



**Minutes of the Campus Curricula Committee Meeting**

**May 8, 2019**

**9:00am, Bertelsmeyer 110H**

**(For Faculty Senate Meeting of June 13, 2019)**

**Attendees:** Steve Raper, Petra Dewitt, Barry Flachsbart, Kyle Perry, Katie Shannon, Kristy Giacomelli and Brittany Parnell

The following curriculum forms were discussed and approved:

**Course Change Forms:**

File: 4406.5	BUS 5230: Financial Statement Analysis
File: 4282.12	CHEM ENG 3131: Separations in Chemical and Biochemical Engineering
File: 998.1	CIV ENG 3330: Engineering Fluid Mechanics
File: 1992.1	CIV ENG 3334: Water Resources Engineering
File: 841.1	CIV ENG 4448: Fundamentals Of Contracts And Construction Engineering
File: 110.6	COMP SCI 1200: Discrete Mathematics for Computer Science
File: 4616	COMP SCI 1500: Computational Problem Solving
File: 468.1	COMP SCI 1570: Introduction To C++ Programming
File: 2418.1	COMP SCI 3610_Computer Networks
File: 184.4	COMP SCI 3800: Introduction to Operating Systems
File: 4619	COMP SCI 4090: Software Engineering Capstone I
File: 4620	COMP SCI 4091: Software Engineering Capstone II
File: 637.1	COMP SCI 4610: Computer Security
File: 118.3	EDUC 2102: Educational Psychology
File: 898.6	ELEC ENG 5210: Fourier Optics
File: 2566.6	FINANCE 5160: Corporate Finance II
File: 2190.8	FINANCE 5260: Investments I
File: 1781.1	GEO ENG 3249: Fundamentals Of Computer Applications In Geological Engineering
File: 1052.1	GEO ENG 5381: Intermediate Subsurface Hydrology And Contaminant Transport Mechs
File: 1532.1	MIL AIR 1110: Air Force Heritage and Values I
File: 1390.1	MIL AIR 1120: Air Force Heritage and Values II
File: 418.1	MIL AIR 2110: Team and Leadership Fundamentals I
File: 1092.1	MIL AIR 2120: Team and Leadership Fundamentals II
File: 419.1	MIL AIR 3110: Leading People & Effective Communication I
File: 1093.1	MIL AIR 3120: Leading People & Effective Communication II
File: 420.1	MIL AIR 4110: National Security, Leadership Responsibilities & Commissioning Preparation I

File: 748.1	MIL AIR 4120: National Security, Leadership Responsibilities & Commissioning Preparation II
File: 4087.3	NUC ENG 4577: Nuclear Forensics and Radiochemistry
File: 4623	NUC ENG 5577: Advanced Nuclear Forensics and Radiochemistry
File: 4189.4	PET ENG 3320: Petrophysics
File: 1045.2	PET ENG 3330: Well Logging
File: 2614.1	PET ENG 3520: Petroleum Reservoir Engineering
File: 285.1	PET ENG 4097: Petroleum Engineering Design
File: 1671.6	PET ENG 4311: Reservoir Characterization
File: 1299.1	PET ENG 4431: Well Completion Design
File: 1266.1	PET ENG 4611: Secondary Recovery Of Petroleum
File: 919.1	PET ENG 4720: Mechanical Earth Modeling
File: 2142.1	PET ENG 4811: Offshore Petroleum Technology
File: 4175.2	PET ENG 6431: Advanced Well Completion Design
File: 79.1	PET ENG 6621: Advanced Applied Reservoir Simulation

**Degree Change Forms:**

File: 142.43	AP MATH-BS: Applied Mathematics BS
File: 237.20	BIOMED-MI: Biomedical Engineering Minor
File: 28.44	CMP SC-BS: Computer Science BS
File: 29.11	CMP SC-MI: Computer Science Minor
File: 161.5	CP ENG-MS: Computer Engineering MS
File: 162.2	CP ENG-PHD: Computer Engineering PhD
File: 163.5	EL ENG-MS: Electrical Engineering MS
File: 164.2	EL ENG-PHD: Electrical Engineering PhD
File: 46.11	ENG MG-MS: Engineering Management MS
File: 58.15	FINANCE-MI: Finance Minor
File: 156.24	GE ENG-BS: Geological Engineering BS
File: 64.25	GL&GPH-BS: Geology and Geophysics BS
File: 70.4	GLBLSTD-MI: Global Studies Minor
File: 108.29	PE ENG-BS: Petroleum Engineering BS
File: 115.30	PHYSIC-BS: Physics BS
File: 172.3	PHYSIC-MS: Physics MS
File: 215.1	PHYSIC-PHD: Physics PhD
File: 192.33	PSYCH-BA: Psychology BA
File: 193.29	PSYCH-BS: Psychology BS
File: 131.13	SYS EN-PHD: Systems Engineering PhD
File: 140.8	SYS ENG-MS: Systems Engineering MS

