: 2013 Term: Summer 🗍 Fall 🔲 Spring 🖾 Course Change Form (CC) This form is for creating or modifying permanent courses. Course Changes (Check all changes.) New Course 🗌 Course Deletion Credit Hours Prerequisites 🛛 Course Title 🔲 Catalog Description 🗌 Course Number 🗌 Co-listing 🔲 Course Information (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.) Department: GSE 2. Discipline and Course Number: Present: Pet Eng 232 Proposed: 3. Course Title: Present: Well Logging Proposed: Abbreviated Course Title: (24 Spaces or Less. Only needed for New Courses or Title Changes.) 4. Catalog Description (300 Character Spaces or Less.) Present: Proposed: 5. If course requires field trip check box: 6. Credit Hours: Total: 3 Present: Lecture: 3 Lab: O Proposed: Lecture: Lab: Total: 7. Prerequisites: Present: Physics 24 or 25 Proposed: Physics 24 or 25 and Pet Eng 241 8. Required for Majors: 🔀 Elective for Majors: Too many sophomores who do not understand fundamentals of rock properties take 9. Justification: the class and are struggling. Semesters previously offered as an experimental course (101, 201, 301, 401): 11. List all co-listed courses, initialed by Dept. Chair, if signature does not appear below. 1) 2) 4) 5)

Date: 10-2-12

Date: ____

Date:

Chair signature)

(Chair signature)

(Chair signature)

(Chair signature)

Recommended by Department

Approved by Faculty Senate:

Approved by Curricula Committee: _

Recommended by Discipline Specific Curricula Committee

From: 573 341 4362 Page: 6/13 Date: 11/2/2012 4:12:56 PM CC File # 8307-2012- ExpEng-Effective Year: 2013 Spring 🔲 Term: Summer 🗌 Fall 🛛 Course Change Form (CC) This form is for creating or modifying permanent courses. Course Changes (Check all changes.) Credit Hours Prerequisites 🗌 New Course 🛛 Course Deletion Course Title 🗌 Catalog Description Course Number 🔲 Co-listing 🛛 Course Information (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.) 1. Department: Mining and Nuclear Engineering 2. Discipline and Course Number: Present: Proposed: Exp Eng 411 3. Course Title: Present: Proposed: Research Methods Abbreviated Course Title: (24 Spaces or Less. Only needed for New Courses or Title Changes.) 4. Catalog Description (300 Character Spaces or Less.) Present: Mining 411 **Proposed:** Foundations, dimensions, and methods for designing and investigating research problems. Focus on fundamentals and applied research, research methods, literature review, experimental design and experimentation, disertation composition, concepts of originality and interlectual property 5. If course requires field trip check box: \square 6. Credit Hours: Lab: Total: Present: Lecture: Lecture: 3 Lab: 0 Total: 3 Proposed: 7. Prerequisites: Present: Proposed: Graduate Standing 8. Required for Majors: Elective for Majors: 🛛 We would like to co-list with Mining 411 research methods. It has become apparent 9. Justification: that the masters of explosives engineering by research students need to take the class and we will be also including this for our PhD in explosives engineering in application as a required class. Dr. Baird (mining and explosives) has currently reworked min 411 and will teach onsite and distance. 10. Semesters previously offered as an experimental course (101, 201, 301, 401): 11. List all co-listed courses, initialed by Dept. Chair, if signature does not appear below. 1) Mining 411 5x 3) 4) Recommended by Department

(Revised 1/29/09)

Date:

Date: _

(Chair signature)

(Chair signature)

(Chair signature)

(Chair signature)

Recommended by Discipline Specific Curricula Committee

Approved by Curricula Committee: _

Approved by Faculty Senate: __

From: 573 341 4362 Page: 7/13 Date: 11/2/2012 4:12:56 PM

From: 573 341 4362 Page: 1/1 Date: 10/24/2012 4:10:29 PM

Effective Year: 2013			CC File # 8	308-2012	-Tlan-
Term: Summer 🗌 Fall	🗵 Spring 🗌				325-10
	Course C	hange Fo	rm (C	2)	
Τ	his form is for crea				
Course Changes (Chec			•		
	se Deletion 🔲	Credit Hou	rs 🛚	Prerequisites !	⊐
	log Description 🔲	Course Nu	mber 🗌	Co-ilsting 🔲	
Course Information (1-9 Must Be Complet	ed. Leave "Propose	d" items blank	if no change is b	eing made.)
1. Department: English					
2. Discipline and Course		ent : Tech Com 3X	X Propos	ed: Tech Com 3	25
3. Course Title: Present:					
Propose	d: Help Authoring				
Abbreviated Course 1	litle: Help Authorin	ng Transport	ay Titlo	Changes \	
(24 Spa 4. Catalog Description (30	ces or Less, Only II	eeded for New Co	urses or little	Changes.)	
A. Catalog Description (50 Present:	o cilaracter operes :	4 than,			
Liganir.					
			:tkille e o		ating official
Proposed: Students wi	ill acquire the techi systems, including	ological and rneti context-sensitive	orical skills ne help for comi	cessary for cre- outer applicatio	ns.
outus usib	systems, memonis	COLLECT DELIZITION	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
	•				
5. If course requires field	trip check box: 🔲				
6. Credit Hours:	Present:	Lecture:		Lab:	Total:
		1	Lab: O	Total: 3	
7. Prerequisites:	Proposed:	Lecture: 3	Lab: C	i Otali S	
Present:					
Proposed: One sem	ester of college wr	iting or technical (writing.		
		_			·
8. Required for Majors:	Elective for M	lajors: 🗵			
9. Justification:					
				10	? 20
10. Semesters previously	offered as an expe	erimental course ((101, 201, 30	L, 401): SP09, S	P10, SP1\$
11. List all co-listed cours	es, initialed by Det	st. Chair, if signat	ure does not a	ppear below.	
1) 2)		3)			
4) E)		6) /			
4) 5)	JA	Z'~ X			W/09/1-
Recommended by Depart	ment f /h-l	(Chair signature)	11/1000	Dat	e: W/23/12-
Recommended by Discipli	ne Specific Curricu	la Committee	Melle	Dat	e; <u>/U/X4/</u> / =
	7	(Chair signature)		Dat	· ·
Approved by Curricula Co	mmirree:	(Chair signature)			
Approved by Faculty Sena	ite:	<u> </u>		Dat	e:
		(Chair signature)			
					(Revised 1/29/09)

