

# Missouri University of Science and Technology

Formerly University of Missouri-Rolla

Minutes of the Campus Curricula Committee Meeting October 2, 2019 9:00am, Bertelsmeyer 110H (For Faculty Senate Meeting of October 17, 2019)

Attendees: Steve Raper, Petra Dewitt, Katie Shannon, Michael Davis, Kyle Perry, Kristy Giacomelli

and Brittany Parnell

Guest: Beth Kania-Gosche

The following curriculum forms were discussed and approved:

## **Course Change Forms:**

0	
File: 4279.21	CHEM ENG 3111: Numerical Computing in Chemical and Biochemical Engineering
File: 4652	CIV ENG 2451: Engineering Drawings and Tools
File: 4653	CIV ENG 5451: Information Technology Applications in the Construction Industry
File: 4654	CIV ENG 5452: Pre-Project Planning and Feasibility Studies
File: 4655	CIV ENG 5453: Logistics for Construction Industry
File: 4656	CIV ENG 5454: Construction Technology for High-Rise Buildings
File: 4657	CIV ENG 5455: Construction Industry Best Practices
File: 637.5	COMP SCI 4610: Computer Security
File: 2086.3	EDUC 1104: Teacher Field Experience I
File: 770.3	EDUC 1164: Teacher Field Experience II
File: 2087.3	EDUC 1174: School Organization & Adm For Teachers
File: 1789.3	EDUC 3325: Novell Netware 4.1 / 4.11
File: 2481.3	EDUC 3335: Curriculum And Instruction Of The Middle School
File: 2154.3	EDUC 3339: Current Issues In Educ: Performance Based Assessment, Beginning
File: 1839.5	EDUC 3340: Assessment of Student Learning
File: 2155.3	EDUC 3341: Current Issues In Educ: Performance Based Assessment, Advanced
File: 1791.3	EDUC 3345: Introducing Educators To Computers
File: 789.1	GEOLOGY 4521: Ore Microscopy
File: 491.1	GEOLOGY 5511: Applied Petroleum Geology
File: 1380.1	GEOLOGY 6351: Advanced Geochemistry
File: 4650	MS&E 5460: Molecular Engineering of Materials
File: 4658	MS&E 6460: Advanced Molecular Engineering of Materials
File: 4189.8	PET ENG 3320: Petrophysics
File: 1923.2	PHYSICS 6101: Classical Mechanics I
File: 2123.3	PHYSICS 6111: Electrodynamics I
File: 1222.1	PHYSICS 6201: Quantum Mechanics I

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# Missouri University of Science and Technology

Formerly University of Missouri-Rolla

**Degree Change Forms:** 

File: 166.13 GL&GPH-MS: Geology and Geophysics MS

File: 343 PROPOSED: Construction Engineering and Management Minor

**Certificate Forms:** 

File: 342 WORKPSY-CT: Applied Workplace Psych CT

**Experimental Course Forms:** 

File: 4660 BIO SCI 3001.003: Physiology Laboratory
File: 4661 EDUC 3001.001: Teacher Field Experience III

File: 4664 MUSIC 3001.002: Introduction to Music Composition and Arranging

File: 4662 PHYSICS 3001.001: Computational Physics Laboratory
File: 4651 STAT 5001.002: Statistical Data Analysis Using R

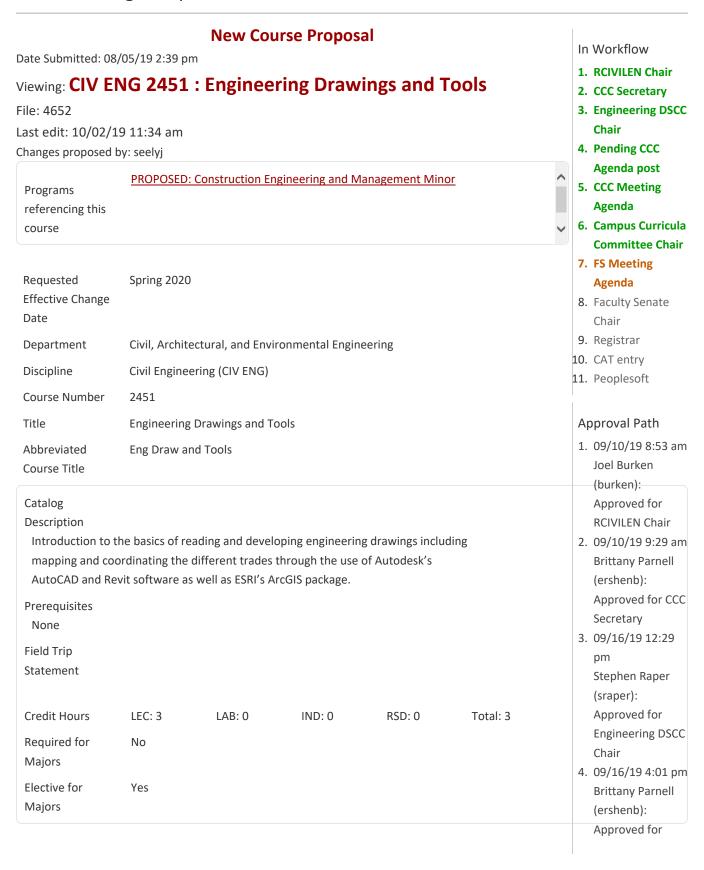
The meeting adjourned at 9:52am.

Stephen A. Raper, Chair

Missouri S&T Campus Curricula Committee

Date Submitted: 08/27/19 5:06 pm In Workflow **Viewing: CHEM ENG 3111: Numerical Computing in Chemical and** 1. RCHEMENG Chair **Biochemical Engineering** 2. CCC Secretary 3. Engineering DSCC File: 4279.21 Chair Last approved: 02/18/19 4:54 am 4. Pending CCC Last edit: 08/27/19 5:06 pm Agenda post Changes proposed by: jcwang 5. CCC Meeting Agenda In The Prerequisites: Other Courses 6. Campus Curricula CHEM ENG 3131: Separations in Chemical and Biochemical referencing this **Committee Chair** Engineering course CHEM ENG 3150: Chemical Engineering Reactor Design 7. FS Meeting Agenda 8. Faculty Senate Requested **Spring 2020 Fall 2019** Chair **Effective Change** 9. Registrar Date 10. CAT entry 11. Peoplesoft Department Chemical and Biochemical Engineering Discipline Chemical Engineering (CHEM ENG) Approval Path Course Number 3111 1. 08/27/19 6:47 pm Title Numerical Computing in Chemical and Biochemical Engineering Joseph Smith (smithjose): Abbreviated **Numerical Computing** Approved for Course Title **RCHEMENG Chair** Catalog 2. 08/28/19 11:28 Description am Students will add to their programming skills by exploring numerical computational **Brittany Parnell** techniques for solving and analyzing algebraic and calculus-based equations and (ershenb): systems of equations that describe chemical engineering processes. Approved for CCC Secretary Prerequisites 3. 09/10/19 10:41 Math 3304 and either both Comp Sci 1570 and Comp Sci 1580, or both Comp Sci 1971 and Comp Sci 1981, or both Comp Sci 1972 and Comp Sci 1982; preceded or Stephen Raper accompanied by Chem Eng 2100. 1982. (sraper): Field Trip Approved for Statement **Engineering DSCC** Chair **Credit Hours** LEC: 2 LAB: 1 IND: 0 RSD: 0 Total: 3 4. 09/16/19 4:01 pm **Brittany Parnell** Required for Yes (ershenb): Majors

Elective for No Majors	Approved for Pending CCC
Justification for change:  Students need to have certain training in process calculation from Chem Eng 2100 in order to be successful in Chem Eng 3111. Adding Chem Eng 2100 as a co-requisite is intended to ensure the students to have proper training when taking Chem Eng 3111.  Semesters previously offered as an experimental course  Co-Listed	Agenda post 5. 10/02/19 11:32 am Brittany Parnell (ershenb): Approved for CCC Meeting Agenda 6. 10/02/19 11:38 am Stephen Raper (sraper): Approved for Campus Curricula Committee Chair
Courses:	History
Course Reviewer Comments	1. Jan 24, 2017 by Daniel Forciniti
Key: 4279	(forcinit)  2. Mar 6, 2017 by kristyg (4279.14)  3. Feb 18, 2019 by jcwang (4279.17)



Justification for

new course:

This minor is proposed to address voids highlighted by the member companies of the Missouri Consortium of Construction Innovation (MO-CCI) in our construction engineering and management (CEM) curriculum. The MO-CCI members have an immediate desire to bridge the gap in the abilities of our fresh graduates and help them meet the current needs of the construction industry.

Semesters previously offered as an experimental course

0

Co-Listed Courses:

!

5. 10/02/19 11:34
am
Brittany Parnell
(ershenb):
Approved for CCC
Meeting Agenda

**Pending CCC** 

Agenda post

6. 10/02/19 11:38 am Stephen Raper (sraper): Approved for Campus Curricula Committee Chair

Course Reviewer ershenb (10/02/19 11:34 am): Added "to" in the catalog description for

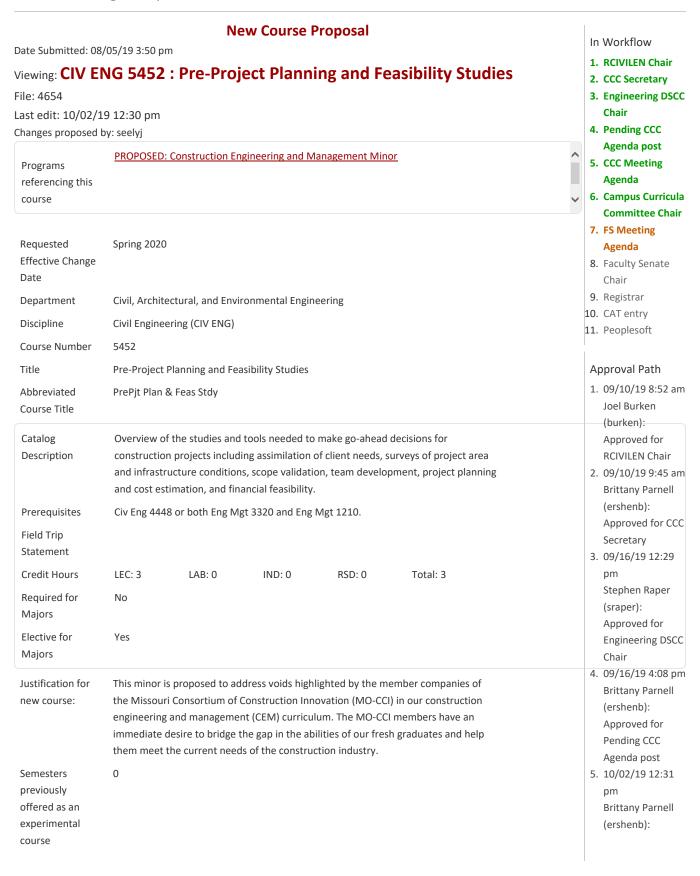
Comments grammatical error.

Key: 4652

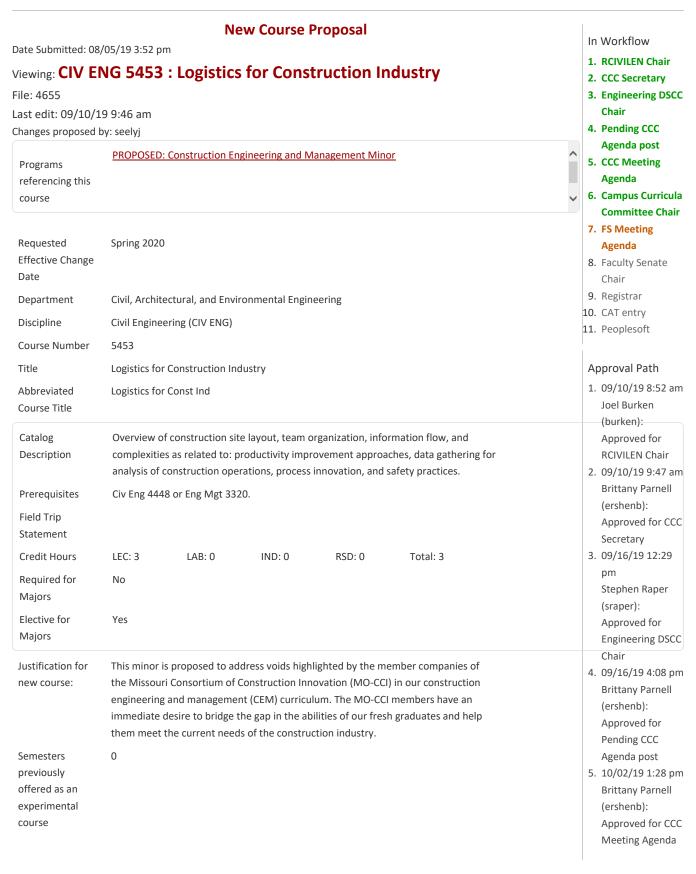


Elective for Yes Majors	Approved for Pending CCC
Justification for new course:  This minor is proposed to address voids highlighted by the member companies of the Missouri Consortium of Construction Innovation (MO-CCI) in our construction engineering and management (CEM) curriculum. The MO-CCI members have an immediate desire to bridge the gap in the abilities of our fresh graduates and help them meet the current needs of the construction industry.  Semesters previously offered as an experimental course 0  Co-Listed Courses:	Agenda post  5. 10/02/19 11:40 am Brittany Parnell (ershenb): Approved for CCC Meeting Agenda  6. 10/02/19 11:42 am Stephen Raper (sraper): Approved for Campus Curricula Committee Chair
Course Reviewer Comments	Kev: 4653