**Experimental Course Forms:**

File: 4628	CHEM ENG 5001.005: AIChE Design Competition
File: 4629	CHEM ENG 5001.006: Chemical Process Modeling and Analysis
File: 4627	CHEM ENG 5001.007: Renewable Energy Processes
File: 4621	CIV ENG 5001.003: Base Courses in Pavements
File: 4596	COMP SCI 5001.003: Game Theory for Computing
File: 4598	COMP SCI 5001.004: Introduction to Virtual Reality
File: 4597	COMP SCI 6001.003: Algorithmic Game Theory
File: 4595	COMP SCI 6001.004: Introduction to Quantum Computing
File: 4622	GEOPHYS 6001.001: Advanced Geophysical Data Analysis
File: 4626	MATH 5001.002: Introduction to Finite Element Methods
File: 4625	MATH 6001.005: Discontinuous Galerkin Methods for Solving Partial Differential Equations
File: 4632	MATH 6001.006: Numerical Analysis in Computational Fluid Dynamics
File: 4630	PET ENG 4001.006: Reservoir Engineering Aspects of Unconventional Oil and Gas
File: 4631	PET ENG 6001.011: Advanced Reservoir Engineering Aspects of Unconventional Oil and Gas
File: 4617	PHYSICS 6001.001: Random Processes and Wave Coherence

**The new course proposal, *CHEM ENG 5240: Pharmaceutical Engineering*, was not approved due to low enrollment as an experimental course per the Chancellor's No. II-30 policy.**

**The new course proposal, *NUC ENG 5577: Advanced Nuclear Forensics and Radiochemistry*, was approved as required of the proposed Nuclear Nonproliferation Graduate Certificate. The Campus Curricula Committee advises that it is not customary practice to approve a required, new course proposal for a graduate certificate that is pending approval.**

**The degree form, *CP ENG-BS Computer Engineering*, was approved to remove the listing of ELEC ENG 3411 from Footnote 9.**

The meeting adjourned at 10:24 a.m.



Stephen A. Raper, Chair  
Missouri S&T Campus Curricula Committee

## Course Change Request

Date Submitted: 04/13/19 5:42 pm

Viewing: **BUS 5230 : Financial Statement Analysis**

File: 4406.5

Last approved: 05/01/17 3:14 am

Last edit: 04/15/19 8:24 am

Changes proposed by: barryf

Programs referencing this course	<a href="#">BUS&amp;MS-BS: Business and Mgmt Systems BS</a> <a href="#">FIN TCH-MI: Minor in Financial Technology (FinTech)</a> <a href="#">FINANCE-CT: Finance CT</a> <a href="#">FIN TCH-CT: Financial Technology CT</a> <a href="#">FINANCE-MI: Finance Minor</a>
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Requested	Fall 2019 <del>08/14/2017</del>
Effective Change Date	
Department	Business and Information Technology
Discipline	Business (BUS)
Course Number	5230
Title	Financial Statement Analysis
Abbreviated Course Title	Financial Stmt Analysis

Catalog Description	Analysis and interpretation of financial statements for profitability analysis, credit analysis, and other business analyses that rely on financial data. Introduces emerging roles of accounting analytics. Illustrates data analytics concepts and techniques to detect earning management, predict fraud, and to provide insights into other business strategies.				
Prerequisites	<b>Finance 2150 or equivalent basic corporate finance knowledge.</b> <del>FINANCE 2150 or Graduate Standing.</del>				
Field Trip Statement					
Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3
Required for Majors	No				
Elective for Majors	Yes				

Justification for change:	Most graduate students have not come through our undergraduate program and have not taken our course on corporate finance (2150). This clarifies that the knowledge is needed, even if the specific course has not been taken. For undergrads, FIN 2150 continues to be appropriate.
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- In Workflow
1. RBUSADMN 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. 04/14/19 12:51 am  
siauk: Approved for RBUSADMN Chair
  2. 04/15/19 8:25 am  
Brittany Parnell (ershenb): Approved for CCC Secretary
  3. 04/15/19 12:43 pm  
Barry Flachsbart (barryf): Approved for Social Sciences DSCC Chair
  4. 04/18/19 9:06 am  
Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
  5. 05/08/19 11:10 am