This fax was received by GFI FAXmaker fax server. For more information, visit: http://www.gfi.com

- كرورميل - 10/2-2019 CC File # \$309 Term: Summer 🗌 Fall 🔲 Spring 🔂 Course Change Form (CC) This form is for creating or modifying permanent courses. Course Changes (Check all changes.) Credit Hours Prerequisites 🍱 Course Deletion New Course Course Number 🗌 Co-listing \square Catalog Description 🗌 Course Title Course Information (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.) 1. Department: Chemical and Bio chemical Enq 2. Discipline and Course Number: Present: ChE 433 Proposed: ChE 433 3. Course Title: Present: Advanced Transport Phenomena Proposed: Advanced Transport Phenomena **Abbreviated Course Title:** (24 Spaces or Less. Only needed for New Courses or Title Changes.) 4. Catalog Description (300 Character Spaces or Less.) Present: Proposed: 5. If course requires field trip check box: \square Present: Lecture: 6. Credit Hours: Proposed: 3 Lecture: Total: 7. Prerequisites: Present: neve Proposed: CUE 335 8. Required for Majors: Elective for Majors: Per Laking Ch E 433
9. Justification: graduate students are taking Ch E 433
with none of inadequate background Semesters previously offered as an experimental course (101, 201, 301, 401): 11. List all co-listed courses, initialed by Dept. Chair, if signature does not appear below. 1) 2) 5) 4) Recommended by Department (Chair signature) Date: 1-/2-9//2 Recommended by Discipline Specific Curricula Committee 🖃 (Chair signature) Date: _____ Approved by Curricula Committee: ____ (Chair signature) Date: _____ Approved by Faculty Senate: ___ (Chair signature)

From: 573 341 4362

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Date: 11/2/2012 4:12:57 PM

From: 573 341 4362

Page: 9/13

Date: 11/2/2012 4:12:57 PM

EC File # 2438-Sp2013-Geo E-30/ Effective Year: 2013 Fall 🔲 Spring 🖾 Effective Term: Summer Experimental Course Form (EC) An EC form must be submitted before an experimental course is to be offered. EC forms approved SP2009 or later allow the course to be offered twice at any time during the following three year period. After an experimental course has been offered twice, a CC form may be submitted to request a permanent course number. A new course that is required as part of a degree program, minor, or graduate certificate may be submitted on a CC form to receive a permanent course number Co-listed offerings should be submitted on one form, originating from the primary discipline. **Department:** Geological Sciences and Eng. Discipline and Course Number: GE301 Course Title: Hydrologic flow reaction and transport modeling Abbreviated Title (24 spaces or less): Hydrologic modeling Instructor(s): Shadab Anwar Lecture: 3 Lab: O Total: 3 Credit Hours: Prerequisites: Phys, Calculus, Civ Eng 215, GevEng 275, 335 Semester(s) previously taught: 0 Brief Course Description: (40 words or less) This course is an introduction to advanced modeling techniques for simulating flow, transport, and reaction processes in porous media under different hydrologic conditions. Emphasis is placed on both theoretical and practical modeling considerations. Computer demonstrations are incorporated. Practical applications are emphasized. List all co-listed courses: Include initials of Dept. Chair, if signature is not already included below. 1) 3) 4) tehair Sig Discipline Specific Curricula Committee:

(Revised 10/12/2010)

Date:_

Curricula Committee: _

(Chair Signature)

From: 573 341 4362 Page: 10/13 Date: 11/2/2012 4:12:57 PM

Effective Year: 2 Effective Term: S		Fall □	Spring 🛚	EC	File # 2440 - 5	To 2013 - Pet Eng 401
	Expe	erime	ntal Co	urse F	orm (EC))
An EC form mus approved SP200 three year perio submitted to re	09 or later a od. After an	llow the c experimer	ourse to be o ital course h	offered twi as been of	ce at any time d	luring the following
A new course th						ate certificate may
Co-listed offerin	ıgs should b	e submitt	ed on one fo	rm, origina	ting from the p	rimary discipline.
Department: Ge	ological Sci. 8	& Eng.				:
Discipline and C	ourse Numt	er: Pet En	g 401			
Course Title: Ad	vanced Mech	anical Earth	n Modeling			:
Abbreviated Titl	le <i>(24 space</i>	s or less):	: Adv MEM			
Instructor(s): D	, ,	_				
Credit Hours:	Lecture:	3	Lab: O	Total	l : 3	
Prerequisites:	Pet Eng 366 Pet Eng 338		e C or better			
Semester(s) pro	eviously tau	ght:				:
Brief Course De: This course focuse surface engineering as stress initializa are discussed and	es on the wor ng application ation, spherica	k processe is using ad al model ge	s necessary to vanced Finite I cometry and co	Element mo	deling techniques	s. Concepts such
List all co-listed 1)	l courses: In 2)	clude initia	ils of Dept. Cha 3)	air, if signat	ure is not already	y included below.
4)	5)		6)			
Department Chair	r: <i>Q</i>	alph St	92 (Chai	r Sig nat ure))	Date: 10-2-12
Discipline Specific	: Curricula Co	mmittee:	Step 4	r signature)	L	Date: 16-25-12

(Revised 10/12/2010)

Date: _

Curricula Committee:____

(Chair Signature)

From: 573 341 4362 Page: 11/13 Date: 11/2/2012 4:12:58 PM

Effective Year: 2013			EC File #2442-SP2013-EE-40
Effective Term: Summer 🗌	Fall 🔲	Spring 🛚	

Experimental Course Form (EC)

approved SP2009 three year period.	or later allow the co After an experiment est a permanent cou	ourse to be offe tal course has t	red twice at any time	e during the following
	t is required as part CC form to receive			luate certificate may
Co-listed offerings	s should be submitte	ed on one form,	originating from the	primary discipline.
Department: Electronic	rical and Computer Eng	g.		:
Discipline and Cou	ırse Number: EE 401			
Course Title: Powe	r Transmission and Dis	stribution		
Abbreviated Title	(24 spaces or less):	Power T&D		:
Instructor(s): Meh	ndi Ferdowsi			
Credit Hours:	Lecture: 3	Lab: 0	Total: 3	
Prerequisites: E	E 207			
Semester(s) previ	iously taught: none			
High voltage transm	ription: (40 words on ission line electric des acteristic, feeders volt	ign, conductors, o		e, insulators,
List all co-listed co	ourses: Include initial 2)	s of Dept. Chair, i	if signature is not alrea	ady included below.
4)	5)	6)		
Department Chair: _	Kehi Eus		gnature)	Date: 10/13/12
Discipline Specific C	urricula Committee: _	(Chair sig	nature)	Nate:
Curricula Committee	ə:	(Chair Sig	nature)	Date:

(Revised 10/12/2010)

From: 573 341 4362 Page: 12/13 Date: 11/2/2012 4:12:58 PM

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Effective Year: 2 Effective Term: S	2013 ummer □ Fall □	Spring 🛚	EC File # <i>る</i> ソソソ	-Sp2013- MIN 30 1
	Experime	ntal Cour	se Form (EC	_
approved SP200 three year perio	9 or later allow the	course to be offe intal course has	al course is to be offer red twice at any time been offered twice, a	during the following
	at is required as par a CC form to receive		gram, minor, or gradu ourse number	iate certificate may
Co-listed offerin	gs should be submit	ted on one form,	originating from the	orimary discipline.
•	ing and Nuclear Engine ک 2-Durse Number: MIN	ENG		
•				
	ing Industry Economic			
Abbreviated Title	e (24 spaces or less)	: Min Ind Economi	ics II	
Instructor(s): St	ewart Gillies			
Credit Hours:	Lecture: 3	Lab: O	Total: 3	
			R Econ 122 M acro Econor y Economics (3 credits) -	
Semester(s) pre	viously taught:			
Mining industry an Marketing of mined mine financing. Mi	d commodities. Mine fi ning feasibility studies,	Social and econom nancing, project lo , government influ-	nic significance of mined bans, leasing and innovat ence and policy, mining i st prediction. Case studie	ive approaches to industry foreign
List all co-listed (1)	courses: Include initia 2)	als of Dept. Chair, 3)	îf signature is not alread	y included below.
4)	5)	6)		f ,
Department Chair:	= mhsh	- (Chair Sid	gnature)	Date: 10/20/17

(Revised 10/12/2010)

Date: _

Curricula Committee: _

Discipline Specific Curricula Committee: __

(Chair Signature)

From: 573 341 4362 Page: 13/13 Date: 11/2/2012 4:12:58 PM

Russell, Judy

From:

Gillies, Stewart

Sent:

Thursday, October 18, 2012 3:38 PM

To:

Russell, Judy

Cc:

Robertson, Barbara A.

Subject:

FW: New course in Mining Economics

Judy,

As discussed this morning (and as discussed by Mining Faculty at our Spring Semester 2012 Retreat at Viburnum) it would be appreciated if you would smooth the birth of this new course to allow the university system to work.

The new Mining course MinE 301 (Provisional, to become MinE 320 Mining Industry Economics II), 3 credits, offered by the Mining Department will be available in Spring semester 2013.

Proposed Course Syllabus.

MinE 320 Mining Economics (3 credits, Lec 3) Spring semester; The mining industry and national economies. Social and economic significance of mined commodities. Marketing of mined commodities. Cartels and other hindrances to free trade. Mine financing, project loans, leasing and innovative approaches to mine financing. Mining feasibility studies, government influence and policy, mining industry foreign investment, investment strategies, mining taxation and cost prediction. Case studies.

Textbook

Runge, I.C., 1998. "Mining Economics and Strategy", Society for Mining, Metallurgy and Exploration, Inc., Colorado.

Related Information

Mining Engineering now requires students to undertake EITHER Econ 121 Micro Economics (3 credits) OR Econ 122 Macro Economics (3 credits) plus the course MinE 270 Mining Industry Economics (3 credits) as minimum Mining Economics instruction to the BS degree.

In recent years a significant number of Mining students have shown an interest in undertaking more credits of Mining Economics instruction This may allow some to complete a Minor in Mining Economics from courses available between the Mining and Economics Departments. Dr Gelles, Chairman of Economics, supports both Departments working together in expanding offerings which provide a balance between Economics and Mining. The provision of the new course Mining Industry Economics II will make it easier for a student to achieve a Mining Economics Minor while undertaking a Mining Engineering BS degree. A Mining Economics Minor could be achieved by a student completing the following courses or possibly some other related courses.

- Econ 121Micro Economics Econ 121 (basic 3 credits course offered by Economics Department),
- Econ 122 Macro Economics (basic 3 credits course offered by Economics Department),
- MinE 270 Mining Industry Economics (Mining Industry Economics, 3 credits course offered by Mining Department and fulfills an ABET requirement),
- MinE 301 (Provisional to become MinE 320 Mining Industry Economics II (3 credits offered by Mining Department) – A NEW COURSE
- Intermediate Micro Economics, Econ 221 (3 credits offered by Economics Department):OR
- Econ 340 Natural Resource Economics (3 credits offered by Economics Department)

Thanks for your assistance. Is there anything else that needs to be done? Class meeting time would be preferred on Tuesday/Thursday.

Dr Stewart Gillies

From: 573 341 4362

Page: 1/1

Date: 11/16/2012 8:58:26 AM

Effective Year: 2013 Effective Term: Summer Fall Sp	oring 🛮	EC file # 2744-5p	2013- MIN 30					
Experimen	Experimental Course Form (EC)							
An EC form must be submitted before a approved SP2009 or later allow the couthree year period. After an experiment submitted to request a permanent cour	irse to be offered al course has bee	twice at any time duri	ing the following					
A new course that is required as part of be submitted on a CC form to receive a	f a degree progra permanent cours	m, minor, or graduate e number	certificate may					
Co-listed offerings should be submitted	l on one form, orl	ginating from the prim	ary discipline.					
Department: Mining and Nuclear Engineers EA Discipline and Course Number: MIN 301	ing C							
Course Title: Mining Industry Economics II								
Abbreviated Title (24 spaces or less): N		·						
Instructor(s): Stewart Gillies								
	Lab: <i>O</i> 1	otal: 3						
Prerequisites: Econ 121 M icro Economic plus the course MinE-270	is (3 credits) OR Ed Mining Industry Ed	on 122 Macro Economics conomics (3 credits) — ş	(3 credits) 3 hez d/					
Semester(s) previously taught:								
Brief Course Description: (40 words or Mining industry and national economies. So Marketing of mined commodities. Mine finar mine financing. Mining feasibility studies, go investment, investment strategies, mining t	cial and economic s ncing, project loans overnment influenc	i, leasing and innovative i e and policy, mining indu	approaches to					
List all co-listed courses: Include initials 1) Eとかっるの 2)	of Dept. Chair, if si 3)	gnature is not already in	cluded below.					
4) 79 5)	6)		1					
Department Chair:	(Chair Signa	ture)	ate: $10/20/17$					
Discipline Specific Curricula Committee:	(Chair signat		ate:					
Curricula Committee;	(Chair Signat		ate:					
10/19/12		• •	(Rev sed 10/12/2010)					