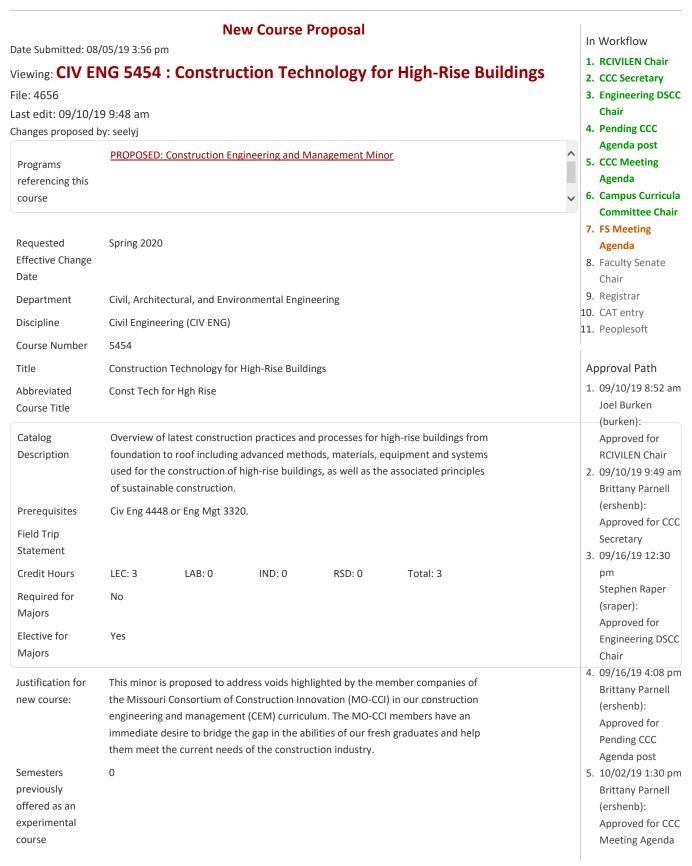
Key: 4653



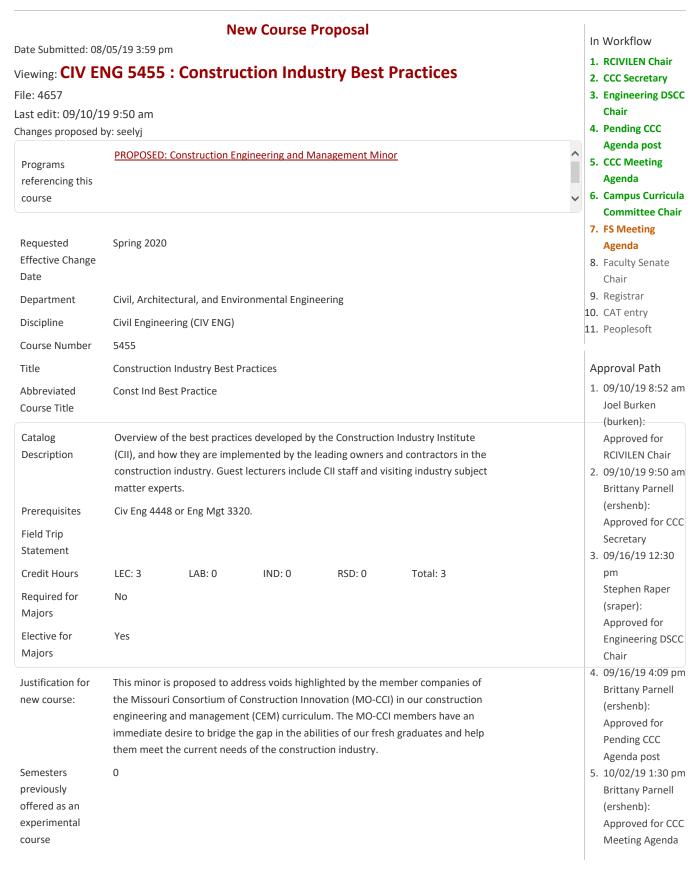
Co-Listed Courses:		Approved for CCC Meeting Agenda
Course Reviewer ershenb (10/02/19 12:30 pm): added "both" to the prerequisite for clarification.  Comments		6. 10/02/19 1:05 pm Stephen Raper (sraper):
	Key: 4654	Approved for Campus Curricula Committee Chair



Co-Listed	6. 10/02/19 1:49 pm
Courses:	Stephen Raper
	(sraper):
Course Reviewer	Approved for
Comments	Campus Curricula
Key: 461	5 Committee Chair



Co-Listed	6. 10/02/19 1:49 pm
Courses:	Stephen Raper
	(sraper):
Course Reviewer	Approved for
Comments	Campus Curricula
Key: 465	6 Committee Chair



Co-Listed	6. 10/02/19 1:49 pm
Courses:	Stephen Raper
	(sraper):
Course Reviewer	Approved for
Comments	Campus Curricula
Key: 461	Committee Chair

Date Submitted: 09/16/19 9:32 am In Workflow **Viewing: COMP SCI 4610: Computer Security** 1. RCOMPSCI Chair File: 637.5 2. CCC Secretary Last approved: 08/05/19 6:01 am 3. Engineering DSCC Last edit: 09/18/19 12:13 pm Chair Changes proposed by: zhupe 4. Pending CCC Agenda post In The Prerequisites: Other Courses 5. CCC Meeting COMP SCI 4091: Software Engineering Capstone II referencing this Agenda course 6. Campus Curricula **Committee Chair** 7. FS Meeting Requested Spring 2020 Agenda **Effective Change** 8. Faculty Senate Date Chair Department **Computer Science** 9. Registrar 10. CAT entry Discipline Computer Science (COMP SCI) 11. Peoplesoft Course Number 4610 Title **Computer Security** Approval Path Abbreviated Computer Security 1. 09/17/19 9:44 am Course Title Bruce McMillin (ff): Approved for Catalog RCOMPSCI Chair Description 2. 09/17/19 10:08 This course covers principles of threat-modeling, trust, and security policies. Topics include cryptography, reverse engineering, software security, malware analysis, **Brittany Parnell** authentication, access controls, operating systems hardening, virtualization, (ershenb): database security, and network security. This class is programming intensive and Approved for CCC project based, with case-analyses. Secretary Prerequisites 3. 09/18/19 10:56 A grade of "C" or better in both Comp Sci 3800. 2500 and Comp Sci 3610. **Brittany Parnell** Field Trip (ershenb): Statement Rollback to RCOMPSCI Chair Credit Hours LEC: 3 LAB: 0 IND: 0 RSD: 0 Total: 3 for Engineering **DSCC Chair** Required for Yes 4. 09/18/19 12:14 Majors pm Elective for No Bruce McMillin Majors

Justification for

#### change:

CS made an error in the phase-in of CS 4610 and students with catalog years 2018 and before are expecting the security course without the CS 3610 prerequisite. We plan to remove the 3610 prerequisite for two years until the 2019 catalog year students become ready to take it, and then we will restore the original prerequisites.

Along with this change, to increase access to CS's advanced courses to non-majors, CS 2500 has been removed as an explicit prerequisite, and is replaced by the material in CS 1575. Since CS 3800 has a prerequisite of CS 1575, explicit enumeration is not needed.

Semesters

previously

offered as an

experimental

course

Co-Listed

Courses:

Course Reviewer

Comments

ershenb (09/18/19 10:56 am): Rollback: Rollback per the request of Dr. McMillin to change prerequisite.

(ff): Approved for RCOMPSCI Chair

- 5. 09/18/19 1:08 pm **Brittany Parnell** (ershenb): Approved for CCC Secretary
- 6. 09/19/19 11:34 am Stephen Raper (sraper): Approved for **Engineering DSCC** Chair
- 7. 09/19/19 1:09 pm **Brittany Parnell** (ershenb): Approved for Pending CCC Agenda post
- 8. 10/02/19 1:59 pm **Brittany Parnell**

(ershenb):

Approved for CCC Meeting Agenda

9. 10/02/19 2:00 pm Stephen Raper (sraper):

Approved for

Campus Curricula Committee Chair

#### History

Key: 637

1. Aug 5, 2019 by tauritzd (637.1)

Date Submitted: 08/06/19 2:30 pm

**Viewing: EDUC 1104: Teacher Field Experience I** 

**Teacher Education and Certification** 

CHEM-BA: Chemistry BA

File: 2086.3

Last approved: 01/18/19 5:02 am Last edit: 09/13/19 8:29 am Changes proposed by: bakm75

**Catalog Pages** 

referencing this

course

**Programs** referencing this

PSYCH-BA: Psychology BA PSYCH-BS: Psychology BS course PROPOSED: Education

Spring 2020 01/07/2019 Requested

**Effective Change** 

Date

Department Teacher Education and Certification

Discipline Education (EDUC)

Course Number 1104

Title Teacher Field Experience I

Abbreviated Teach Teacher Field

Course Title Experience I

Catalog

Description

Observation and analysis of instructional techniques and duties in the classroom and school environment by discipline. Students Student-will spend 60 clock at least 30 contact hours per credit hours in classrooms, including experiences in diverse settings. classroom. Students will attend seminar sessions and complete assignments related to the field experiences. A background check is required for enrollment in this course. In addition, library and field experience reports will be made.In addition, Action Research and Seminars will be required.

**Prerequisites** 

Educ 1040. Field Trip

Statement

In Workflow

1. REDUCATION Chair

2. CCC Secretary

3. Social Sciences **DSCC Chair** 

4. Pending CCC Agenda post

5. CCC Meeting Agenda

6. Campus Curricula **Committee Chair** 

7. FS Meeting Agenda

8. Faculty Senate Chair

9. Registrar

10. CAT entry

11. Peoplesoft

Approval Path

1. 08/06/19 3:20 pm Beth Kania-

Gosche

(bkaniagosche): Approved for

REDUCATION

Chair

2. 08/08/19 1:25 pm **Brittany Parnell** 

(ershenb):

Approved for CCC

Secretary

3. 09/13/19 8:29 am

**Brittany Parnell** (ershenb):

Secretary for **Social Sciences** 

Rollback to CCC

**DSCC Chair** 

Credit Hours Required for Majors Elective for Majors	LEC: 0 Yes No	LAB: 2	IND: 0	RSD: 0	Total: 2		Brittany Parnell (ershenb): Approved for CCC Secretary  09/14/19 9:24 am
	ground check i The Roman nu	is required for ei meral I was add	ntering schools, sed to the title be	so this was addec cause another co		6.	Michael Davis (davismc): Approved for Social Sciences DSCC Chair . 09/16/19 4:09 pm Brittany Parnell
Semesters previously offered as an experimental course						7	(ershenb): Approved for Pending CCC Agenda post . 10/02/19 1:59 pm Brittany Parnell (ershenb):
Co-Listed Courses:							Approved for CCC Meeting Agenda
Course Reviewer Comments ershenb (09/13, review.	/19 8:29 am): I	Rollback: Rolled	back so new Soc	ial Sciences DSCC	can	Key: 2086	Stephen Raper (sraper): Approved for Campus Curricula Committee Chair
							istory . Jan 18, 2019 by ershenb (2086.1)

Date Submitted: 08/06/19 2:36 pm In Workflow Viewing: EDUC 1164: Teacher Field Experience II Aiding Elementary, Middle 1. REDUCATION **And Secondary Schools** Chair 2. CCC Secretary File: 770.3 3. Social Sciences Last approved: 01/18/19 5:02 am **DSCC Chair** Last edit: 09/13/19 8:29 am 4. Pending CCC Changes proposed by: bakm75 Agenda post **Teacher Education and Certification** 5. CCC Meeting **Catalog Pages** Agenda referencing this 6. Campus Curricula course **Committee Chair** CHEM-BA: Chemistry BA 7. FS Meeting **Programs** PSYCH-BA: Psychology BA Agenda referencing this PSYCH-BS: Psychology BS 8. Faculty Senate course Chair 9. Registrar 10. CAT entry Requested Spring 2020 01/07/2019 11. Peoplesoft **Effective Change** Date Approval Path Department Teacher Education and Certification 1. 08/06/19 3:21 pm Discipline Education (EDUC) Beth Kania-Course Number 1164 Gosche (bkaniagosche): Title Teacher Field Experience II Aiding Elementary, Middle And Secondary Approved for **Schools REDUCATION** Abbreviated Teach Field Exp II Aid Elem, Chair Course Title Mid & Sec Schl 2. 08/08/19 1:26 pm Brittany Parnell Catalog Students will spend 60 clock hours in classrooms, including experiences in diverse (ershenb): Description settings. Students will teach lessons, work with learners, and otherwise assist in Approved for CCC the classroom to which they are assigned. A background check is required for Secretary enrollment in this course. Instructionally-related clinical/administrative and 3. 09/13/19 8:29 am monitorial duties in the classroom during semesters and summer. Student works 30 **Brittany Parnell** hours for each credit, with instructor supervising. Also, Action Research and (ershenb): Seminars are required. Rollback to CCC Prerequisites Educ 1040, 1040 and Educ 1104, and Educ 3216. 1104. Secretary for Field Trip Social Sciences Statement DSCC Chair 4. 09/13/19 8:31 am IND: 0 **Credit Hours** LEC: 0 LAB: 2 RSD: 0 Total: 2 **Brittany Parnell** Required for No (ershenb): Majors Approved for CCC Elective for No Secretary 5. 09/14/19 9:25 am Majors Michael Davis (davismc):