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

Course Reviewer  
Comments

Brittany Parnell  
(ershenb):  
Approved for CCC  
Meeting Agenda  
6. 05/08/19 11:54  
am  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair

Key: 4406

### History

1. May 1, 2017 by  
Barry Flachsbart  
(barryf)

[Preview Bridge](#)

## Course Change Request

Date Submitted: 03/26/19 4:59 pm

Viewing: **CHEM ENG 3131 : Separations in Chemical and Biochemical Engineering**

File: 4282.12

Last approved: 03/06/17 3:15 am

Last edit: 04/04/19 6:29 pm

Changes proposed by: jcwang

In Workflow

1. **RCHEMENG 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

Programs referencing this course	<a href="#">CH ENG-BS: Chemical Engineering BS</a>
Other Courses referencing this course	<p>In The Prerequisites:</p> <p><a href="#">CHEM ENG 4091 : Chemical Process Design I</a></p> <p><a href="#">CHEM ENG 4110 : Chemical Engineering Process Dynamics And Control</a></p> <p><a href="#">CHEM ENG 4130 : Chemical Engineering Laboratory II</a></p> <p><a href="#">CHEM ENG 5250 : Isolation and Purification of Biologicals</a></p>

Requested Effective Change Date	<b>Spring 2020</b> <del>08/14/2017</del>
Department	Chemical and Biochemical Engineering
Discipline	Chemical Engineering (CHEM ENG)
Course Number	3131
Title	Separations in Chemical and Biochemical Engineering
Abbreviated Course Title	<b>Process Biochemical</b> Separations

Approval Path

1. 04/04/19 5:09 pm  
Muthanna Al-Dahhan (aldahhanm):  
Approved for RCHEMENG Chair
2. 04/04/19 6:29 pm  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 04/19/19 8:53 am  
Stephen Raper (srafer):  
Approved for Engineering DSCC Chair
4. 04/23/19 11:22 am  
Brittany Parnell (ershenb):

Catalog Description	Flash and column distillation. McCabe-Thiele method, plate efficiencies. Azeotropes. Batch distillation. Absorption and stripping. Washing and leaching.
Prerequisites	Chem Eng 3101, Chem Eng 3111, and Chem Eng 3120. Admitted to the Chemical Engineering Program.
Field Trip Statement	

Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3	Approved for Pending CCC Agenda post
Required for Majors	Yes					5. 05/08/19 11:11 am
Elective for Majors	No					Brittany Parnell (ershenb):
Justification for change:	Change the abbreviated title to avoid possible confusion with another bioseparation-related course in the same department (ChE 5250).					Approved for CCC Meeting Agenda
Semesters previously offered as an experimental course						6. 05/08/19 11:54 am
Co-Listed Courses:						Stephen Raper (sraper):
Course Reviewer Comments						Approved for Campus Curricula Committee Chair
						<b>History</b>
						1. Jan 10, 2017 by Daniel Forciniti (forcinit)
						2. Mar 6, 2017 by kristyg (4282.11)

Key: 4282

[Preview Bridge](#)