From: 573 341 4362

Page: 1/15 Date: 11/2/2012 4:18:05 PM

	Effective Year: 2013 Effective Term: Summer Fall xx S	pring 🔲		2012 - Emgt-
	(Creating or modifying a degree program must b			
	Degree Ch	ange Forr	n (DC)	
	This form is to be used for creating or mo	difying degree progra	ms, emphasis area	s, and minors.
	Title of degree program, emphasis area Engineering Management	, or minor:		
	Department: EMSE			
émgt ←	Briefly describe action requested (Attac Add EMSE 213 (new 3 credit hour course CO hours of required Engineering Management Engineering, Management of Technology and EMSE technical electives (Separate DC form documentation.	; submitted with thi core courses. Conc d General Emphasis	s request) to the current to this cha s areas will remov	inge, the Industrial e 3 credit hours of
	,			
	Recommended by Department:	مارگ (Chair signature)	444	Date: <u>리네기</u>
	Recommended by: Discipline Specific Curricula Committee)人 (Chair signature)		Date: 8/26/12
	Approved by Curricula Committee:	(Chair signature)	· · · ·	Date:
	Approved by Faculty Senate:	(Chair signature)		Date:
	A3/33/13			(Revised 9/12/2011)

02/27/12

From: 573 341 4362 Pa

Page: 2/15

Date: 11/2/2012 4:18:06 PM

Bachelor of Science Engineering Management Student Checklist - FS 2013 - Catalog 128 Hours

	Fre	:shm	an Year		
First Semester	, ,		Second Semester		
FE 10 Study and Careers in Engineering	1	\bigcirc	IDE 20 Engineering Design with Computer Appli	3	$ \bigcirc$
Chem 1 General Chemistry	4	\bigcirc	Math 15 Calculus II for Engineers	4	$ \circ $
Chem 2 General Chemistry Lab	1	\bigcirc	Phys 23 Engineering Physics 1	4	$ \bigcirc$
Chem 4 Intro to Lab Safety	1	\circ	Econ 121/122 - Micro or Macro Economics	3	$ \bigcirc$
Math 14 Calculus I for Engineers	4	\circ	Humanities Elective	3	$ \bigcirc$
Engl 20 Exposition and Argumentation	3	Ō)		
Hist 112, 175, 176 or Pol Sci 90	3				
	17			17	
	Sop	hom	ore Year		
First Semester		-	Second Semester		_
Math 22 - Calculus w/Anlytic Geometry III	4	\bigcirc	Math 204 - Differential Equations	3	$ \mathcal{Q} $
Physics 24 - Engineering Physics II	4	\mathbb{Q}	Stat 215/217 - Eng Statistics	3	\bigcirc
IDE 50 - Enginieering Mechanics - Statics	3	\mathbb{Q}	IDE 150 - Engineering Mechanics - Dynamics	2	\mathbb{Q}
Eng Mg 213 Complex System Mgt	3	\bigcirc	Eng Mg 147 - Eng Mgt Acct&Fin	3	\bigcirc
Eng Mg 137 - Eng Economics	2	\bigcirc	Eng Mg 134 - Management Eng & Technology	3	\bigcirc
			Psych 50 - General Psychology	3	\bigcirc
	16			17	
	J	unio	r Year		
First Semester	,		Second Semester		
Eng Mg 253 - Operations & Prod Mngt	3	\bigcirc	Eng Mg 266 - Quality Philosophies & Methods	3	\bigcirc
Eng Mg 251 - Marketing Management	3	Q	Eng Mg 254 - Project Management	3	\bigcirc
IDE 110 - Mechanics of Materials	3	=	El Eng 281 - Electrical Circuits	3	\bigcirc
IDE 120 - Mechanics of Materials Laby	1	\mathcal{Q}	English 160 - Technical Writing	3	\bigcirc
Comp Sci 74 - C++ Programming	2	\bigcirc	ME 227 - Thermal Analysis	3	\bigcirc
Com Sci 78 - C++ Lab	1	\bigcirc			
Sp&Med 085 or 181	3	\circ			
	16	ı		15	
	S	enio	r Year		
First Semester			Second Semester		
Eng Mg Emphasis Requirement	3	\circ	Eng Mg 299 - Senior Design	3	0
Eng Mg Emphasis Requirement	3	\bigcirc	Eng Mg Technical Elective	3	0
Eng Mg 260 - Gen Mgt - Design & Integration	3	\bigcirc	Eng Mg Technical Elective	3	0
Eng Mg Emphasis Requirement	3	\bigcirc	Upper Level H/SS	3	0
Eng Mg Emphasis Requirement	3	0	Free Elective	3	\circ
	15			15	

Comments:

From: 573 341 4362 Page: 3/15

Date: 11/2/2012 4:18:06 PM

DC #0419-2012- Emgt-000-00 Effective Year: 2013 Effective Term: Summer 🔲 Fall xx□ Spring 🔲 (Creating or modifying a degree program must be effective for a Fall term) Degree Change Form (DC) This form is to be used for creating or modifying degree programs, emphasis areas, and minors. Title of degree program, emphasis area, or minor: Industrial Engineering Emphasis Area **Department: EMSE** Briefly describe action requested (Attach documentation as appropriate): The Industrial Engineering Emphasis area credit hour requirements will change from 21 credit hours to 18 credit hours. This change is being made in order to add a new 3 credit hour course (EMSE 213) to the current 26 credit hours of EMSE required core courses. The 12 credit hours of required courses (EMSE 257, 311, 356 and 382) will not change. The EMSE technical electives will be reduced to 6 credit hours from the current required 9 credit hours. This change enables EMSE to maintain 3 credit hours of Free Electives as a part of the 128 required credit hours. Recommended by Department: Discipline Specific Curricula Committee (Chair signature) Approved by Curricula Committee: Date: (Chair signature) Approved by Faculty Senate: ___ Date: (Chair signature)