Justification for	The title of the course is out of date; classroom "aides" are now called	Approved for
change:	paraprofessionals, and the students are not employed by the district to be using this	Social Sciences
	title.	DSCC Chair
	Action research is not conducted in the course, so that phrase needs to be removed.	6. 09/16/19 4:09 pm
	Students must have a background check to enter schools, so this was added to the	Brittany Parnell
	description. Part of the Department's mission is to prepare students for all types of	(ershenb):
	schools, so the diverse experience is important to mention.	Approved for
Semesters		Pending CCC
previously		Agenda post
offered as an		7. 10/02/19 2:00 pm
experimental		Brittany Parnell
course		(ershenb):
		Approved for CCC
Co-Listed		Meeting Agenda
Courses:		8. 10/02/19 2:00 pm
Course Reviewer	ershenb (09/13/19 8:29 am): Rollback: Rolled back so new Social Sciences DSCC can	Stephen Raper
Comments	review.	(sraper):
	Key: 770	Approved for
		Campus Curricula
		Committee Chair
		History
		1. Jan 18, 2019 by
		ershenb (770.1)

Date Submitted: 08/09/19 10:36 am In Workflow Viewing: EDUC 1174: School Organization and Administration & Adm-For 1. REDUCATION **Elementary & Secondary** Teachers Chair 2. CCC Secretary File: 2087.3 3. Social Sciences Last approved: 01/18/19 5:02 am **DSCC Chair** Last edit: 10/02/19 2:01 pm 4. Pending CCC Changes proposed by: bakm75 Agenda post **Teacher Education and Certification** 5. CCC Meeting **Catalog Pages** Agenda referencing this 6. Campus Curricula course **Committee Chair** CHEM-BA: Chemistry BA 7. FS Meeting **Programs** PSYCH-BA: Psychology BA Agenda referencing this PSYCH-BS: Psychology BS 8. Faculty Senate course PROPOSED: Education Chair 9. Registrar 10. CAT entry Requested Spring 2020 01/07/2019 11. Peoplesoft **Effective Change** Date Approval Path Department Teacher Education and Certification 1. 08/09/19 2:36 pm Discipline Education (EDUC) Beth Kania-Gosche Course Number 1174 (bkaniagosche): Title School Organization and Administration & Adm-For Elementary & Approved for Secondary-Teachers **REDUCATION** Abbreviated Sch Org Adm Elem Sec Tch Chair Course Title 2. 08/12/19 2:57 pm **Brittany Parnell** Catalog Required for certification of elementary and secondary teachers. Students will gain (ershenb): Description knowledge Course content relates to methods of organization and understanding of Approved for CCC management in the organizational structure elementary and the general operation Secretary and administration of public secondary schools. The student should more clearly 3. 09/13/19 8:29 am understand the role of the classroom teacher in classroom management, school **Brittany Parnell** law, equity in education, curriculum/instruction, and professional development. (ershenb): Rollback to CCC Prerequisites Educ 1040 and Educ 1104. Secretary for Field Trip Social Sciences Statement DSCC Chair Credit Hours LEC: 2 LAB: 0 IND: 0 RSD: 0 Total: 2 4. 09/13/19 8:31 am **Brittany Parnell** Required for No (ershenb): Majors Approved for CCC Elective for No Secretary Majors 5. 09/14/19 9:25 am Michael Davis Justification for We will soon be adding a middle school program, and that word was not reflected in (davismc): change: the title. It was shorter to just delete all of the descriptors to make the title broader.

Semesters previously offered as an experimental course Co-Listed Courses:	The description better reflects the content of the course when it is reviewed by the state.	Approved for Social Sciences DSCC Chair 6. 09/16/19 4:09 pm Brittany Parnell (ershenb): Approved for Pending CCC Agenda post 7. 10/02/19 2:01 pm
Course Reviewer Comments	ershenb (09/13/19 8:29 am): Rollback: Rolled back so new Social Sciences DSCC can review. ershenb (10/02/19 2:01 pm): Changed the "&" to "and" and "Adm" to "Administration" in the long title.  Key: 2087	Brittany Parnell (ershenb): Approved for CCC Meeting Agenda 8. 10/02/19 2:10 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair
		History  1. Jan 18, 2019 by ershenb (2087.1)

A deleted record can	not be edited	
	<b>Course Deactivation Proposal</b>	
Date Submitted: 08/	06/19 2:21 pm	In Workflow
Viewing: <b>EDUC</b>	3325 : Novell Netware 4.1 / 4.11	1. REDUCATION  Chair
File: 1789.3	·	2. CCC Secretary
Last approved: 01/	/18/19 5:02 am	3. Social Sciences
Last edit: 09/13/19		DSCC Chair
Changes proposed b		4. Pending CCC
Requested	Spring 2020 <del>01/07/2019</del>	Agenda post
Effective Change		5. CCC Meeting Agenda
Date		6. Campus Curricula
Department	Teacher Education and Certification	Committee Chair
Discipline	Education (EDUC)	7. FS Meeting
·	, ,	Agenda
Course Number	3325	8. Faculty Senate
Title	Novell Netware 4.1 / 4.11	Chair
Abbreviated	Novell Netware 4.1/4.11	<ol> <li>Registrar</li> <li>CAT entry</li> </ol>
Course Title		11. Peoplesoft
Catalog	A practial, hands-on course for Novell network administration including NDS	
Description	planning, mapping and documentation; system power up/down; security, resource	Approval Path
·	service management; user management from creation to user and workstation	1. 08/06/19 3:21 pm
	maintenance; application software installation and management, and Novell Server	Beth Kania-
	installation.	Gosche
Prerequisites		(bkaniagosche):
Field Trip		Approved for
Statement		REDUCATION Chair
Credit Hours	LEC: 3 LAB: 0 IND: 0 RSD: 0 Total: 3	2. 08/08/19 1:27 pm
Required for	No	Brittany Parnell
Majors		(ershenb):
Elective for	No	Approved for CCC
Majors	NO .	Secretary
		3. 09/13/19 8:29 am Brittany Parnell
Justification for	This course is out of date and the software referenced in the title has been	(ershenb):
change:	discontinued.	Rollback to CCC
Semesters		Secretary for
previously		Social Sciences
offered as an experimental		DSCC Chair
course		4. 09/13/19 8:31 am Brittany Parnell
Co-Listed		(ershenb):
Co-Listed Courses:		Approved for CCC
		Secretary
Course Reviewer	ershenb (09/13/19 8:29 am): Rollback: Rolled back so new Social Sciences DSCC can	5. 09/14/19 9:26 am
Comments	review.	Michael Davis

Key: 1789

(davismc): Approved for

Social Sciences

DSCC Chair

6. 09/16/19 4:09 pm

Brittany Parnell (ershenb):

Approved for

Pending CCC

Agenda post

7. 10/02/19 2:03 pm

Brittany Parnell

(ershenb):

Approved for CCC

Meeting Agenda

8. 10/02/19 2:10 pm

Stephen Raper

(sraper):

Approved for

Campus Curricula

Committee Chair

### History

1. Jan 18, 2019 by ershenb (1789.1)

Date Submitted: 08,	/09/19 10:14 am	La Maralella
Viewing: <b>EDUC</b>	3335 : Curriculum And Instruction Of The Middle School	In Workflow
File: 2481.3		1. REDUCATION Chair
ast approved: 01	/18/19 5:02 am	2. CCC Secretary
ast edit: 09/13/1	9 8:29 am	3. Social Sciences
Changes proposed b	y: bakm75	DSCC Chair
Requested	Spring 2020 <del>01/07/2019</del>	4. Pending CCC
Effective Change	Spinig 2020 01/07/2013	Agenda post
Date		5. CCC Meeting
Donartmont	Teacher Education and Certification	Agenda
Department		6. Campus Curricul
Discipline	Education (EDUC)	Committee Chai
Course Number	3335	7. FS Meeting
Title	Curriculum And Instruction Of The Middle School	Agenda
		8. Faculty Senate
Abbreviated	Curr Instr Curr/Instr Middle School	Chair  9. Registrar
Course Title	SCHOOL	10. CAT entry
Catalog	This course <b>provides an overview</b> advances teachers' understanding of the	11. Peoplesoft
Description	structure and philosophy of middle schools, including interdisciplinary and	
	collaborative teams. school curriculum and instruction. The unique needs of the	Approval Path
	early adolescent will be aligned with evidence-based practices. Students will	
	complete a field experience in a middle school. A cleared background check is	1. 08/09/19 2:36 p Beth Kania-
	required for this course. It utilizes knowledge about the nature and needs of young	Gosche
	adolescents in developing interdisciplinary learning units, and fosters applications	(bkaniagosche):
	appropriate to experienced teachers' professional assignments.	Approved for
Prerequisites	Educ 1040. Graduate standing.	REDUCATION
Field Trip		Chair
Statement		2. 08/12/19 2:58 p
Credit Hours	LEC: 3 LAB: 0 IND: 0 RSD: 0 Total: 3	Brittany Parnell
		(ershenb):
Required for	No	Approved for CC
Majors		Secretary
Elective for	No	3. 09/13/19 8:29 a
Majors		Brittany Parnell (ershenb):
Justification for	We are developing an undergraduate program for middle school; all courses needed	Rollback to CCC
change:	are already in existence. Thus, we eliminated the prerequisites and updated the	Secretary for
	course description for the state review of the program.	Social Sciences
Comostors		DSCC Chair
Semesters previously		4. 09/13/19 8:31 a
offered as an		Brittany Parnell
experimental		(ershenb):
course		Approved for CC
Co-Listed		Secretary
Co-Listea Courses:		5. 09/14/19 9:26 a
Courses.		Michael Davis
		(davismc):

Course Reviewer Comments	ershenb (09/13/19 8:29 am): Rollback: Rolled back so new Social Sciences DSCC can review.	Approved for Social Sciences
	Key: 2481	DSCC Chair  6. 09/16/19 4:09 pm Brittany Parnell (ershenb): Approved for Pending CCC Agenda post  7. 10/02/19 2:07 pm Brittany Parnell (ershenb): Approved for CCC Meeting Agenda  8. 10/02/19 2:10 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair
		History  1. Jan 18, 2019 by ershenb (2481.1)

A deleted record cannot be edited

### **Course Deactivation Proposal**

Date Submitted: 08/06/19 2:43 pm

Viewing: EDUC 3339: Current Issues In Educ: Performance Based

### Assessment, Beginning

File: 2154.3

Last approved: 01/18/19 5:02 am Last edit: 09/13/19 8:29 am Changes proposed by: bakm75

Requested Spring 2020 01/07/2019

**Effective Change** 

Date

Department Teacher Education and Certification

Discipline Education (EDUC)

Course Number 3339

Title Current Issues In Educ: Performance Based Assessment, Beginning

Abbreviated Perform Based Assess Beg

Course Title

Catalog This course is intended to provide an understanding of the principles of sound

Description classroom assessment, the five different types of learning outcomes that need to be

assessed and the choice of an assessment that best evaluates the achievement

targets.

Prerequisites Practicing educator.

Field Trip Statement

Credit Hours LEC: 1 LAB: 2 IND: 0 RSD: 0 Total: 3

Required for No

Majors

Elective for No

Majors

Justification for Only one of the three assessment courses listed in the catalog is being used by the

change: Department. Having three, listed "beginning, intermediate, and advanced" is

confusing when only the intermediate course is offered. A course change will be submitted to remove the intermediate from the title of the remaining course.

Semesters

previously offered as an

experimental course

Co-Listed

Courses:

In Workflow

1. REDUCATION Chair

2. CCC Secretary

3. Social Sciences
DSCC Chair

4. Pending CCC Agenda post

5. CCC Meeting
Agenda

6. Campus Curricula Committee Chair

7. FS Meeting Agenda

8. Faculty Senate Chair

9. Registrar

10. CAT entry

11. Peoplesoft

Approval Path

1. 08/06/19 3:21 pm Beth Kania-

Gosche

(bkaniagosche): Approved for REDUCATION

Chair

2. 08/08/19 3:00 pm Brittany Parnell

(ershenb):

Approved for CCC Secretary

3. 09/13/19 8:29 am

Brittany Parnell (ershenb): Rollback to CCC

Secretary for Social Sciences DSCC Chair

4. 09/13/19 8:31 am Brittany Parnell (ershenb):

(ershenb):
Approved for CCC
Secretary

5. 09/14/19 9:27 am Michael Davis

ershenb (09/13/19 8:29 am): Rollback: Rolled back so new Social Sciences DSCC can (davismc): Course Reviewer Comments Approved for review. Social Sciences DSCC Chair 6. 09/16/19 4:09 pm Brittany Parnell (ershenb): Approved for Pending CCC Agenda post 7. 10/02/19 2:08 pm Brittany Parnell (ershenb): Approved for CCC Meeting Agenda 8. 10/02/19 2:10 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair History 1. Jan 18, 2019 by ershenb (2154.1)

Date Submitted: 08/09/19 10:31 am

Viewing: EDUC 3340 : Assessment of Student Learning Current Issues In

### **Education: Performance Based Assessment, Intermediate**

File: 1839.5

Last approved: 02/04/19 5:03 am Last edit: 09/13/19 8:29 am Changes proposed by: bakm75

Requested Spring 2020 Fall 2019

**Effective Change** 

Date

Teacher Education and Certification Department

Discipline Education (EDUC)

Course Number 3340

Title Assessment of Student Learning Current Issues In

Abbreviated Assessment of Learning Course Title Perform Base Assess Inte

Catalog Students will learn to evaluate assessments for validity and reliability. Students Description will develop formative and summative assessments aligned with learning

outcomes. Writing quality rubrics and universal design will be introduced. Students will analyze data to make instructional decisions and learn to evaluate vendor assessments. This course will provide participants with an understanding of performance-based assessments, how to construct performance tasks and how to

construct scoring guides.

Prerequisites Educ 1040.