## Course Change Request

Date Submitted: 02/07/19 10:05 am

Viewing: **CIV ENG 3330 : Engineering Fluid Mechanics**

File: 998.1

Last edit: 05/08/19 11:12 am

Changes proposed by: seelyj

Programs referencing this course	<a href="#">PE ENG-BS: Petroleum Engineering BS</a> <a href="#">AP MATH-BS: Applied Mathematics BS</a> <a href="#">ARC ENG-BS: Architectural Engineering BS</a> <a href="#">CV ENG-BS: Civil Engineering BS</a> <a href="#">GE ENG-BS: Geological Engineering BS</a> <a href="#">EV ENG-BS: Environmental Engineering BS</a>
Other Courses referencing this course	In The Prerequisites: <a href="#">ARCH ENG 4800 : Principles of HVAC I</a> <a href="#">CHEM ENG 6330 : Physicochemical Operations In Environmental Engineering Systems</a> <a href="#">CIV ENG 3333 : Engineering Hydrology</a> <a href="#">CIV ENG 3334 : Water Resources Engineering</a> <a href="#">CIV ENG 3335 : Hydraulic Engineering</a> <a href="#">CIV ENG 3715 : Fundamentals of Geotechnical Engineering</a> <a href="#">CIV ENG 5330 : Unsteady Flow Hydraulics</a> <a href="#">CIV ENG 5331 : Hydraulics Of Open Channels</a> <a href="#">CIV ENG 5332 : Transport Processes in Environmental Flows</a> <a href="#">CIV ENG 5333 : Intermediate Hydraulic Engineering</a> <a href="#">CIV ENG 5335 : Water Infrastructure Engineering</a> <a href="#">CIV ENG 5337 : River Mechanics And Sediment Transport</a> <a href="#">CIV ENG 5660 : Introduction To Air Pollution</a> <a href="#">CIV ENG 5662 : Air Pollution Control Methods</a> <a href="#">CIV ENG 6331 : Advanced Hydraulics And Hydraulic Engineering</a> <a href="#">CIV ENG 6611 : Physicochemical Operations In Environmental Engineering Systems</a> <a href="#">CIV ENG 6612 : Biological Operations In Environmental Engineering Systems</a> <a href="#">ENV ENG 5660 : Introduction To Air Pollution</a> <a href="#">ENV ENG 5662 : Air Pollution Control Methods</a> <a href="#">ENV ENG 6611 : Physicochemical Operations In Environmental Engineering Systems</a> <a href="#">ENV ENG 6612 : Biological Operations In Environmental Engineering Systems</a> <a href="#">GEO ENG 5320 : Groundwater Modeling</a> <a href="#">GEO ENG 5381 : Intermediate Subsurface Hydrology And</a>

### 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
10. CAT entry
11. Peoplesoft

### Approval Path

1. 03/13/19 5:48 am  
Joel Burken (burken):  
Approved for RCIVILEN Chair
2. 03/13/19 8:05 am  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 03/25/19 1:58 pm  
Stephen Raper (sraper):  
Approved for Engineering DSCC Chair
4. 04/23/19 11:23 am  
Brittany Parnell (ershenb):  
Approved for

[Contaminant Transport Mechs](#)  
[MECH ENG 5571 : Environmental Controls](#)  
[MECH ENG 5575 : Mechanical Systems For Environmental Control](#)  
[MIN ENG 5113 : Mine Atmosphere Control](#)  
[MIN ENG 5912 : Mine Power and Drainage](#)  
[PET ENG 6811 : Advanced Offshore Petroleum Technology](#)

- Pending CCC Agenda post
- 5. 05/08/19 11:13 am  
Brittany Parnell (ershenb):  
Approved for CCC Meeting Agenda
- 6. 05/08/19 11:54 am  
Stephen Raper (sraper):  
Approved for Campus Curricula Committee Chair

Requested **Fall 2019** ~~08/14/2018~~  
 Effective Change Date  
 Department Civil, Architectural, and Environmental Engineering  
 Discipline Civil Engineering (CIV ENG)  
 Course Number 3330  
 Title Engineering Fluid Mechanics  
 Abbreviated Course Title Engineering Fluid Mechanics

Catalog Description Study of fluids at rest and in motion. Topics include fluid properties, statics of fluids, and the control volume approach to conservation of mass, momentum and energy. Applications include flow in pipes, pipe systems, external flow, and fluid flow measurements.

Prerequisites **A grade of "C" or better in Math 3304** ~~Mech Eng 2350 or Mech Eng 2340~~, and **in one of Mech Eng 2340, Mech Eng 2350 or Mech 2360. MATH 3304, each with a grade of "C" or better.**

Field Trip Statement

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

Required for Majors **Yes** ~~No~~

Elective for Majors No

Justification for change: All three Dynamics courses will work as a prerequisite for this class.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer **sraper (03/25/19 1:58 pm)**: Changed prereq as suggested by DSCC member.  
Comments **ershenb (05/08/19 11:12 am)**: checked "Yes" for majors.