02/27/12

(Revised 9/12/2011)

From: 573 341 4362 Page: 4/15 Date: 11/2/2012 4:18:06 PM

Bachelor of Science Engineering Management

Industrial Engineering Emphasis

Student Checklist - FS 2013 - Catalog 128 Hours

	Fre	_	an Year		
First Semester			Second Semester		
FE 10 Study and Careers in Engineering	1	\bigcirc	IDE 20 Engineering Design with Computer Appli	3	
Chem 1 General Chemistry	4	Ŏ	Math 15 Calculus II for Engineers	4	Ō
Chem 2 General Chemistry Lab	i	$\tilde{\Box}$	Phys 23 Engineering Physics 1	4	ĬŎ
Chem 4 Intro to Lab Safety	1	$\check{\frown}$	Econ 121/122 - Micro or Macro Economics	3	Ŏ
Math 14 Calculus I for Engineers	4	Ŏ	Humanities Elective	3	igtriangledown
Engl 20 Exposition and Argumentation	3	Ŏ	•		_
Hist 112, 175, 176 or Pol Sci 90	3	Ŏ			
	17			17	
		hom	ore Year		
First Semester			Second Semester		
Math 22 - Calculus w/Anlytic Geometry III	4	\bigcirc	Math 204 - Differential Equations	3	\circ
Physics 24 - Engineering Physics II	4	\bigcirc	Stat 215/217 - Eng Statistics	3	0
IDE 50 - Enginieering Mechanics - Statics	3	\bigcirc	IDE 150 - Engineering Mechanics - Dynamics	2	0
Eng Mg 213 Complex System Mgt	3	\bigcirc	Eng Mg 147 - Eng Mgt Acct&Fin	3	0
Eng Mg 137 - Eng Economics	2	\bigcirc	Psych 50 - General Psychology	3	0
		0	Eng Mg 134 - Management Eng & Technology	3	0
	16			17	
	Ju	ınio	r Year		
First Semester			Second Semester		_
Eng Mg 253 - Operations & Prod Mngt	3	\bigcirc	Eng Mg 266 - Quality Philosophies & Methods	3	\bigcirc
Eng Mg 251 - Marketing Management	3	\bigcirc	Eng Mg 254 - Project Management	3	\bigcirc
IDE 110 - Mechanics of Materials	3	\bigcirc	El Eng 281 - Electrical Circuits	3	\bigcirc
IDE 120 - Mechanics of Materials Laby	1.	\bigcirc	English 160 - Technical Writing	3	Q
Comp Sci 74 - C++ Programming	2	\bigcirc	ME 227 - Thermal Analysis	3	\circ
Com Sci 78 - C++ Lab	1	\bigcirc			
Sp&Med 085 or 181	3	\bigcirc			
	16			15	
	Se	enio	r Year		
First Semester			Second Semester		
Eng Mg 356 - Ind Sys Simulation	3	\bigcirc	Eng Mg 299 - Senior Design	3	\bigcirc
Eng Mg 382 Intro to Ops Research	3	Q	Eng Mg 257 - Mat Hndl & Plant Layout	3	Q
Eng Mg 311 - Human Factors	3	Q	Eng Mg Technical Elective	3	\bigcirc
Eng Mg 260 - Gen Mgt - Design & Integration	3	\bigcirc	Upper Level H/SS	3	Q
Eng Mg Technical Elective	3	0	Free Elecetive	3	0

Comments:

From: 573 341 4362 Page: 5/15 Date: 11/2/2012 4:18:07 PM

Effective Year: 2013 Effective Term: Summer Fall xx (Creating or modifying a degree program mus	Spring [] st be effective for a Fall t	DC #0420-2012-Emgt-000-00
Degree C	hange Fori	m (DC)
This form is to be used for creating or	modifying degree progra	ams, emphasis areas, and minors.
Title of degree program, emphasis are General Emphasis Area	ea, or minor:	
Department: EMSE		
Briefly describe action requested (Att The General Emphasis area credit hour rec hours. This change is being made in orde current 26 credit hours of EMSE required of Courses (Engineering Discipline) will rema reduced to 3 credit hours from the current maintain 3 credit hours of Free Electives a	quirements will chang r to add a new 3 cred core courses. The 15 in the same. The EMS required 6 credit how	le from 21 credit hours to 18 credit lit hour course (EMSE 213) to the Emg for credit hours Engineering Area SE technical electives will be
Recommended by Department:	とし。 (Chair signature)	Date: 3/37/12
Recommended by:	(Chair signature)	Date: 8126(12
Approved by Curricula Committee:	(Chair signature)	Date:
Approved by Faculty Senate:	(Chair signature)	Date:
02/27/12		(Revised 9/12/2011)