Field Trip Statement

Credit Hours LEC: 3 LAB: 0 IND: 0 RSD: 0 Total: 3

Required for Yes

Majors

Elective for No

Majors

Justification for change:

The beginning and advanced assessment courses were deleted. We intend to add this course to secondary degrees in the future, and we will be adding it to the soon-

Semesters previously offered as an experimental

course

to-be-proposed middle school program. As such, the description content needed to be revised and broadened. This course will not be taught until Fall 2020.

In Workflow

1. REDUCATION Chair

2. CCC Secretary

3. Social Sciences **DSCC Chair** 

4. Pending CCC Agenda post

5. CCC Meeting Agenda

6. Campus Curricula **Committee Chair** 

7. FS Meeting Agenda

8. Faculty Senate Chair

9. Registrar

10. CAT entry

11. Peoplesoft

Approval Path

1. 08/09/19 2:36 pm Beth Kania-Gosche (bkaniagosche):

Approved for **REDUCATION** 

Chair

2. 08/12/19 3:00 pm Brittany Parnell (ershenb):

> Approved for CCC Secretary

3. 09/13/19 8:29 am **Brittany Parnell** (ershenb): Rollback to CCC

> Secretary for Social Sciences DSCC Chair

4. 09/13/19 8:31 am **Brittany Parnell** (ershenb): Approved for CCC

5. 09/14/19 9:28 am Michael Davis (davismc):

Secretary

https://nextcatalog.mst.edu/courseleaf/courseleaf.cgi?page=/courseadmin/1839/index.html... 10/3/2019

Co-Listed Courses:  Course Reviewer Comments	ershenb (09/13/19 8:29 am): Rollback: Rolled back so new Social Sciences DSCC can review.	Approved for Social Sciences DSCC Chair 6. 09/16/19 4:09 pm Brittany Parnell
	Key: 1839	(ershenb): Approved for Pending CCC Agenda post 7. 10/02/19 2:09 pm Brittany Parnell (ershenb): Approved for CCC Meeting Agenda 8. 10/02/19 2:10 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair
		History  1. Feb 4, 2019 by carterke (1839.1)

A deleted record cannot be edited

## **Course Deactivation Proposal**

Date Submitted: 08/06/19 2:40 pm

**Viewing: EDUC 3341: Current Issues In Educ: Performance Based** 

## **Assessment, Advanced**

File: 2155.3

Last approved: 01/18/19 5:02 am Last edit: 09/13/19 8:30 am Changes proposed by: bakm75

Requested Spring 2020 01/07/2019

Effective Change

Date

Department Teacher Education and Certification

Discipline Education (EDUC)

Course Number 3341

Title Current Issues In Educ: Performance Based Assessment, Advanced

Abbreviated Perform Based Assess Adv

Course Title

#### ------

Catalog Description

This course is intended to provide an understanding of balanced classroom assessment. Students will learn to create multiple types of assessment measures for the purpose of evaluating a wide variety of achievement targets.

Prerequisites

Practicing educator.

Field Trip Statement

Credit Hours LEC: 1 LAB: 2 IND: 0 RSD: 0 Total: 3

Required for No

Majors

Elective for No

Majors

Justification for

change:

In Workflow

1. REDUCATION Chair

2. CCC Secretary

3. Social Sciences

**DSCC Chair** 

4. Pending CCC Agenda post

5. CCC Meeting Agenda

6. Campus Curricula Committee Chair

7. FS Meeting Agenda

8. Faculty Senate

Chair

9. Registrar

10. CAT entry

11. Peoplesoft

Approval Path

08/06/19 3:22 pm
 Beth Kania Gosche

(bkaniagosche): Approved for

**REDUCATION** 

Chair

2. 08/08/19 3:00 pm Brittany Parnell

(ershenb):

Approved for CCC Secretary

3. 09/13/19 8:30 am Brittany Parnell (ershenb):

> Rollback to CCC Secretary for

Social Sciences
DSCC Chair

Only one of the three listed assessment courses is actually used by the department. Having the others listed in the catalog is confusing, and they have not been taught in years.

The title of the remaining course, EDUC 3340, will be changed so the word "intermediate" is removed.

Semesters previously offered as an experimental

course

Co-Listed Courses:

Course Reviewer

Comments

ershenb (09/13/19 8:30 am): Rollback: Rolled back so new Social Sciences DSCC can review.

4. 09/13/19 8:31 am **Brittany Parnell** (ershenb): Approved for CCC

Secretary

- 5. 09/14/19 9:28 am Michael Davis (davismc): Approved for Social Sciences **DSCC Chair**
- 6. 09/16/19 4:09 pm **Brittany Parnell** (ershenb):

Approved for Pending CCC Agenda post

7. 10/02/19 2:09 pm **Brittany Parnell** 

Key: 2155 (ershenb):

Approved for CCC Meeting Agenda

8. 10/02/19 2:10 pm Stephen Raper (sraper): Approved for Campus Curricula

Committee Chair

### History

1. Jan 18, 2019 by ershenb (2155.1)

A deleted record cannot be edited

## **Course Deactivation Proposal**

Date Submitted: 08/06/19 2:37 pm

**Viewing: EDUC 3345: Introducing Educators To Computers** 

File: 1791.3

Last approved: 01/18/19 5:02 am Last edit: 09/13/19 8:30 am Changes proposed by: bakm75

Requested Spring 2020 01/07/2019

**Effective Change** 

Date

Teacher Education and Certification Department

Discipline Education (EDUC)

Course Number 3345

Title Introducing Educators To Computers

Abbreviated Intro Educators/Computer

Course Title

In Workflow

1. REDUCATION Chair

2. CCC Secretary

3. Social Sciences

**DSCC Chair** 

4. Pending CCC Agenda post

5. CCC Meeting **Agenda** 

6. Campus Curricula **Committee Chair** 

7. FS Meeting Agenda

8. Faculty Senate

Chair

9. Registrar

10. CAT entry

11. Peoplesoft

### Catalog

Description

A basic introduction to computers for K-12 educators. Includes identification and use of hardware components, as well as the fundamentals of using the operating system and basic computer software. Actual software taught will reflect current usage.

Prerequisites

Post Bac/practicing teacher.

Field Trip Statement

**Credit Hours** LEC: 1 LAB: 0

IND: 0 RSD: 0 Total: 1

Required for No

Majors

Elective for No

Majors

Justification for

change:

Approval Path

1. 08/06/19 3:32 pm Beth Kania-Gosche

> (bkaniagosche): Approved for

**REDUCATION** 

Chair

2. 08/08/19 3:02 pm **Brittany Parnell** 

> (ershenb): Approved for CCC

Secretary

3. 09/13/19 8:30 am **Brittany Parnell** (ershenb):

Rollback to CCC Secretary for Social Sciences **DSCC Chair** 

This course has not been taught for many years, and the language is out of date. Technology integration is now embedded throughout the Teacher Education curriculum.

Semesters previously

offered as an experimental

course

Co-Listed

Courses:

Course Reviewer

Comments

ershenb (09/13/19 8:30 am): Rollback: Rolled back so new Social Sciences DSCC can review.

- 4. 09/13/19 8:31 am **Brittany Parnell** (ershenb):
  - Approved for CCC Secretary
- 5. 09/14/19 9:28 am Michael Davis (davismc): Approved for **Social Sciences DSCC Chair**
- 6. 09/16/19 4:09 pm **Brittany Parnell** (ershenb): Approved for Pending CCC Agenda post

- 7. 10/02/19 2:09 pm Brittany Parnell (ershenb): Approved for CCC Meeting Agenda
- 8. 10/02/19 2:10 pm Stephen Raper (sraper): Approved for Campus Curricula

Committee Chair

### History

1. Jan 18, 2019 by ershenb (1791.1)

Date Submitted: 08/20/19 12:03 pm In Workflow Viewing: GEOLOGY 4521: Ore Microscopy 1. RGEOSENG Chair File: 789.1 2. CCC Secretary Last edit: 10/02/19 2:11 pm 3. Sciences DSCC Changes proposed by: locmelism Chair 4. Pending CCC In The Prerequisites: Other Courses Agenda post **GEOLOGY 6521: Advanced Ore Microscopy** referencing this 5. CCC Meeting **GEOLOGY 6531: Applied Ore Microscopy** course Agenda 6. Campus Curricula **Committee Chair** Requested Spring 2020 08/01/2014 7. FS Meeting **Effective Change** Agenda Date 8. Faculty Senate Department Geosciences and Geological and Petroleum Chair Engineering 9. Registrar 10. CAT entry Discipline Geology (GEOLOGY) 11. Peoplesoft Course Number 4521 Title Ore Microscopy Approval Path Abbreviated Ore Microscopy 1. 08/20/19 1:05 pm Course Title David Borrok (borrokd): Catalog Approved for Description **RGEOSENG Chair** A study of polished sections of minerals and ores under reflected light. Includes the 2. 08/20/19 2:58 pm preparation of polished sections, the identification of ore minerals, and the study of **Brittany Parnell** the textures, associations, and alterations of ore minerals. (ershenb): Prerequisites Approved for CCC Geology 2610 and Geology 3511. 2610. Secretary 3. 08/27/19 11:05 Field Trip am Statement Katie Shannon (shannonk): **Credit Hours** LEC: 1 LAB: 2 IND: 0 RSD: 0 Total: 3 Approved for Required for No Sciences DSCC Majors Chair 4. 09/16/19 4:09 pm Elective for Yes No **Brittany Parnell** Majors (ershenb): Approved for

Justification for

change:

It is requested that Geology 3511 (Introduction to Mineral deposits) is added as prerequisite. Geology 3511 covers the theory of ore formation, while Geology 4521 uses microscopy to study them.

Semesters previously offered as an experimental

Co-Listed Courses:

Comments

Course Reviewer

course

uses microscopy to study them.

Semesters

ershenb (10/02/19 2:11 pm): checked "Yes" elective for majors

Pending CCC Agenda post

- 5. 10/02/19 2:11 pm Brittany Parnell (ershenb): Approved for CCC Meeting Agenda
- 6. 10/02/19 2:22 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair

Key: 789

Date Submitted: 08/21/19 10:04 am

**Viewing: GEOLOGY 5511: Applied Petroleum Geology** 

File: 491.1

Last edit: 10/02/19 2:33 pm Changes proposed by: locmelism

Requested Spring 2020 08/01/2014

**Effective Change** 

Date

Department Geosciences and Geological and Petroleum

Engineering

Discipline Geology (GEOLOGY)

Course Number 5511

Title Applied Petroleum Geology

Abbreviated Applied Petroleum Geol

Course Title

Catalog

Description

The principles of petroleum geology are applied in solving hydrocarbon exploration and developmental problems. Geological and economical techniques for evaluating hydrocarbonbearing reservoirs are presented, with methods for decisionmaking under conditions of extreme uncertainty.

Prerequisites

Consent of instructor. Geology 5411.

Field Trip Statement

Credit Hours LEC: 1 LAB: 2 IND: 0 RSD: 0 Total: 3

Required for No

Majors

Elective for Yes No

Majors

Justification for

change:

It is requested that the prerequisite is changed to "Consent of instructor". The reason is that the current prerequisite "Advanced Geochemistry" teaches magmatic

In Workflow

1. RGEOSENG Chair

2. CCC Secretary

3. Sciences DSCC

Chair

4. Pending CCC

Agenda post

5. CCC Meeting Agenda

6. Campus Curricula Committee Chair

7. FS Meeting Agenda

8. Faculty Senate

Chair

9. Registrar10. CAT entry

Peoplesoft

Approval Path

08/21/19 4:28 pm
 David Borrok

(borrokd):

Approved for RGEOSENG Chair

2. 08/22/19 3:45 pm

Brittany Parnell (ershenb):

Approved for CCC

Secretary

3. 09/05/19 10:51

am

Katie Shannon

(shannonk): Approved for

Sciences DSCC

Chair

4. 09/16/19 4:09 pm
Brittany Parnell
(ershenb):
Approved for

and metamorphic systems and therefore has nothing to do with petroleum geology	Pending CCC
(which is sedimentary).	Agenda post
Semesters	5. 10/02/19 2:32 pm
previously	Brittany Parnell
offered as an	(ershenb):
experimental	Approved for CCC
course	Meeting Agenda
	6. 10/02/19 2:33 pm
	Stephen Raper
Co-Listed	(sraper):
Courses:	Approved for
Course Deviences	Campus Curricula
Course Reviewer	Committee Chair
Comments	
ershenb (10/02/19 2:33 pm): checked "yes" elective for majors	
	Kev: 491