Key: 998

[Preview Bridge](#)

# Course Change Request

Date Submitted: 02/07/19 10:08 am

Viewing: **CIV ENG 3334 : Water Resources Engineering**

File: 1992.1

Last edit: 05/08/19 11:14 am

Changes proposed by: seelyj

Programs referencing this course	<a href="#">CV ENG-BS: Civil Engineering BS</a> <a href="#">EV ENG-BS: Environmental Engineering BS</a>
Other Courses referencing this course	In The Prerequisites: <a href="#">CIV ENG 5338 : Hydrologic Engineering</a>

- 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
  10. CAT entry
  11. Peoplesoft

Requested **Fall 2019** ~~08/14/2018~~  
 Effective Change Date  
 Department Civil, Architectural, and Environmental Engineering  
 Discipline Civil Engineering (CIV ENG)  
 Course Number 3334  
 Title Water Resources Engineering  
 Abbreviated Water Resources Engr  
 Course Title

- Approval Path
1. 03/13/19 5:48 am Joel Burken (burken): Approved for RCIVILEN Chair
  2. 03/13/19 8:08 am Brittany Parnell (ershenb): Approved for CCC Secretary
  3. 03/25/19 1:59 pm Stephen Raper (sraper): Approved for Engineering DSCC Chair
  4. 04/23/19 11:24 am Brittany Parnell (ershenb): Approved for

Catalog Description	An introduction to the engineering of water resources; flow in closed conduits, pumps, flow in open channels, surface water hydrology, rainfall analysis, hydrograph analysis, flow routing; and ground-water hydrology.				
Prerequisites	<b>A grade of "C" or better in Civ Eng 3330 and in one of Stat 3111, Stat 3113, Stat 3115, or Stat 3117. <del>3113 with grades of "C" or better.</del></b>				
Field Trip Statement					
Credit Hours	LEC: 3	LAB: 1	IND: 0	RSD: 0	Total: 4
Required for Majors	<b>Yes</b> <del>No</del>				

Elective for Majors	No	Pending CCC Agenda post
Justification for change:	All four 3000 level Stat classes will work as a prerequisite for this course.	5. 05/08/19 11:15 am
Semesters previously offered as an experimental course		Brittany Parnell (ershenb): Approved for CCC Meeting Agenda
Co-Listed Courses:		6. 05/08/19 11:54 am
Course Reviewer Comments	<b>sraper (03/25/19 1:59 pm):</b> Change prereq as suggested by DSCC member. <b>ershenb (05/08/19 11:14 am):</b> corrected spelling for "better" in prerequisites and checked "yes" required for majors	Stephen Raper (sraper): Approved for Campus Curricula Committee Chair

Key: 1992

[Preview Bridge](#)

## Course Change Request

Date Submitted: 02/07/19 11:57 am

Viewing: **CIV ENG 4448 : Fundamentals Of Contracts And Construction Engineering**

File: 841.1

Last edit: 03/25/19 2:00 pm

Changes proposed by: seelyj

Programs referencing this course  
[CV ENG-BS: Civil Engineering BS](#)  
[EV ENG-BS: Environmental Engineering BS](#)

Other Courses referencing this course  
In The Catalog Description:  
[ARCH ENG 4448 : Fundamentals Of Contracts And Construction Engineering](#)  
In The Prerequisites:  
[ARCH ENG 4097 : Senior Design Project](#)  
[ARCH ENG 5448 : Green Engineering: Analysis of Constructed Facilities](#)  
[CIV ENG 4097 : Senior Design Project](#)  
[CIV ENG 5445 : Construction Methods](#)  
[CIV ENG 5446 : Management Of Construction Costs](#)  
[CIV ENG 5448 : Green Engineering: Analysis of Constructed Facilities](#)  
[CIV ENG 5449 : Engineering and Construction Contract Specifications](#)  
[ENV ENG 4097 : Senior Design Project](#)

Requested **Fall 2019 ~~08/14/2018~~**  
 Effective Change Date  
 Department Civil, Architectural, and Environmental Engineering  
 Discipline Civil Engineering (CIV ENG)  
 Course Number 4448  
 Title Fundamentals Of Contracts And Construction Engineering  
 Abbreviated Course Title Fund Contract & Const En

Catalog 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
10. CAT entry
11. Peoplesoft

Approval Path

1. 03/13/19 5:48 am  
Joel Burken (burken):  
Approved for RCIVILEN Chair
2. 03/13/19 8:08 am  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 03/25/19 2:00 pm  
Stephen Raper (sraper):  
Approved for Engineering DSCC Chair
4. 04/23/19 11:24 am  
Brittany Parnell (ershenb):  
Approved for

A study of the concepts and techniques used in large construction projects for the preparation of engineer service contracts, the development of a project manual, detailed and conceptual cost estimating, and construction scheduling analysis.						Pending CCC Agenda post 5. 05/09/19 11:15 am Brittany Parnell (ershenb): Approved for CCC Meeting Agenda 6. 05/09/19 1:21 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair
Prerequisites <b>Junior</b> <del>Senior</del> Standing.						
Field Trip Statement						
Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3	
Required for Majors	<b>Yes</b> <del>No</del>					
Elective for Majors	No					

Justification for change: Allow students to enroll in class earlier to allow time for upper level depth in the construction area.