From: 573 341 4362 Page: 6/15 Date: 11/2/2012 4:18:07 PM

Bachelor of Science Engineering Management

Student Checklist - FS 2013 - Catalog 128 Hours

General Engineering Emphasis

		shman Year		
First Semester		Second Semester	1	
FE 10 Study and Carcers in Engineering	1	IDE 20 Engineering Design with Computer Appli	3	$\overline{}$
Chem 1 General Chemistry	4	Math 15 Calculus II for Engineers	4	\succeq
Chem 2 General Chemistry Lab	il	Phys 23 Engineering Physics 1	4	\succeq
Chem 4 Intro to Lab Safety	1	Econ 121/122 - Micro or Macro Economics	3	\succeq
Math 14 Calculus I for Engineers	4	Humanities Elective	3	ŏ
Engl 20 Exposition and Argumentation	3		_	
Hist 112, 175, 176 or Pol Sci 90	3	Ŏ		
	17		17	
	Sopi	omore Year	•	
First Semester		Second Semester		
Math 22 - Calculus w/Anlytic Geometry III	4	Math 204 - Differential Equations	3	\bigcirc
Physics 24 - Engineering Physics II	4	Stat 215/217 - Eng Statistics	3	\bigcirc
IDE 50 - Enginieering Mechanics - Statics	3	DE 150 - Engineering Mechanics - Dynamics	2	\bigcirc
Eng Mg 213 Complex System Mgt	3	Eng Mg 147 - Eng Mgt Acct&Fin	3	\bigcirc
Eng Mg 137 - Eng Economics	2	Eng Mg 134 - Management Eng & Technology	3	\bigcirc
		Psych 50 - General Psychology	3	\bigcirc
	16		17	
	Ju	nior Year		
First Semester	ŀ	Second Semester		,
Eng Mg 253 - Operations & Prod Mngt	3	Eng Mg 266 - Quality Philosophies & Methods	3	\bigcirc
Eng Mg 251 - Marketing Management	3	Eng Mg 254 - Project Management	3	\bigcirc
IDE 110 - Mechanics of Materials	3	El Eng 281 - Electrical Circuits	3	\odot
IDE 120 - Mechanics of Materials Laby	1	English 160 - Technical Writing	3	Q
Comp Sci 74 - C++ Programming	2	ME 227 - Thermal Analysis	3	\circ
Com Sci 78 - C++ Lab	1	0		
Sp&Med 085 or 181	3	9		
	16		15	
	Se	nior Year		
First Semester		Second Semester	J	
Eng Mg Emphasis Requirement	3	Eng Mg 299 - Senior Design	3	\bigcirc
Eng Mg Emphasis Requirement	3	Eng Mg Emphasis Requirement	3	Q.
Eng Mg 260 - Gen Mgt - Design & Integration	3	Eng Mg Technical Elective	3	Q
Eng Mg Emphasis Requirement	3	Upper Level H/SS	3	Q
Eng Mg Emphasis Requirement	3	Free Elective	3	\circ
	15		15	

Comments:

From: 573 341 4362 Page: 7/15 Date: 11/2/2012 4:18:07 PM

2013 Effective Year: 2012 DC # Effective Term: Summer □ Fall ∞□ Spring □ (Creating or modifying a degree program must be effective for a Fall term)	429-2012-Emgt-0
Degree Change Form (DC	C)
This form is to be used for creating or modifying degree programs, empha	asis areas, and minors.
Title of degree program, emphasis area, or minor: Change of "Free Elective Footnote" paragraph, page 139 of current catalo	og
Change of Footnote 3 in current catalog - Free Electives	
Department: EMSE	
Briefly describe action requested (Attach documentation as appro	priate):
The second sentence of the Free Elective Footnote paragraph currently st required to take six hours of free electives in consultation with his/her ac	tates: "Each student is ademic advisor."
The second sentence should be changed to: "Each student is required to electives in consultation with his/her academic advisor." The remaining should remain the same.	o take three hours of free sentences in the paragraph
The first sentence of Footnote 3 currently states the following: "Each stusia six hours of free electives in consultation with his/her academic advisor."	ident is required to take
The first sentence should be changed to the following: "Each student is a hours of free electives in consultation with his/her academic advisor."	required to take three
The remaining sentences/statements of the Footnote 3 will remain the sa	ame.
Recommended by Department: (Chair signature)	Date: 3(3.8)13
Recommended by: A Committee (Chair signature)	Date: <u>&N6/1</u> _
Approved by Curricula Committee:(Chair signature)	Date:
Approved by Faculty Senate: (Chair signature)	Date:

03/28/12

(Revised 9/12/2011)

From: 573 341 4362

Page: 8/15

Date: 11/2/2012 4:18:08 PM

Bachelor of Science Engineering Management Student Checklist - FS 2013 - Catalog 128 Hours

	Fresh	man Year		
First Semester		Second Semester	· · ·	_
FE 10 Study and Carcers in Engineering	1 (IDE 20 Engineering Design with Computer Appli	3	$\overline{}$
Chem 1 General Chemistry	4 (Math 15 Calculus II for Engineers	4	\succeq
Chem 2 General Chemistry Lab	1 0	Phys 23 Engineering Physics 1	À	\succeq
Chem 4 Intro to Lab Safety	ے ا	Econ 121/122 - Micro or Macro Economics	, 	≍
Math 14 Calculus I for Engineers	4 6	Humanities Elective	٦,	\succeq
Engl 20 Exposition and Argumentation	3 2	5	"	_
Hist 112, 175, 176 or Pol Sci 90	3	\$		
	17		17	
	Sophor	nore Year		
First Semester		Second Semester		_
Math 22 - Calculus w/Anlytic Geometry III	4 ⊊	Math 204 - Differential Equations	3 (\bigcirc
Physics 24 - Engineering Physics II		Stat 215/217 - Eng Statistics	3 (Q
IDE 50 - Enginieering Mechanics - Statics		IDE 150 - Engineering Mechanics - Dynamics	2 (Q
Eng Mg 213 Complex System Mgt		Eng Mg 147 - Eng Mgt Acct&Fin	3 (Q
Eng Mg 137 - Eng Economics	2 ⊆	Eng Mg 134 - Management Eng & Technology	3 (Q
	10	Psych 50 - General Psychology	3 (\bigcirc
	16	~	17	
First Semester	Junio	or Year		
	ہے ا	Second Semester	1.	
Eng Mg 253 - Operations & Prod Mngt	3 5	Eng Mg 266 - Quality Philosophies & Methods	3 (اپ
Eng Mg 251 - Marketing Management		Eng Mg 254 - Project Management	3 (اپ
IDE 110 - Mechanics of Materials	3 5	El Eng 281 - Electrical Circuits	3 \	ارچ
IDE 120 - Mechanics of Materials Laby	- ' ⊆	English 160 - Technical Writing	3 (_)
Comp Sci 74 - C++ Programming	2 ⊆	ME 227 - Thermal Analysis	3 (_)
Com Sci 78 - C++ Lab	1 5		1	ı
Sp&Med 085 or 181	3 C)		
Milk , ,	16	r Year	15	_
Eirst Semester	Зеціо		η 	_
Eng Mg Emphasis Requirement	مار	Second Semester	_ _	_
ing Mg Emphasis Requirement	:19	Eng Mg 299 - Senior Design	3 ⊆	귀
ing Mg 260 - Gen Mgt - Design & Integration	19	Eng Mg Technical Elective	3 ⊊	
Eng Mg Emphasis Requirement	312	Eng Mg Technical Elective	3 5	⊋
ang Mg Emphasis Requirement	3 8	Upper Level H/SS	3 ⊊	- ∤
we we continues redimental	30	Free Elective	3	ᅦ
^ommante-	15		15	-