Key: 491

Date Submitted: 08/		In Workflow
	OGY 6351 <del>5411</del> : Advanced Geochemistry	1. RGEOSENG Chair
ile: 1380.1		2. CCC Secretary
ast edit: 08/21/19		3. Sciences DSCC
Changes proposed b	y: locmelism	Chair
Requested	08/01/2014	4. Pending CCC
Effective Change		Agenda post
Date		5. CCC Meeting
Department	Geosciences and Geological and Petroleum	Agenda
	Engineering	6. Campus Curricula Committee Chair
Discipline	Geology (GEOLOGY)	7. FS Meeting
Course Number	6351 5 <del>411</del>	Agenda
		8. Faculty Senate
Title	Advanced Geochemistry	Chair
Abbreviated	Adv Geochemistry	9. Registrar
Course Title		10. CAT entry
Catalog	A study of the absolute and relative abundance of elements and isotopes in the	11. Peoplesoft
Description	Earth, principles of element transport, formation of the Earth's crust, mineral	
Description	deposits, and soils. Field trip fee required.	Approval Path
Droroguisitos		1. 08/21/19 4:30 pn
Prerequisites	Geology 3410.	David Borrok
Field Trip		(borrokd):
Statement		Approved for
Credit Hours	LEC: 3 LAB: 0 IND: 0 RSD: 0 Total: 3	RGEOSENG Chair
Required for	No	2. 08/22/19 3:47 pn Brittany Parnell
Majors		(ershenb):
Elective for	No	Approved for CCC
Majors		Secretary
		3. 09/05/19 10:52
Justification for	It is requested that this class is changed to a 6000 level course. The 6000 level better	am
change:	reflects the advanced content of the class. It will also allow GGPE to offer a much	Katie Shannon
	needed additional class that will allow graduate students to meet the graduation criteria of completing two 6000 level classes.	(shannonk):
	criteria di completing two dodo level classes.	Approved for Sciences DSCC
Semesters		Chair
previously offered as an		4. 09/16/19 4:09 pn
experimental		Brittany Parnell
course		(ershenb):
		Approved for
Co-Listed Courses:		Pending CCC
Courses.		Agenda post
Course Reviewer		5. 10/02/19 2:49 pn
Comments		Brittany Parnell (ershenb):
	Key: 1380	Approved for CCC
		Meeting Agenda

6. 10/02/19 2:56 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair

	New Course Proposal	In Workflow
Date Submitted: 08,	/06/19 4:16 pm	1. RMATSENG Chair
Viewing: MS&E	5460: Molecular Engineering of Materials	2. CCC Secretary
File: 4650		3. Engineering DSC
Last edit: 08/12/1	9 3:14 pm	Chair
Changes proposed b	py: doganf	4. Pending CCC
Requested	Spring 2020	Agenda post 5. CCC Meeting
Effective Change		Agenda
Date		6. Campus Curricula
Department	Materials Science & Engineering	Committee Chair
Discipline	Materials Science & Eng (MS&E)	7. FS Meeting
Course Number	5460	Agenda 8. Faculty Senate
Title	Molecular Engineering of Materials	Chair
Abbreviated	Molecular Engineering	9. Registrar
Course Title	Molecular Engineering	10. CAT entry
		11. Peoplesoft
Catalog	This course focuses on the fundamentals of molecular engineering with an emphasis	
Description	on their applications including renewable/clean energy solutions, energy storage, air/water cleaning, and optoelectronics. Topics include principles of modern physics,	Approval Path
	carbon chemistry, macromolecules, metal(covalent)-organic frameworks sol-gel	1. 07/16/19 4:46 pr
	processing and crystal growth.	Greg Hilmas (ghilmas):
Prerequisites	Senior Standing or consent of instructor.	Approved for
Field Trip		RMATSENG Chair
Statement		2. 07/22/19 9:23 an
Credit Hours	LEC: 3 LAB: 0 IND: 0 RSD: 0 Total: 3	Brittany Parnell
		(ershenb): Rollback to
Required for Majors	No	Initiator
•		3. 08/08/19 2:01 an
Elective for	Yes	Greg Hilmas
Majors		(ghilmas):
Justification for	This course was developed through a mutual agreement (signed MOU) between S&T	Approved for
new course:	and Abdullah Gul University (AGU) in Turkey during the visit of the President of AGU	4. 08/13/19 2:06 pr
	at S&T in 2017. The course was co-taught by Prof. Hakan Usta (PhD Northwestern	Brittany Parnell
	Univ. Chemistry) at AGU and myself in Spring 2018 and 2019 online via Zoom.  This elective course was offered for senior undergraduate and graduate students	(ershenb):
	(5000/6000 level) at both universities. Due to 8-9 hours time difference, the class (3	Approved for CCC
	hours lecture with breaks) at S&T started at 8:00am. Number of students in 2018: 10	Secretary
	AGU and 7 S&T, in 2019: 7 AGU and 6 S&T).	5. 09/10/19 10:41
	The molecular engineering approach used in this course does not only teach the	am Stephen Raper
	fundamentals for rational design of existing materials processed by the bottom-up	(sraper):
	methods but also provides the essential skills to design next-generation novel materials for future applications. Topics include principles of carbon chemistry,	Approved for
	rational molecular engineering, small molecules, macromolecules, organic/printed	Engineering DSC
	optoelectronics, quantum dots and atomically layered materials, crystal growth	Chair
	processes, defects in nanostructures, sol-gel processing, metal(covalent)-organic	

Semesters Spring 2018 S&T enrollment: MS&E 5001- 6 students (ershaph):		frameworks, sustainability, renewable/clean energy and information technology.  Due to strong emphasis on chemistry of materials, the course is proposed to be colisted in the curriculum of Chemistry Department at S&T.  The course assignments will include in-class presentations given by students and term papers related to the molecular engineering. Graduate students taking the advanced 6000 level course will focus on emerging fields of molecular science and engineering.	6. 09/16/19 4:09 pm Brittany Parnell (ershenb): Approved for Pending CCC Agenda post 7. 10/02/19 2:50 pm
offered as an Approved for CC Meeting Agenda Meeting Agenda	previously offered as an experimental	Spring 2018 S&T enrollment: MS&E 5001- 6 students Spring 2019 S&T enrollment: MS&E 5001- 3 students	Approved for CCC Meeting Agenda 8. 10/02/19 2:56 pm
Co-Listed CHEM 5460 - Course Not Found (sraper): Courses: Approved for		CHEM 5460 - Course Not Found	(sraper):
Course Reviewer ershenb (07/22/19 9:23 am): Rollback: ROllback per email from Brittany Parnell		ershenb (07/22/19 9:23 am): Rollback: ROllback per email from Brittany Parnell	Campus Curricula Committee Chair

Key: 4650

### **New Course Proposal**

Date Submitted: 08/06/19 4:16 pm

**Viewing: MS&E 6460: Advanced Molecular Engineering of** 

#### **Materials**

File: 4658

Last edit: 10/02/19 11:23 am Changes proposed by: doganf

Requested

Spring 2020

**Effective Change** 

Date

Department

Materials Science & Engineering

Discipline

Materials Science & Eng (MS&E)

Course Number

6460

Title

Advanced Molecular Engineering of Materials

Abbreviated

Adv. Molecular Eng.

Course Title

#### Catalog

### Description

This advanced course focuses on the fundamentals of molecular science and engineering and their applications including renewable/clean energy solutions, energy storage, and optoelectronics. Topics include principles of carbon chemistry, macromolecules, metal(covalent)-organic frameworks, sol-gel processing, crystal growth and other advanced topics.

Prerequisites

Graduate Standing or consent of instructor.

Field Trip

Statement

**Credit Hours** 

LEC: 3

LAB: 0

IND: 0

RSD: 0

Total: 3

Required for

Majors

Elective for

Yes

No

Majors

Justification for

new course:

In Workflow

- 1. RMATSENG Chair
- 2. CCC Secretary
- 3. Engineering DSCC Chair
- 4. Pending CCC Agenda post
- 5. CCC Meeting Agenda
- 6. Campus Curricula **Committee Chair**
- 7. FS Meeting Agenda
- 8. Faculty Senate
  - Chair
- 9. Registrar
- 10. CAT entry 11. Peoplesoft

#### Approval Path

- 1. 08/08/19 2:01 am **Greg Hilmas** (ghilmas): Approved for **RMATSENG Chair**
- 2. 08/13/19 2:06 pm **Brittany Parnell** (ershenb):

Approved for CCC

Secretary

3. 09/10/19 10:41

Stephen Raper (sraper):

Approved for

**Engineering DSCC** Chair

4. 09/16/19 4:09 pm Brittany Parnell

(ershenb):

Approved for

This advanced course focuses on the fundamentals of molecular science and engineering with an emphasis on their applications including renewable/clean energy solutions, energy storage, air/water cleaning, and optoelectronics. Topics include principles of modern physics, carbon chemistry, macromolecules, metal (covalent)-organic frameworks, sol-gel processing and crystal growth.

This course was developed through a mutual agreement (signed MOU) between S&T and Abdullah Gul University (AGU) in Turkey during the visit of the President of AGU at S&T in 2017. The course was co-taught by Prof. Hakan Usta (PhD Northwestern Univ. Chemistry) at AGU and myself in Spring 2018 and 2019 online via Zoom. This elective course was offered for senior undergraduate and graduate students (5000/6000 level) at both universities. Due to 8-9 hours time difference, the class (3 hours lecture with breaks) at S&T started at 8:00am. Number of students in 2018: 10 AGU and 7 S&T, in 2019: 7 AGU and 6 S&T).

The molecular engineering approach used in this course does not only teach the fundamentals for rational design of existing materials processed by the bottom-up methods but also provides the essential skills to design next-generation novel materials for future applications. Topics include principles of carbon chemistry, rational molecular engineering, small molecules, macromolecules, organic/printed optoelectronics, quantum dots and atomically layered materials, crystal growth processes, defects in nanostructures, sol-gel processing, metal(covalent)-organic frameworks, sustainability, renewable/clean energy and information technology. Due to strong emphasis on chemistry of materials, the course is proposed to be colisted in the curriculum of Chemistry Department at S&T.

The course assignments will include in-class presentations given by students and term papers related to the molecular engineering. Graduate students taking the advanced 6000 level course will focus on emerging fields of molecular science and engineering.

Semesters Spring 2018 S&T enrollment: MS&E 6001- 2 students previously Spring 2019 S&T enrollment: MS&E 6001- 3 students

offered as an experimental

course

Co-Listed CHEM 6460 - Course Not Found

Courses:

Course Reviewer ershenb (10/02/19 11:23 am): Changed "crystal growth and emerging fields" to

Comments "crystal growth and other advanced topics."

Pending CCC Agenda post

- 10/02/19 2:50 pm
   Brittany Parnell (ershenb):
   Approved for CCC Meeting Agenda
- 6. 10/02/19 2:56 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair

Key: 4658

Date Submitted: 08/27/19 9:32 am In Workflow **Viewing: PET ENG 3320: Petrophysics** 1. RGEOSENG Chair File: 4189.8 2. CCC Secretary Last approved: 06/20/19 3:38 am 3. Engineering DSCC Last edit: 09/10/19 10:43 am Chair Changes proposed by: reflori 4. Pending CCC Agenda post In The Prerequisites: Other Courses 5. CCC Meeting PET ENG 3330: Well Logging referencing this Agenda PET ENG 3520: Petroleum Reservoir Engineering course 6. Campus Curricula **Committee Chair** 7. FS Meeting Requested Spring 2020 Fall 2019 Agenda **Effective Change** 8. Faculty Senate Date Chair Department Geosciences and Geological and Petroleum 9. Registrar Engineering 10. CAT entry 11. Peoplesoft Discipline Petroleum Engineering (PET ENG) Course Number 3320 Approval Path Title Petrophysics 1. 08/27/19 1:01 pm Abbreviated Petrophysics David Borrok Course Title (borrokd): Approved for Catalog **RGEOSENG Chair** Description 2. 08/28/19 11:32 Properties of petroleum reservoir rocks, including lithology, porosity, absolute am permeability, pore surface area, relative and effective permeability, fluid **Brittany Parnell** saturations, rock wettability, capillary characteristics, acoustic properties, and (ershenb): electrical properties. Darcy's law for single phase linear horizontal, tilted and radial Approved for CCC flow. Secretary 3. 09/10/19 10:43 **Prerequisites** Preceded or accompanied by both Pet Eng 2510 and Physics 1135. Stephen Raper Field Trip (sraper): Statement Approved for **Engineering DSCC** LAB: 1 **Credit Hours** LEC: 2 IND: 0 RSD: 0 Total: 3 Chair 4. 09/16/19 4:09 pm Required for Yes **Brittany Parnell** Majors (ershenb): No

Elective for Approved for Majors **Pending CCC** Agenda post Justification for 5. 10/02/19 2:55 pm change: **Brittany Parnell** We want new Soph transfer students to be able to take this course their first (ershenb): semester (Fall) here even if they haven't had the Pet Eng 2510 Fluids class yet. Approved for CCC Meeting Agenda Semesters 6. 10/02/19 2:56 pm previously Stephen Raper offered as an (sraper): experimental Approved for course Campus Curricula None. This is a required course. Committee Chair Co-Listed Courses: History Course Reviewer 1. Oct 16, 2017 by Comments reflori sraper (09/10/19 10:43 am): There is an objection to removing the Pet Eng Prereq 2. Jun 20, 2019 by as follows: - I have a problem with this one. Without the PE 2510 co-requisite, reflori (4189.4) presumably it does not require material from Pet 2510. So, why is a 3000-level course? If it does not require sophomore-level prerequisite material, then it should be a 2000-level course. One can handle the problem about Sophomore transfer students by granting a permission number for those that have a strong record. How many students are in this situation? Fall 2018 shows an enrollment of 2 sophomore and 11 juniors in the program. We need to discuss this at the CCC meeting. I am not sure we can object to this or require a lower number.