Semesters previously offered as an experimental course

Co-Listed Courses: ARCH ENG 4448 - Fundamentals Of Contracts And Construction Engineering

Course Reviewer Comments	<b>sraper (03/25/19 2:00 pm):</b> Changed to required for major. DSCC member does not like junior standing.
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Key: 841

[Preview Bridge](#)

## Course Change Request

Date Submitted: 04/01/19 5:33 am

Viewing: **COMP SCI 1200 : Discrete Mathematics for Computer Science**

File: 110.6

Last approved: 02/05/18 3:29 am

Last edit: 04/01/19 5:33 am

Changes proposed by: tauritzd

Programs referencing this course	<a href="#">CP ENG-BS: Computer Engineering BS</a> <a href="#">CMP SC-BS: Computer Science BS</a>
Other Courses referencing this course	In The Prerequisites: <a href="#">COMP SCI 2200 : Theory of Computer Science</a> <a href="#">COMP SCI 2500 : Algorithms</a> <a href="#">COMP SCI 2889 : Introduction To Computer Organization And Assembly</a> <a href="#">COMP SCI 3800 : Introduction to Operating Systems</a> <a href="#">COMP SCI 5300 : Database Systems</a> <a href="#">MATH 5107 : Combinatorics And Graph Theory</a> <a href="#">PHILOS 3254 : Symbolic Logic in Argumentation</a>

Requested Effective Change Date	<b>Spring 2020</b> <del>08/14/2018</del>
Department	Computer Science
Discipline	Computer Science (COMP SCI)
Course Number	1200
Title	Discrete Mathematics for Computer Science
Abbreviated Course Title	Discrete Math For Cmp Sc

### Catalog Description

**This course provides a** rigorous treatment of topics from discrete mathematics which are essential to computer science. Principal topics include: formal logic (propositional & predicate), **set theory**, proof techniques, mathematical induction, program correctness, ~~sets~~, combinatorics, **discrete** probability, relations, functions, matrices, ~~graph theory~~ and graph **theory**. ~~algorithms~~.

### In Workflow

1. **RCOMPSCI 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. 03/29/19 3:17 pm  
Bruce McMillin (ff): Rollback to Initiator
2. 04/01/19 8:09 am  
Bruce McMillin (ff): Approved for RCOMPSCI Chair
3. 04/01/19 4:30 pm  
Brittany Parnell (ershenb): Approved for CCC Secretary
4. 04/15/19 10:36 am  
Stephen Raper (sraper): Approved for Engineering DSCC Chair

<p>Prerequisites A grade of "C" or better in <b>either</b> <del>both</del> Comp Sci <b>1500 or Comp Sci 1570</b> and <b>in</b> one of Math 1120, Math 1140, Math 1208, <del>or and</del> Math 1214.</p> <p>Field Trip Statement</p> <table border="0"> <tr> <td>Credit Hours</td> <td>LEC: 3</td> <td>LAB: 0</td> <td>IND: 0</td> <td>RSD: 0</td> <td>Total: 3</td> </tr> <tr> <td>Required for Majors</td> <td colspan="5">Yes</td> </tr> <tr> <td>Elective for Majors</td> <td colspan="5">No</td> </tr> </table>	Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3	Required for Majors	Yes					Elective for Majors	No					<p>5. 04/23/19 11:39 am Brittany Parnell (ershenb): Approved for Pending CCC Agenda post</p> <p>6. 05/09/19 11:17 am Brittany Parnell (ershenb): Approved for CCC Meeting Agenda</p>
Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3														
Required for Majors	Yes																		
Elective for Majors	No																		
<p>Justification for change: Minor update of the course description, correction of the prereqs, and addition of the new course Comp Sci 1500 as alternative prereq to Comp Sci 1570.</p> <p>Semesters previously offered as an experimental course</p> <p>Co-Listed Courses:</p>	<p>7. 05/09/19 1:21 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair</p> <p><b>History</b></p> <ol style="list-style-type: none"> <li>1. Apr 28, 2014 by lahne (110.1)</li> <li>2. Feb 5, 2018 by tauritzd (110.2)</li> </ol>																		
<p>Course Reviewer Comments <b>ff (03/29/19 3:17 pm):</b> Rollback: can you put the removal of program correctness on hold until we discuss more - this is a specific example noted by the ACM/IEEE curriculum DS/Basic Logic. Moreover, the theory measurement of student outcomes 6 for discrete math shows that students are consistently not meeting standards, so it would appear that more application, rather than less, are needed.</p>																			