From: 573 341 4362 Page: 9/15 Date: 11/2/2012 4:18:08 PM

Effective Year: 2013 Effective Term: Summer Fall S (Creating or modifying a degree program must	ipring [] t be effective for a Fall (2012 - Mot - 000-00
·	hange Fori		
This form is to be used for creating or n	_	•	s, and minors.
Title of degree program, emphasis are History major: History Teacher Education (ia, or minori Program		
Briefly describe action requested (Atta We are adding a new course (tentatively had be able coform), that history majors would be able requirement, or as an upper-division histor in the research seminar will be required to as that currently required by the senior the structured, classroom environment (as opposed as a policy we believe would be beneficial to many his	list 396, Research See to take in place of t by elective in prepara product a research esis, but the research posed to the indepen	minar in History, he Hist 397 Senio ition for the senio paper the same le h seminar would o	see accompanying r Thesis r thesis. Students ingth and quality iffer a more
Recommended by Department: Recommended by: Discipline Specific Curricula Committee	(Chair signature) (Chair signature)	\	Date: 9-10-12 Date: 9-17-12
Approved by Curricula Committee:	(Cheir signature)		Date:
Approved by Faculty Senate:	(Chair signature)		Date:
•			

09/10/11

(Revised 9/12/2011)

From: 573 341 4362

Page: 10/15 Date: 11/2/2012 4:18:08 PM

Current History Major:

Hist 10	Intro to Hist.	1 credit hours
Hist 175, 176	American History surveys	6
Hist 299	Historiography	3
	American History electives	6
	European History electives	6
	Open History electives	6
Hist 397	Senior Thesis	3
Total		31 credit hours

Proposed History Major:

Hist 10	Intro to Hist.	1 credit hours
Hist 175, 176	American History surveys	6
Hist 299	Historiography	3
" '	American History electives	6
	European History electives	6
	Open History electives	6
Hist 396 or 397	Hist. Research Sem. or Senior Thesis	3
Total		31 credit hours

¹ History majors and those in the History Teacher Education Program are also required to complete Hist 111 and 112 (the Western Civilization sequence) as part of the general education requirements for the B.A. In addition, 9 hours of the 31 major hours must be taken at the 300 level (no change in requirements with this).

From: 573 341 4362 Page: 11/15 Date: 11/2/2012 4:18:09 PM

Effective Year: 2013 Term: Summer ☐ Fall ☐ Spring ⊠

Approved by Curricula Committee: _

Approved by Faculty Senate:

cc File #8280-2012-GE-416-20

Course Change Form (CC) This form is for creating or modifying permanent courses. Course Changes (Check all changes.) Prerequisites 🔲 New Course Course Deletion Credit Hours Co-listing 🔲 Course Title Catalog Description 🗌 Course Number **Course Information** (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.) 1. Department: Electrical and Computer Eng. Present: (PEng 416 Proposed: 2. Discipline and Course Number: Cp Eng 416 advanced Computer architecture I 3. Course Title: Proposed: Abbreviated Course Title: Advanced Comput Arch II (24 Spaces or Less. Only needed for New Courses or Title Changes.) 4. Catalog Description (300 Character Spaces or Less.) Present: (LEC 3.0) Continuation of Computer Engineering 415. Prerequisite: Cp Eng 415. Proposed: 5. If course requires field trip check box: 🗌 6. Credit Hours: Present: Lecture: Lab: Total: Total: Proposed: Lecture: Lab: 7. Prerequisites: Present: CP ENJ 415 Proposed: 8. Required for Majors: 🔲 Elective for Majors: Course has not been taught since spring 2008. The instructor who normally taught 9. Justification: this course has retired. The course is not expected to be offered in the future. Semesters previously offered as an experimental course (101, 201, 301, 401): 11. List all co-listed courses, initialed by Dept. Chair, if signature does not appear below. 1) 2) 5) 4) Recommended by Department (Chair signature) Recommended by Discipline Specific Curricula Committee (Chair signature)

(Revised 1/29/09)

Date:

Date: ____

(Chair signature)

(Chair signature)

Page: 12/15 Date: 11/2/2012 4:18:09 PM р. ј

From: 573 341 4362

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Date: 9/17/2012 11:23:53 AM

CC FILE # 8281 2012 . HIST. 396.10 Effective Year: 2013 Term: Summer 🗌 Fall 🗵 Spring 🔲 Course Change Form (CC) This form is for creating or modifying permanent courses. Course Changes (Check all changes.) Prorequisites 🗔 Credit Hours New Course 🗵 Course Deletion Co-listing 🛄 Course Number Catalog Description 🗖 Course Title 🔲 Course Information (1-9 Must Se Completed. Leave "Proposed" Items blank if no change is being made.) 1. Department: History and Political Science Proposed: History 395 2. Discipline and Course Number: Present: Present 3. Course Title: Proposed: History Research Saminar Approviated Course Title: Hist. Research Sem. (24 Spaces or Less. Only needed for New Courses or Title Changes.) 4. Catalog Description (300 Character Spaces or Less.) Present: Proposed: The course focuses on advanced research methods, and each student will produce a substantial research paper in preparation for or to replace the senior thesis. The historical topic of the seminar for each semester will be chosen by the faculty member responsible for teaching it. 5. If course requires field trip check box: 🔲 Total: Lab: Lecture: Present: 6. Credit Hours: Total: 3 Lecture: 3 Lab: O Proposed: 7. Preregulaités: Present: Proposed: Hist 299; junior or senior status Blective for Majors: 🗆 8. Required for Majors: 🖾 The initial experiences with the Hist 397 senior thesis were not entirely satisfactory. O. Justification: Many history majors need a more structured, classroom environment to produce the requisite level of historical scholarship our department deems necessary for our majors. The seminar will be an alternative to Hist 397, or students may take both. 10. Semesters previously offered as an experimental course (101, 201, 301, 401): new w/ major change 11. List all co-listed courses, initialed by Dept. Cheir, if signature does not appear below. 3) 2) 1) S) 4) Recommended by Department Recommended by Discipline Specific Curricula Committee (Chair signature) Date: _____ Approved by Curricula Committee: _ (Chair signature) Date: _____ Approved by Faculty Senate:_