Key: 4189

Date Submitted: 08/	31/19 8:18 pm	
/iewing: PHYSI	CS 6101 <del>5201</del> : Classical Mechanics I	In Workflow
ile: 1923.2		1. RPHYSICS Chair
ast approved: 05,	/02/14 3·46 am	2. CCC Secretary
ast edit: 10/02/1		3. Sciences DSCC
hanges proposed b		Chair
	•	4. Pending CCC  Agenda post
Requested	Spring 2020 <del>08/01/2014</del>	5. CCC Meeting
Effective Change		Agenda
Date		6. Campus Curricula
Department	Physics	Committee Chair
Discipline	Physics (PHYSICS)	7. FS Meeting
Course Number	6101 <del>5201</del>	Agenda
course Number	0101 <del>3201</del>	8. Faculty Senate
Title	Classical Mechanics I	Chair
Abbreviated	Classical Mechanics I	9. Registrar
Course Title		10. CAT entry
		11. Peoplesoft
Catalog	Methods of Newton, Lagrange, and Hamilton applied to the motion of particles and	
Description	rigid bodies. Introduction to canonical transformations and Poisson brackets.	Approval Path
	Classical scattering and small oscillations.	1. 08/31/19 9:01 pr
Prerequisites	Math <b>3304 and <del>3304,</del></b> Physics 3201.	Thomas Vojta
Field Trip		(vojtat):
Statement		Approved for
Credit Hours	LEC: 3 LAB: 0 IND: 0 RSD: 0 Total: 3	RPHYSICS Chair
	LEC. 5 LAB. 0 IND. 0 RSD. 0 TOTAL. 5	2. 09/03/19 4:21 pr
Required for	No	Brittany Parnell
Majors		(ershenb):
Elective for	No	Approved for CCC
Majors		Secretary
	The state of the s	3. 09/13/19 10:32
Justification for	The course number change from 5201 to 6101 is requested to ensure that proper	am
change:	graduate credit is received by students completing this course.	Katie Shannon
Semesters		(shannonk):
previously		Approved for Sciences DSCC
offered as an		Chair
experimental		4. 09/16/19 4:10 pr
course		Brittany Parnell
Co-Listed		(ershenb):
Courses:		Approved for
Course Deviews	auch auch (10/02/10 2/FC num). Add ad Handli to the arrays	Pending CCC
Course Reviewer Comments	ershenb (10/02/19 2:56 pm): Added "and" to the prereq.	Agenda post
Comments		5. 10/02/19 2:59 pr
	· ·	Brittany Parnell
		(ershenb):
		Approved for CCC
		Meeting Agenda

6. 10/02/19 3:05 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair

#### History

1. May 2, 2014 by lahne (1923.1)

Date Submitted: 08/31/19 8:20 pm

Viewing: PHYSICS 6111 5211: Electrodynamics I

File: 2123.3

Last approved: 05/02/14 3:46 am Last edit: 09/03/19 4:21 pm Changes proposed by: wilemski

Requested Spring 2020 08/01/2014

Effective Change

Date

Department Physics

Discipline Physics (PHYSICS)

Course Number 6111 5211

Title Electrodynamics I

Abbreviated Electrodynamics I

Course Title

Description

Catalog

A rigorous development of the fundamentals of electromagnetic fields and waves.

Electrostatics, magnetostatics, Maxwell's equations--Green's function, boundary

value problems, multipoles, conservation laws.

Prerequisites

Physics 4211.

Field Trip

Statement

Credit Hours LEC: 3 LAB: 0 IND: 0 RSD: 0 Total: 3

Required for No

Majors

Elective for No

Majors

Justification for

change:

The course number change from 5211 to 6111 is requested to ensure that proper

graduate credit is received by students completing this course.

Semesters

previously

In Workflow

1. RPHYSICS Chair

2. CCC Secretary

3. Sciences DSCC

Chair

4. Pending CCC

Agenda post

5. CCC Meeting

Agenda

6. Campus Curricula Committee Chair

7. FS Meeting Agenda

8. Faculty Senate

Chair

9. Registrar

10. CAT entry

11. Peoplesoft

Approval Path

1. 08/31/19 9:02 pm

Thomas Vojta (vojtat):

Approved for

RPHYSICS Chair

2. 09/03/19 4:22 pm Brittany Parnell

(ershenb):

Approved for CCC

Secretary

3. 09/13/19 10:32

am

Katie Shannon

(shannonk):

Approved for

Sciences DSCC

Chair

4. 09/16/19 4:10 pm Brittany Parnell

(ershenb):

Approved for

offered as an experimental course  Co-Listed Courses:	Pending CCC Agenda post 5. 10/02/19 2:59 pm Brittany Parnell (ershenb): Approved for CCC Meeting Agenda
Course Reviewer Comments  Key: 212	6. 10/02/19 3:05 pm Stephen Raper
	History  1. May 2, 2014 by lahne (2123.1)

Date Submitted: 08/31/19 8:22 pm

Viewing: PHYSICS 6201 5301: Quantum Mechanics I

File: 1222.1

Last edit: 09/03/19 4:23 pm Changes proposed by: wilemski

Requested Spring 2020 08/14/2018

**Effective Change** 

Date

Department Physics

Discipline Physics (PHYSICS)

Course Number 6201 5301

Title Quantum Mechanics I

Abbreviated Quantum Mechanics I

Course Title

Catalog

Description

Basic formalism applied to selected problems. Schroedinger equation and one dimensional problems, Dirac notation, matrix mechanics, harmonic oscillator, angular momentum, hydrogen atom, variational methods, introduction to spin.

Prerequisites

Physics 4301 or equivalent.

Field Trip Statement

Credit Hours LEC: 3 LAB: 0

Required for No

Majors

Elective for No

Majors

Justification for

change:

The course number change from 5301 to 6201 is requested to ensure that proper graduate credit is received by students completing this course.

Semesters

previously

offered as an

In Workflow

1. RPHYSICS Chair

2. CCC Secretary

3. Sciences DSCC

Chair

4. Pending CCC

Agenda post

5. CCC Meeting Agenda

6. Campus Curricula Committee Chair

7. FS Meeting Agenda

8. Faculty Senate

Chair

9. Registrar

CAT entry
 Peoplesoft

Approval Path

1. 08/31/19 9:03 pm Thomas Vojta

(vojtat):

Approved for

RPHYSICS Chair

2. 09/03/19 4:23 pm Brittany Parnell

(ershenb):

Approved for CCC Secretary

3. 09/13/19 10:32

am

Katie Shannon

(shannonk):

Approved for Sciences DSCC

Chair

4. 09/16/19 4:10 pm Brittany Parnell (ershenb):

Approved for

IND: 0

RSD: 0

Total: 3

experimental course	5	Pending CCC Agenda post 5. 10/02/19 3:00 pm
Co-Listed Courses:		Brittany Parnell (ershenb): Approved for CCC
Course Reviewer Comments	Key: 1222	Meeting Agenda 5. 10/02/19 3:05 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair

Date Submitted: 07/12/19 10:43 am

Viewing: GL&GPH-MS: Geology and

# **Geophysics MS**

File: 166.13

Last approved: 06/14/19 2:11 pm

Last edit: 10/02/19 3:10 pm

Changes proposed by: sbrower

Catalog Pages Using this Program

Geology and Geophysics

Start Term

Fall 2020 2019

**Program Code** 

**GL&GPH-MS** 

Department

Geosciences and Geological and Petroleum Engineering

Title

Geology and Geophysics MS

### **Program Requirements and Description**

#### In Workflow

- 1. RGEOSENG Chair
- 2. CCC Secretary
- 3. Sciences DSCC Chair
- 4. Pending CCC Agenda post
- 5. CCC Meeting Agenda
- 6. Campus Curricula Committee Chair
- 7. FS Meeting Agenda
- 8. Faculty Senate Chair
- 9. Registrar
- Kristy Giacomelli-Feys

## **Approval Path**

- 1. 07/12/19 2:02 pm David Borrok (borrokd): Approved for RGEOSENG Chair
- 2. 07/16/19 4:16 pm Brittany Parnell (ershenb): Approved for CCC Secretary
- 3. 08/11/19 10:22 pm
  Katie Shannon
  (shannonk):
  Approved for
  Sciences DSCC
  Chair
- 4. 09/16/19 4:09 pm Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
- 5. 10/02/19 3:10 pm Brittany Parnell (ershenb): Approved for CCC

1 of 4 10/4/2019, 8:30 AM

Meeting Agenda
6. 10/02/19 3:43 pm
Stephen Raper
(sraper): Approved
for Campus
Curricula
Committee Chair

## **History**

- 1. Jun 17, 2014 by pantaleoa
- 2. Jun 22, 2015 by pantaleoa
- 3. Jul 23, 2015 by pantaleoa
- 4. Jun 14, 2019 by Sharon Lauck (laucks)

Graduate work in geology and geophysics is offered at both the master of science (thesis and non-thesis) and doctoral levels. Programs are designed to provide you with an understanding of the fundamentals and principles of geology, geochemistry, and geophysics.

Research investigations comprise a significant part of each program, and at the doctoral level an original contribution to the science is required.

Research emphasis of the program is in:

- Low Temperature and Environmental Geochemistry
- Mineralogy/Petrology/Economic Geology
- Geophysics/Tectonics/Remote Sensing
- Sedimentology/Paleontology/Stratigraphy/Petroleum Exploration

In geology and geochemistry, opportunities for research at both the M.S. and Ph.D. levels are available in mining geology, petroleum geology, **environmental geochemistry**, stratigraphy and sedimentation, **geochemistry**, clay mineralogy, remote sensing, GIS, palynology, structural geology, igneous and metamorphic petrology, **volcanology**, and **planetary geology**. **volcanology**.

In geophysics, opportunities for research at both the M.S. and Ph.D. levels are available in the areas of reflection and refraction seismology, theoretical seismology, geophysical data analysis, gravity, magnetics, seismic hazards, and computational geophysics.

The study of the Earth and other planets includes all areas of scientific inquiry. To work effectively in so broad a discipline requires considerable depth and breadth of understanding of physical principles and advanced proficiency in mathematics, particularly for those students contemplating advanced studies in geophysics. A thorough undergraduate training in an earth or physical science is a ordinarily regarded as necessary prerequisite for advanced study in geology or geophysics.

Earth sciences have been an integral part of the university since its founding. The program has a long and proud history of faculty and students who have contributed to the advancement of the science, science and to mineral and hydrocarbon exploration, and to protecting the environment. exploration. The university was formerly the Missouri School of Mines. Because of the school's tradition and location near the Missouri Lead District, the emphasis of the program has been in exploration for mineral and petroleum resources. hard rock exploration. The program has now expanded to include environmental geochemistry, geophysics, and soft rock geology, and planetary geology. Our graduates find employment in the mining, petroleum, environmental, and environmental

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industries, as well as with government agencies and academia. petroleum industries. The program provides students It is our intention to provide the student with a sufficiently diverse educational opportunities to prepare themselves to and complete education that he or she may seek employment in any area of the earth sciences.

The program has a wide variety of equipment for research and exploration in geology, geochemistry, and geophysics. In addition to its own facilities, the Missouri Department of Natural Resources, and the U.S. Geological Survey's mid-continent mapping division are also located in Rolla. Cooperative research with other departments within the university or other campuses of the University of Missouri may be undertaken by our faculty and graduate students. Interaction with mining engineering, geological engineering, petroleum engineering, metallurgy, environmental engineering, biological sciences and various other programs/departments is routine. Our faculty and graduate students commonly participate in collaborative research with other departments on campus as well as universities worldwide. In addition, cooperative research and internship opportunities with the Missouri Geological Survey, the U.S. Geological Survey's National Geospatial Technical Operations Center and the Mark Twain National Forest Service, all located in Rolla, are available. Cooperative programs are also undertaken with local mining companies, petroleum companies, or other industries are also possible. using the skills and techniques of the earth scientist. Thus, your research interests need not fall entirely within the interests of our faculty or within the bounds of the equipment directly available within the program.

A B.S. Although an advanced degree level is essential not a requirement for professional practice in geology or geophysics in industry. geophysics, the B.S. Due to should usually be considered a preparatory, the increasing complexity of jobs in the geosciences, the M.S. degree is recognized as the "professional degree" for geoscientists desiring employment in the Petroleum, Minerals, and many other industries. should be considered the professional degree, and the Ph.D.should be sought by candidates interested in a career in teaching or research. The Ph.D. M.S. degree is for those students that want to conduct original research with purpose of adding new knowledge in a specific area of the geosciences. Successful Ph.D. should be sought by candidates find employment interested in academia or research centers a career in government agencies or corporate research labs. teaching or research.

Two M.S. degree options are available: thesis and non-thesis. degree is typically granted with the thesis option, although a non-thesis option is now available. All Geology and Geophysics MS students are required to take the Professional Geosciences Skills course (GEOLOGY 5100) GEOLOGY 5100) and either Advanced Physical Geology (GEOLOGY 5111) GEOLOGY 5111) or Global Tectonics (GEOPHYS 5096). For students whose native language is not English, a minimum score of 79 on the standard Test of English as a Foreign Language is generally required for admission. The minimum Graduate Record Examinations (GRE) scores required for acceptance consideration in the Geology and Geophysics graduate program are Q = 148, Q+V = 300, and A(W) = 3.0.

#### Justification for request

The first required courses are being included because Graduate students need mentoring and experience in developing both research skills and professional soft-skills which are required for a successful geoscience career. They also need experience in researching papers and opportunities to present scientific content to larger groups of peers. New CC forms for these courses (GEO 5100 & GEO 6100) have been submitted as required. Graduate students need one or the other of the second courses (or even both depending upon their committee recommendations) to establish a firm understanding of fundamental concepts in the Geosciences such that they will be able to use this information in understanding the broader significance of their research. These courses will be offered on a regular basis. The faculty decided to make explicit the entrance requirements for the GRE etc. Supporting Documents

Course Reviewer Comments

ershenb (07/16/19 10:35 am): updated start term to fall 2020

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ershenb (07/16/19 4:16 pm): .
ershenb (10/02/19 3:10 pm): FYI: Geology 5100 and Geology 6100 were approved at the April 2019 Faculty Senate meeting.