Key: 110

[Preview Bridge](#)

# Course Change Request

## New Course Proposal

Date Submitted: 03/29/19 3:49 pm

Viewing: **COMP SCI 1500 : Computational Problem Solving**

File: 4616

Last edit: 03/29/19 3:49 pm

Changes proposed by: tauritzd

Programs referencing this course	<a href="#">CMP SC-BS: Computer Science BS</a> <a href="#">CMP SC-MI: Computer Science Minor</a>
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Requested	Fall 2019
Effective Change Date	
Department	Computer Science
Discipline	Computer Science (COMP SCI)
Course Number	1500
Title	Computational Problem Solving
Abbreviated Course Title	Computational Solving

Catalog Description	This course provides a rigorous introduction to computational problem solving, thinking, and debugging, for those with little-to-no experience in computer science. Language-agnostic foundations focus on pseudo-code, flowcharts, and software-based code tracing, then build to programming in a high-level interpreted language, with a focus on data and modeling.				
Prerequisites					
Field Trip Statement					
Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3
Required for Majors	Yes				
Elective for Majors	No				

Justification for new course: This course is part of the new BS in CS degree program being proposed (see DC form). It provides students campus-wide with a rigorous introduction to computational problem solving in a high-level programming language, and will be the prereq for the existing core CS course Comp Sci 1570. The justification for creating this new first core course in the program is three-fold, namely:  
 (a) This program's ABET student outcome 2 as measured by the Introductory Programming rubric in CS 1570, has been failing consistently for several years, indicating that students are not grasping programming fundamentals. The new

- In Workflow
1. RCOMPSCI 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. 03/29/19 3:15 pm  
Bruce McMillin (ff): Rollback to Initiator
  2. 03/29/19 3:47 pm  
Bruce McMillin (ff): Rollback to Initiator
  3. 03/29/19 3:52 pm  
Bruce McMillin (ff): Approved for RCOMPSCI Chair
  4. 04/01/19 4:29 pm  
Brittany Parnell (ershenb): Approved for CCC Secretary
  5. 04/15/19 10:37 am  
Stephen Raper (sraper): Approved for Engineering DSCC Chair
  6. 04/23/19 11:39 am

course CS1500 addresses this by providing a significant grounding in programming fundamentals before the students cover more advanced programming topics in CS1570 and more advanced data structures in CS1575.

(b) Aligning this course with one of the core goals of the First Year Experience (FYE), namely to provide all FYE students with an experience reflective of what CS is really about to help them decide whether this is the right major for them.

(c) Diversifying the CS student body by attracting non-traditional majors by showcasing societal impact through computational problem solving rather than ignoring societal impact by narrowly focusing on the technicalities of low-level programming.

Semesters  
previously  
offered as an  
experimental  
course

None. We're skipping experimental status as this is a required course for the new BS in CS degree program being proposed (see DC form).

Co-Listed  
Courses:

- Brittany Parnell  
(ershenb):  
Approved for  
Pending CCC  
Agenda post  
7. 05/09/19 11:17  
am  
Brittany Parnell  
(ershenb):  
Approved for CCC  
Meeting Agenda  
8. 05/09/19 1:22 pm  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair

Course Reviewer **ff (03/29/19 3:15 pm):** Rollback: This needs to be justified in terms of failing  
Comments measurement of ABET student outcome 2 as measured by the Introductory  
Programming rubric in CS 1570 for several years, consistently.  
**ff (03/29/19 3:47 pm):** Rollback: Missing clause in 1500 in writeup

Key: 4616

[Preview Bridge](#)