(Revised 1/29/09)

This fax was received by GFI FAXmaker fax server. For more information, visit: http://www.gfi.com

(Chair signature)

From: 573 341 4362 Page: 13/15 Date: 11/2/2012 4:18:09 PM CC File # 8282 -2012 - EMGT -Effective Year: 2013 Effective Term: Summer [Fall 🔲 Spring 🖾 Course Change Form (CC) This form is for creating or modifying permanent courses. Course Changes (Check all changes.) New Course Course Deletion Credit Hours Prerequisites 🛛 Course Title Catalog Description Course Number 🗌 Co-listing 🔲 **Course Information** (1-9 Must Be Completed. Leave "Proposed" Items blank if no change is being made.) Department: Eng. Mgmt. & Sys. Eng. 2. Discipline and Course Number: Present: EMgt 482 Proposed: 3. Course Title: Present: Financial Engineering II Proposed: Abbreviated Course Title: (24 Spaces or Less. Only needed for New Courses or Title Changes.) 4. Catalog Description (40 Words or Less) Present: This course introduces advanced topics in financial engineering, which includes introduction to Wienver processes, martingales and Ito's lemma; basic numerical methods for options pricing, exotic options; interest rate models; stochastic volatility models and jump-diffusion models; and value-at-risk. Proposed: 5. If course requires field trip check box: 🔲 Total: 3 6. Credit Hours: Lab: O Present: Lecture: 3 Total: Proposed: Lecture: Lab: 7. Prerequisites: Present: Eng Mgt/Sys Eng 481 **Proposed:** Eng Mgt 481 8. Required for Majors: 🔲 Elective for Majors: 🔲 9. Justification: EMgt 352 is no longer offered. Semesters previously offered as an experimental course (101, 201, 301, 401): 11. List all co-listed courses, initialed by Dept. Chair, if signature does not appear below. 3) 1) Sus Eng 482 4) Recommended by Department

(Chair signature)

Approved by Faculty Senate: _______ Date: ______

Date:

(Chair signature)

Recommended by Discipline Specific Curricula Committee

Approved by Curricula Committee: ___

From: 573 341 4362 Page: 14/15 Date: 11/2/2012 4:18:10 PM cc File # 8284.2012. Sys E-Effective Year: 2013 Term: Summer 🗀 Fall 🗵 Spring 🛄 Course Change Form (CC) This form is for creating or modifying permanent courses. Course Changes (Check all changes.) New Course 🗌 Course Deletion 🗌 Credit Hours Prerequisites 🛛 Course Title 🗀 Catalog Description Course Number Co-listing 🔲 Course Information (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.) 1. Department: EMSE 2. Discipline and Course Number: Present: SysEng 378 Proposed: 3. Course Title: Present: Introduction to Neural Networks & Applications Proposed: Abbreviated Course Title: (24 Spaces or Less, Only needed for New Courses or Title Changes.) 4. Catalog Description (300 Character Spaces or Less.) Present: Introduction to artificial neural network architectures, adaline, madaline, back propagation, BAM, and Hopfield memory, counterpropagation networks, self organizing maps, adaptive resonance theory, are the topics covered. Students experiment with the use of artificial neural networks in engineering through semester projects. Proposed: 5. If course requires field trip check box: 🔲 Total: 3 Lab: *O* Lecture: 3 6. Credit Hours: Present: Total: Proposed: Lab: Lecture: 7. Prerequisites: Present: Math 204 or 229. Proposed: Math 204 or 229 and graduate standing. Elective for Majors: 8. Required for Majors: 🗵 Simplify prerequisites, present list is redundant. 9. Justification: 10. Semesters previously offered as an experimental course (101, 201, 301, 401): 11. List all co-listed courses, initialed by Dept. Chair, if signature does not appear below. 1) ECE368 2) 3) 6) 5) 4) Date: ၅/명) Recommended by Department (Chair signature) Date: 9/24/17 Recommended by Discipline Specific Curricula Committee (Chair signature) Date: _____

Date: _____

(Chair signature)

(Chair signature)

Approved by Curricula Committee: _____

Approved by Faculty Senate: _____

Page: 15/15 From: 573 341 4362 Date: 11/2/2012 4:18:10 PM CC File #8285-2012-EMS+-Effective Year: 2013 Fall 🔲 Spring 🖂 Effective Term: Summer 🔲 Course Change Form (CC) This form is for creating or modifying permanent courses. Course Changes (Check all changes.) Prerequisites 🗵 Credit Hours 🔲 Course Deletion 🔲 New Course 🗌 Course Number 🔲 Co-listing 🔲 Catalog Description 🔲 Course Title 🔲 Course Information (1-9 Must Be Completed. Leave "Proposed" items blank if no change is being made.) 1. Department: Eng. Mgmt. & Sys. Eng. 2. Discipline and Course Number: Present: EMgt 481 Proposed: 3. Course Title: Present: Financial Engineering Proposed: Abbreviated Course Title: (24 Spaces or Less. Only needed for New Courses or Title Changes.) 4. Catalog Description (40 Words or Less) An introduction to financial engineering, with an emphasis on financial derivatives, including Present: the future markets, the pricing of forwards and futures, forward rate agreements, interest and exchange rate futures, swaps, the options markets, option strategies, the binomial and Black-Scholes models for option valuation, the option Greeks, and volatility smiles. Proposed: 5. If course requires field trip check box: 🔲 Total: 3 Lecture: 3 6. Credit Hours: Lab: 7 Present: Total: Proposed: Lecture: Lab: 7. Prerequisites: Present: Eng Mgt 308, Eng Mgt 352; Eng Mgt 480 or Sys Eng 480 or equivalent. Proposed: Eng Mgt 137 or 308 8. Required for Majors: 🔲 Elective for Majors: 9. Justification: EMgt 352 is no longer offered. 10. Semesters previously offered as an experimental course (101, 201, 301, 401): 11. List all co-listed courses, initialed by Dept. Chair, if signature does not appear below. 2) 4) Recommended by Department Recommended by Discipline Specific Curricula Committee (Chair signature) Date: _ Approved by Curricula Committee: __ (Chair signature)

(Revised 1/31/08)

Date:

Approved by Faculty Senate: ____

(Chair signature)