Key: 166

4 of 4

## **New Program Proposal**

Date Submitted: 08/27/19 3:55 pm

**Viewing: PROPOSED: Construction Engineering and Management Minor** 

File: 343

Last edit: 10/02/19 3:49 pm

Changes proposed by: seelyj

Start Term

Fall 2020

**Program Code** 

**PROPOSED** 

Department

Civil, Architectural, and Environmental Engineering

Title

Construction Engineering and Management Minor

### **Program Requirements and Description**

#### In Workflow

- 1. RCIVILEN Chair
- 2. CCC Secretary
- 3. Engineering DSCC Chair
- 4. Pending CCC Agenda post
- 5. CCC Meeting Agenda
- 6. Campus Curricula Committee Chair
- 7. FS Meeting Agenda
- 8. Faculty Senate Chair
- 9. Registrar
- Kristy Giacomelli-Feys

## **Approval Path**

- 09/10/19 8:52 am
   Joel Burken
   (burken): Approved
   for RCIVILEN Chair
- 2. 09/10/19 9:28 am
  Brittany Parnell
  (ershenb):
  Approved for CCC
  Secretary
- 3. 09/16/19 12:29 pm Stephen Raper (sraper): Approved for Engineering DSCC Chair
- 4. 09/16/19 4:10 pm Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
- 5. 10/02/19 3:49 pm Brittany Parnell (ershenb): Approved for CCC Meeting Agenda

6. 10/02/19 3:52 pm

1 of 3 10/4/2019, 8:37 AM

Stephen Raper (sraper): Approved for Campus Curricula Committee Chair

## **Minor in Construction Engineering & Management**

The minor in Construction Engineering and Management will require 15 credits of coursework from the following lists. Some courses may also count toward the students' undergraduate degree. To maintain the value of the minor, we require students to complete a minimum of 9 credits in addition to any classes counting towards the students undergraduate and/or graduate degree(s).

#### 3 Credit Hours from the following List:

<u>CIV ENG 2451</u>	Engineering Drawings and Tools	3
<u>CIV ENG 4448</u>	Fundamentals Of Contracts And Construction Engineering	3
ENG MGT 3320	Introduction to Project Management	3

#### 6 Credit Hours from the following List:

<u>CIV ENG 5442</u>	Construction Planning and Scheduling Strategies	3
<u>CIV ENG 5445</u>	Construction Methods	3
<u>CIV ENG 5446</u>	Management Of Construction Costs	3
<u>CIV ENG 5449</u>	Engineering and Construction Contract Specifications	3
ENG MGT 5316	Safety Engineering Management	3
ENG MGT 5610	Advanced Facilities Planning & Design	3
BUS 3205	Accounting Essentials	1.5

#### 6 Credit Hours from the following List:

<u>CIV ENG 5451</u>	Information Technology Applications in the Construction Industry	3
<u>CIV ENG 5452</u>	Pre-Project Planning and Feasibility Studies	3
<u>CIV ENG 5453</u>	Logistics for Construction Industry	3
<u>CIV ENG 5454</u>	Construction Technology for High-Rise Buildings	3
<u>CIV ENG 5455</u>	Construction Industry Best Practices	3
ARCH ENG 2103	Architectural Materials And Methods Of Construction	3

#### Justification for request

This minor is proposed to address voids highlighted by the member companies of the Missouri Consortium of Construction Innovation (MO-CCI) in our construction engineering and management (CEM) curriculum. The MO-CCI members have an immediate desire to bridge the gap in the abilities of our fresh graduates and help them meet the current needs of the construction industry.

2 of 3 10/4/2019, 8:37 AM

CIP CODE: 14.3301

**Supporting Documents** 

Course Reviewer Comments

ershenb (09/10/19 9:24 am): formatting

ershenb (09/10/19 9:28 am): . ershenb (09/10/19 9:28 am): .

ershenb (09/10/19 9:42 am): updated start term to fall 2020

ershenb (10/02/19 3:49 pm): added CIP code

Key: 343

3 of 3

Date Submitted: 06/07/19 3:52 pm

Viewing: WORKPSY-CT : Applied Workplace

# Psych CT

File: 304.1

Last edit: 06/07/19 3:52 pm

Changes proposed by: ershenb

Catalog Pages Using this Program

**Psychology** 

Start Term

Spring 2020

**Program Code** 

**WORKPSY-CT** 

Department

Psychological Science PSYCH

Title

Applied Workplace Psych CT

## **Program Requirements and Description**

#### In Workflow

- 1. RPSYCHOL Chair
- 2. CCC Secretary
- 3. VC of Research & Dean of Grad Studies
- 4. Social Sciences
  DSCC Chair
- 5. Pending CCC Agenda post
- 6. CCC Meeting Agenda
- 7. Campus Curricula Committee Chair
- 8. FS Meeting Agenda
- Faculty Senate Chair
- 10. Registrar
- Kristy Giacomelli-Feys

## **Approval Path**

- 1. 08/30/19 9:31 am Susan Murray (murray): Approved for RPSYCHOL Chair
- 2. 08/30/19 1:20 pm Brittany Parnell (ershenb): Approved for CCC Secretary
- 09/03/19 2:56 pm
   Costas Tsatsoulis
   (tsatsoul): Approved
   for VC of Research
   & Dean of Grad
   Studies
- 4. 09/14/19 9:29 am
  Michael Davis
  (davismc):
  Approved for Social
  Sciences DSCC
  Chair

5. 09/16/19 4:10 pm

1 of 3 10/4/2019, 8:39 AM

**Brittany Parnell** (ershenb): Approved for Pending CCC Agenda post 6. 10/03/19 4:22 pm **Brittany Parnell** (ershenb): Approved for CCC Meeting Agenda 7. 10/03/19 4:27 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair

## **Applied Workplace Psychology**

The applied workplace psychology graduate certificate is designed to serve as a recruitment tool for the industrial-organizational psychology MS program. This program will offer students a set of foundational courses in industrial and organizational psychology. Students who pass all four courses with a grade of B or better in each course can gain entry to the I-O psychology MS program with the other application requirements being waived. The included courses cover an introductory seminar course, an advanced research methods course, a course on job analysis and performance appraisal and a small group dynamics course which will examine groups and teams in organizations.

All four courses included in the applied workplace psychology certificate curriculum will be offered once per year. All of these courses are available both on-campus as well as via distance.

#### Fall Courses:

PSYCH 5010	Seminar for Industrial / Organizational Psychology	
PSYCH 5020	Introduction to Industrial-Organizational Psychology	3
PSYCH 5210	Advanced Research Methods	3

#### Spring Courses:

PSYCH 5601	Small Group Dynamics	3
PSYCH 5700	Job Analysis and Performance Management	3

The applied workplace psychology certificate program is open to all persons holding a B.S., M.S., or Ph.D. degree in psychology, business, or a related field and who have a minimum of one year of professional employment experience. Once admitted to the program, the student must take the four designated courses (provided in the curriculum section). In order to receive a graduate certificate, the student must have an average cumulative grade point of 3.0 or better in the certificate courses. Once admitted to the program, a student will be given three years to complete the program.

Students admitted to the applied workplace psychology certificate program will have non-degree graduate status, however, they will earn graduate credit for the course they complete. If the student completes the four-course sequence with a grade of B or better in each of the

2 of 3 10/4/2019, 8:39 AM

courses taken, they, upon application, will be admitted to the M.S. degree program in industrial organizational psychology. The certificate credits taken by the students admitted to the M.S. degree program will count towards their master's degrees. Students who do not have all of the prerequisite courses necessary to begin the courses in the applied workplace psychology certificate program will be allowed to take "bridge" courses at either the graduate or undergraduate level to prepare for the formal certificate courses.

#### Justification for request

We previously changed the course number for PSYCH 5010 to PSYCH 5020 at the recommendation of the Campus Curricula Committee to reflect that while taught in the seminar "style" that it is not intended as a seminar course. It should be counted as a lecture course. The 5010 course number is typically reserved for courses intended to count as a seminar instead of a lecture. The certificate courses remain the same, but the course numbers will be changed to reflect the currently approved course numbers (i.e. 5010 becomes 5020).

Supporting Documents

### WORKPSY-CT Applied Workplace Psych CT.pdf

Course Reviewer Comments

ershenb (06/07/19 3:52 pm): Submitted per Dr.Susan Murray's email.

Key: 304

3 of 3 10/4/2019, 8:39 AM



MEMO TO: Whom It Concerns

FROM:

Stephen Roberts, Interim Provost and Vice Chancellor for Academic Affairs

DATE:

October 13, 2019

RE:

Approval of Revision Proposal for Applied Workplace Psychology

**Graduate Certificate** 

With recommendation of the Psychological Science Department, CASB Dean (which was previously myself), and the Vice Chancellor of Research and Dean of Graduate Studies, I agree and request that the revisions proposed in the attached documentation be accepted by the University of Science & Technology.

Please contact me if you have any questions or need additional information.

Approved by

Stephen Roberts

Interim Provost and Executive

Vice Chancellor for Academic Affairs

**Attachments** 

cc: UM System



# **Psychological Science**

136 Humanities and Social Sciences | 500 W. 1th Street | Rolla, MO 65409 (573)-341-4937 | psych@mst.edu | psych.mst.edu

### 5/29/2019

To:

Stephen Roberts

Vice Provost and Dean of the College of Arts, Science, and Business

Costas Tsatsoulis

Vice Chancellor of Research and Dean of Graduate Studies

From:

Susan Murray

Department of Psychological Science

Nathan Weidner

Department of Psychological Science

Subject:

Revision Proposal for Applied Workplace Psychology Graduate

Certificate

In 2017 the Applied Workplace Psychology graduate certificate was developed by Department of Psychological Science. The certificate consisted of the following courses:

**Fall Courses** 

PSYCH 5010 - Introduction to I-O Psychology

PSYCH 5210 - Advanced Research Methods in I-O

**Spring Courses** 

PSYCH 5601 - Advanced Group Dynamics

PSYCH 5700 - Job Analysis and Performance Management

Psych 5010 was misclassified as a seminar course. At the request of the curriculum committee, we updated the course number from 5010 to 5020 in 2018 to reflect that it is counted as a lecture course rather than a seminar course. As a result, we would like to amend the graduate certificate to consist of the following courses:

**Fall Courses** 

PSYCH 5020 - Introduction to I-O Psychology

PSYCH 5210 - Advanced Research Methods in I-O

**Spring Courses** 

PSYCH 5601 - Advanced Group Dynamics

PSYCH 5700 - Job Analysis and Performance Management

If you have any questions, please do not hesitate to contact the department.

### REVISED GRADUATE CERTIFICATE IN Applied Workplace Psychology

### **OFFERED BY:**

Department of Psychological Science

### PARENT DEPARTMENT AND DEGREE:

Department of Psychological Science

MS in Industrial-Organizational Psychology

INTENDED AUDIENCE: \_\_Main Campus Students \_\_Distance Students \_X\_Both

#### JUSTIFICATION (Reason for revision):

We previously changed the course number for <u>Psych 5010</u> to <u>Psych 5020</u> at the recommendation of the Campus Curriculum Committee to reflect that while taught in the seminar "style" this is not intended as a seminar course. It should <u>be counted as a lecture course</u>. The 5010 course number is typically reserved for courses intended to count as a seminar instead of a lecture. <u>The certificate courses remain the same</u>, but the course numbers will be changed to reflect the currently approved course numbers (i.e. 5010 becomes 5020).

#### **PROPOSED GRCT PROGRAM:**

All courses are offered both on-campus and via distance.

Students must complete the following four psychology courses.

### Fall Courses

PSYCH 5020 – Introduction to I-O Psychology PSYCH 5210 – Advanced Research Methods in I-O

#### **Spring Courses**

PSYCH 5601 – Advanced Group Dynamics
PSYCH 5700 – Job Analysis and Performance Management

#### PROPOSED COURSE DESCRIPTIONS:

#### PSYCH 5020: Introduction to Industrial-Organizational Psychology

Review of the most recent theoretical and applied research in advanced personnel and organizational psychology. Topics will include personnel selection, training and performance appraisal, job attitudes, motivation, work groups and teams, leadership, organizational culture, and organizational development. Prerequisite: graduate standing. (Offered both online and campus)

#### PSYCH 5210: Advanced Research Methods in I-O

Research methods and techniques, with an emphasis on conducting psychological research in organizational settings. Topics discussed include: ethics, reliability and validity in measurement and application, proper uses of experimental, quasi-experimental, and survey methodologies, as well as advanced methodologies IRT, SEM, HLM, and Meta-Analyses. Prerequisites: graduate standing. (Offered both online and campus)

#### PSYCH 5601: Small Group Dynamics

An in-depth review of the concepts and theories related to group dynamics. Topics include group goals, communication within groups, group structure, norms, leadership, decision making, controversy, conflict resolution, power, diversity issues, and team development. Students will consider theoretical implications and practical applications of topics in group dynamics in the form of independent reading, research proposals, and observational assignments. *Prerequisite: PSYCH 4601 or graduate standing.* (Offered both online and campus)

## PSYCH 5700: Job Analysis and Performance Management

A focus on the scientific measurement of job performance. An in-depth discussion of the science and methods of appropriate job and task analysis will be discussed. Additionally, students will focus on current issues in performance management and appraisal including scientific findings related to both objective and subjective measures of performance in organizations. Prerequisite: Psych 4700 or graduate standing. (Offered both online and campus)

## **CURRENT GRCT PROGRAM:**

**Fall Courses** 

PSYCH 5010 – Introduction to I-O Psychology PSYCH 5210 – Advanced Research Methods in I-O

**Spring Courses** 

PSYCH 5601 – Advanced Group Dynamics PSYCH 5700 – Job Analysis and Performance Management

Please sign below indicating your agreement with the proposed changes:

Vice Provost & Dean Stephen Roberts

Vice Chancellor and Dean Costas Tsatsoulis

If you have any questions about this form, please contact the Office of Graduate Studies, 573-341-4141.

Date Suhmitted: 00	New Experimental Course Proposal	In Workflow
Date Submitted: 08/16/19 12:50 pm Viewing: BIO SCI 3001.003: Physiology Laboratory		1. RBIOLSCI Chair
	CI 3001.003 : Physiology Laboratory	2. CCC Secretary
File: 4660		3. Sciences DSCC Chair
ast edit: 09/16/19 9:42 am Changes proposed by: niyogid		4. Pending CCC
		Agenda post
Requested Effective Change	Spring 2020	5. CCC Meeting
Date		Agenda
Department	Biological Sciences	6. Campus Curricula Committee Chair
•		7. CAT entry
Discipline	Biological Sciences (BIO SCI)	8. Registrar
Course Number	3001	 
Topic ID	003	Approval Path
Experimental Title	Physiology Laboratory	1. 08/16/19 1:02 pm David Duvernell
Experimental	Physiology Laboratory	(duvernelld):
Abbreviated		Approved for
Course Title		RBIOLSCI Chair 2. 08/16/19 3:15 pn
Instructors	staff	Brittany Parnell
Experimental	Laboratory activities and demonstrations of basic physiology of animals, including	(ershenb):
Catalog	humans, ranging from cell to organ systems.	Approved for CCC
Description		Secretary 3. 08/27/19 11:04
Prerequisites	Preceded or accompanied by either Bio Sci 3333 or Bio Sci 3343.	am
Field Trip		Katie Shannon
Statement		(shannonk):
Credit Hours	LEC: 0 LAB: 1 IND: 0 RSD: 0 Total: 1	Approved for
		Sciences DSCC Chair
Justification for	We are adding a new laboratory course that focuses on physiology of animals,	4. 09/16/19 4:01 pn
new course:	especially humans. We have purchased new equipment for use in this lab, which will appeal to our pre-health students.	Brittany Parnell
Samastar(s)	None	(ershenb):
Semester(s) previously taught	Notice	Approved for
Co-Listed		Pending CCC Agenda post
Courses:		5. 10/02/19 3:51 pn
		Brittany Parnell
Course Reviewer		(ershenb):
Comments	Key: 4660	Approved for CCC
	Key: 4660	Meeting Agenda 6. 10/02/19 3:51 pn
		Stephen Raper
		(sraper):
		Approved for

Campus Curricula Committee Chair 7. 10/03/19 8:49 am Marita Tibbetts (tibbettsmg): Approved for CAT entry

**New Experimental Course Proposal** In Workflow Date Submitted: 08/21/19 3:29 pm 1. REDUCATION Viewing: EDUC 3001.001: Teacher Field Experience III Chair File: 4661 2. CCC Secretary 3. Social Sciences Last edit: 09/16/19 10:18 am **DSCC Chair** Changes proposed by: bakm75 4. Pending CCC Requested Spring 2020 Agenda post **Effective Change** 5. CCC Meeting Date Agenda Department Teacher Education and Certification 6. Campus Curricula **Committee Chair** Discipline Education (EDUC) 7. CAT entry Course Number 3001 8. Registrar Topic ID 001 Approval Path Experimental Teacher Field Experience III Title 1. 08/21/19 3:43 pm Beth Kania-Experimental Field Experience III Gosche Abbreviated (bkaniagosche): Course Title Approved for Instructors **Kelly Carter REDUCATION** Chair Experimental 2. 08/22/19 8:16 am Catalog **Brittany Parnell** Description (ershenb): Students enrolled in this course will be planning and implementing activities and Approved for CCC assessments with children or adolescents in structured learning environments. Secretary Students will be supervised by experienced, credentialed educators and submit 3. 09/13/19 8:29 am assignments. At least 30 hours of contact time with children or adolescents is **Brittany Parnell** required per credit hour. (ershenb): Prerequisites Rollback to CCC Educ 1104 and Educ 1164. Secretary for **Social Sciences** Field Trip **DSCC Chair** Statement 4. 09/13/19 8:31 am Students will be in area school districts one full day per week. **Brittany Parnell Credit Hours** LEC: 0 LAB: 1 IND: 0 RSD: 0 Total: 1 (ershenb): Approved for CCC Justification for Secretary new course:

Feedback from students in the teacher education program and area principals and superintendents indicate that they need more experience in schools prior to student teaching. As currently designed, the secondary students take both field experience courses their first year and do not set foot in a classroom again until student teaching. This course will provide an opportunity for them to gain experience in the field prior to student teaching and employment.

Semester(s)

previously taught

Co-Listed

Courses:

Course Reviewer

Comments

ershenb (09/13/19 8:29 am): Rollback: Rolled back so new Social Sciences DSCC can review.

- 5. 09/14/19 9:26 am
  Michael Davis
  (davismc):
  Approved for
  Social Sciences
  DSCC Chair
- 6. 09/16/19 4:09 pm
  Brittany Parnell
  (ershenb):
  Approved for
  Pending CCC
  Agenda post
- 7. 10/02/19 3:52 pm Brittany Parnell (ershenb): Approved for CCC Meeting Agenda

Key: 4661

- 8. 10/02/19 3:52 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair
- 9. 10/03/19 8:50 am Marita Tibbetts (tibbettsmg): Approved for CAT entry

	New Experimental Course Proposal	In Workflow
Date Submitted: 09/	(17/19 11:35 am	1. RPHILOSO Chair
Viewing: MUSI	C 3001.002 : Introduction to Music Composition and	2. CCC Secretary
Arranging		3. Arts &
File: 4664		Humanities DSCC
ast edit: 10/02/19 3:53 pm		Chair 4. Pending CCC
Changes proposed b	·	Agenda post
Requested	Spring 2020	5. CCC Meeting
Effective Change		Agenda
Date		6. Campus Curricula
Department	Arts, Languages, & Philosophy	Committee Chair 7. CAT entry
Discipline	Music (MUSIC)	8. Registrar
Course Number	3001	or mag.ou.
		Approval Path
Topic ID	002	1. 09/13/19 12:39
Experimental	Introduction to Music Composition and Arranging	pm
Title		Audra Merfeld-
Experimental Abbreviated	Music Comp & Arranging	Langston
Course Title		(audram): Approved for
	Kula Warnka	RPHILOSO Chair
Instructors	Kyle Wernke	2. 09/16/19 9:26 am
Experimental	Without composers there would be no music. In this course students will learn to	Brittany Parnell
Catalog	create new musical ideas, develop those ideas, and create an original short piece of	(ershenb):
Description	music. In addition students will learn how to take existing pieces of music and arrange them for various ensembles through a basic course in orchestration.	Approved for CCC Secretary
_		3. 09/16/19 9:41 an
Prerequisites	Preceded or accompanied by Music 1130, Music 1131, Music, 1132, Music 1134, Music 1135, or Music 1136.	Petra Dewitt
	Music 1155, Of Music 1150.	(dewittp):
Field Trip Statement		Rollback to CCC
		Secretary for Arts & Humanities
Credit Hours	LEC: 3 LAB: 0 IND: 0 RSD: 0 Total: 3	DSCC Chair
Justification for	Current music students, and potential music minor enrollees, have indicated high	4. 09/16/19 10:22
new course:	interest in this field. Several students have already done arrangements or	am
	compositions for the Miner Marching Band, Video Game Music Ensemble, Pep Band, and Orchestra, this could inspire more students to do the same. Artistic creation	Brittany Parnell
	also fosters critical thinking and creative problem solving.	(ershenb): Approved for CCC
Semester(s)	9	Secretary
previously taught		5. 09/16/19 10:26
Co-Listed		am
Courses:		Brittany Parnell
		(ershenb):
Course Reviewer	dewittp (09/16/19 9:41 am): Rollback: Prerequisites not enforceable as written	Initiator
Comments	currently. Should contain a list of music courses.  ershenb (09/16/19 10:26 am): Rollback: Rollback per the request of Dr. Petra Dewitt	

6. 09/17/19 12:14 per her comments on the form about enforcing a prereq. ershenb (10/02/19 3:53 pm): adjusted the prereq to "preceded or accompanied by" pm Audra Merfeld-Langston (audram): Approved for RPHILOSO Chair 7. 09/17/19 1:54 pm **Brittany Parnell** (ershenb): Approved for CCC Secretary 8. 09/17/19 1:55 pm Petra Dewitt (dewittp): Approved for Arts & Humanities **DSCC Chair** 9. 09/19/19 8:21 am Brittany Parnell (ershenb): Approved for Pending CCC Agenda post 10. 10/02/19 3:53 pm **Brittany Parnell** (ershenb): Approved for CCC Meeting Agenda 11. 10/02/19 3:58 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair 12. 10/03/19 8:51 am Marita Tibbetts (tibbettsmg): Approved for CAT

entry

	New Experimental Course Proposal	In Workflow
Date Submitted: 08/		1. RPHYSICS Chair
/iewing: PHYSI	CS 3001.001 : Computational Physics Laboratory	2. CCC Secretary
ile: 4662		3. Sciences DSCC
ast edit: 09/16/19		Chair 4. Pending CCC
Changes proposed b	y: juliaem	4. Pending CCC Agenda post
Requested	Spring 2020	5. CCC Meeting
Effective Change Date		Agenda
Department	Physics	6. Campus Curricul Committee Chair
•	Physics	7. CAT entry
Discipline	Physics (PHYSICS)	8. Registrar
Course Number	3001	I I
Topic ID	001	Approval Path
Experimental Title	Computational Physics Laboratory	1. 08/21/19 5:24 pr Thomas Vojta
Experimental Abbreviated Course Title	Compt Physics Lab	(vojtat): Approved for RPHYSICS Chair
Instructors	Dr. Julia Medvedeva	2. 08/22/19 3:49 pr
Experimental Catalog Description	Computational project-based studies in the areas of fundamental and applied physics including condensed matter physics, statistical physics, optics, atomic physics, soft-matter physics, astrophysics, etc. The semester-long computational projects will be targeted to various levels of programming skills.	Brittany Parnell (ershenb): Approved for CCC Secretary 3. 09/05/19 10:52
Droroguisitos		am
Prerequisites	Physics 2305 or Physics 2311.	Katie Shannon (shannonk):
Field Trip Statement	N/A	Approved for
Credit Hours	LEC: 0 LAB: 3 IND: 0 RSD: 0 Total: 3	Sciences DSCC
Credit Hours	EEC. 0 LAB. 5 IND. 0 NSD. 0 Total. 5	Chair
Justification for new course:	Computational skills are widely required in many research areas as well as in the current job market. The course will not require prior programming skills, thus, manundergraduates in physics and engineering will be able to benefit from this course. This course will have a major hands-on research-like component, thus, qualifies as experiential learning.	(ershenb):
Semester(s)	None	5. 10/02/19 3:54 pr
previously taught		Brittany Parnell
Co-Listed Courses:		(ershenb): Approved for CC
Course Reviewer		Meeting Agenda 6. 10/02/19 3:58 pr
Comments		Stephen Raper
		(sraper): Approved for

Campus Curricula Committee Chair 7. 10/03/19 8:52 am Marita Tibbetts (tibbettsmg): Approved for CAT entry

Date Submitted: 07/	New Experimental Course Proposal	In Workflow
·		1. RMATHEMA
_	5001.002 : Statistical Data Analysis Using R	Chair
File: 4651		2. CCC Secretary 3. Sciences DSCC
Last edit: 09/16/19		Chair
Changes proposed b		4. Pending CCC
Requested	Spring 2020	Agenda post
Effective Change Date		5. CCC Meeting
	Adable and Aire O Chabinting	Agenda
Department	Mathematics & Statistics	6. Campus Curricula Committee Chair
Discipline	Statistics (STAT)	7. CAT entry
Course Number	5001	8. Registrar
Topic ID	002	_
Experimental	Statistical Data Analysis Using R	Approval Path
Title	-	1. 07/22/19 10:06
Experimental	Data Analysis Using R	am
Abbreviated		vsam: Approved
Course Title		for RMATHEMA
Instructors	Dr. Robert Paige	Chair 2. 07/22/19 10:17
		am
Experimental Catalog	This course will introduce the student to common data analytic tools implemented in the R programming language and their appropriate and effective use. The focus	Brittany Parnell
Description	will be on the use of R for data analysis and a discussion of theoretical	(ershenb):
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	underpinnings of the methods implemented.	Approved for CCC
Prerequisites	One of the following: Stat 3113, Stat 3115, Stat 3117 or Stat 5643; and one of the	Secretary
	following: Stat 5346, Stat 5353, Stat 6841, Stat 6343, Stat 6344, or Stat 6545.	3. 08/11/19 10:22 pm
Field Trip		Katie Shannon
Statement		(shannonk):
Credit Hours	LEC: 3 LAB: 0 IND: 0 RSD: 0 Total: 3	Approved for
Create Flours	1.00.0	Sciences DSCC
Justification for	R is arguably the most widely used statistical software package today. A statistical	Chair 4. 09/16/19 4:10 pr
new course:	data analysis course using R would serve students in Mathematics and Statistics as	Brittany Parnell
	well as many other students from around campus who need to analyze real data.	(ershenb):
Semester(s)	None	Approved for
previously taught		Pending CCC
Co-Listed		Agenda post
Courses:		5. 10/02/19 3:58 pr Brittany Parnell
Course Reviewer		(ershenb):
Comments		Approved for CCC
	Кеу: 4651	Meeting Agenda
		6. 10/02/19 3:58 pr
		Stephen Raper (sraper):

Approved for Campus Curricula Committee Chair 7. 10/03/19 8:54 am Marita Tibbetts (tibbettsmg): Approved for CAT entry