## Course Change Request

Date Submitted: 03/27/19 6:38 am

Viewing: **COMP SCI 1570 : Introduction To C++ Programming**

File: 468.1

Last edit: 04/02/19 11:45 am

Changes proposed by: tauritzd

Programs referencing this course	<a href="#">PHYSIC-BS: Physics BS</a> <a href="#">AP MATH-BS: Applied Mathematics BS</a> <a href="#">CH ENG-BS: Chemical Engineering BS</a> <a href="#">CP ENG-BS: Computer Engineering BS</a> <a href="#">EL ENG-BS: Electrical Engineering BS</a> <a href="#">PSYCH-BS: Psychology BS</a> <a href="#">CMP SC-BS: Computer Science BS</a> <a href="#">CMP SC-MI: Computer Science Minor</a> <a href="#">MC ENG-BS: Mechanical Engineering BS</a>
Other Courses referencing this course	In The Prerequisites: <a href="#">AERO ENG 5139 : Computational Fluid Dynamics</a> <a href="#">AERO ENG 5449 : Robotic Manipulators and Mechanisms</a> <a href="#">AERO ENG 5830 : Applied Computational Methods</a> <a href="#">BIO SCI 5323 : Bioinformatics</a> <a href="#">CHEM ENG 3111 : Numerical Computing in Chemical and Biochemical Engineering</a> <a href="#">COMP ENG 3150 : Introduction to Microcontrollers and Embedded System Design</a> <a href="#">COMP ENG 3151 : Digital Engineering Lab II</a> <a href="#">COMP SCI 1200 : Discrete Mathematics for Computer Science</a> <a href="#">COMP SCI 1575 : Data Structures</a> <a href="#">COMP SCI 1580 : Introduction To Programming Laboratory</a> <a href="#">COMP SCI 2501 : Java and Object Oriented Design</a> <a href="#">COMP SCI 5700 : Bioinformatics</a> <a href="#">GEOPHYS 5251 : Introduction To Geophysical Data Analysis</a> <a href="#">MECH ENG 2519 : Thermodynamics</a> <a href="#">MECH ENG 3313 : Machine Dynamics</a> <a href="#">MECH ENG 3411 : Modeling and Analysis of Dynamic Systems</a> <a href="#">MECH ENG 3525 : Heat Transfer</a> <a href="#">MECH ENG 5139 : Computational Fluid Dynamics</a> <a href="#">MECH ENG 5449 : Robotic Manipulators and Mechanisms</a> <a href="#">MECH ENG 5763 : Computer Aided Design: Theory and Practice</a> <a href="#">MECH ENG 5830 : Applied Computational Methods</a>

### In Workflow

1. **RCOMPSCI 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. 03/29/19 3:13 pm  
Bruce McMillin (ff): Approved for RCOMPSCI Chair
2. 04/02/19 11:46 am  
Brittany Parnell (ershenb): Approved for CCC Secretary
3. 04/15/19 12:34 pm  
Stephen Raper (sraper): Approved for Engineering DSCC Chair
4. 04/23/19 11:40 am  
Brittany Parnell (ershenb):

Requested **Spring 2020 08/14/2018**  
 Effective Change  
 Date  
 Department Computer Science  
 Discipline Computer Science (COMP SCI)  
 Course Number 1570  
 Title Introduction To **C++** Programming  
 Abbreviated Intro To **C++** Programming  
 Course Title

Approved for  
 Pending CCC  
 Agenda post  
 5. 05/09/19 11:17  
 am  
 Brittany Parnell  
 (ershenb):  
 Approved for CCC  
 Meeting Agenda  
 6. 05/09/19 1:22 pm  
 Stephen Raper

## Catalog

## Description

**Object-Oriented** Programming design and development **in using** C++. Emphasis placed on ~~problem-solving methods using~~ good programming **practices. practices and algorithm design and development. Topics **include included are** syntax/semantics, ~~logical, relational and arithmetic~~ operators, **control flow/decision decision** branching, ~~loops,~~ functions, file I/O, **C-strings**, arrays, **memory management, pointers, classes, inheritance, templates, polymorphism, and exception handling.** ~~output formatting, C-strings, and an introduction to Object-Oriented Programming including the development and use of classes.~~ **This course is programming intensive.****

Prerequisites **A grade of "C" or better in Accompanied by** Comp Sci **1500 and accompanied by Comp Sci 1580.**

Field Trip  
Statement

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

Required for **Yes No**  
Majors

Elective for No  
Majors

Justification for change: In the new BS in CS degree program being proposed (see DC form), this course becomes the second in the programming course sequence, preceded by the new Comp Sci 1500 course which provides students campus-wide with a rigorous introduction to computational problem solving in a high-level programming language. Consequently, this course will be faster paced and extend coverage to more advanced C++ programming topics. The title is being changed to emphasize the treatment of C++ as opposed to being programming language agnostic like the new Comp Sci 1500.

Semesters  
previously  
offered as an

(sraper):

Approved for  
 Campus Curricula  
 Committee Chair

experimental  
course

Co-Listed  
Courses:

Course Reviewer  
Comments

Key: 468

[Preview Bridge](#)

# Course Change Request

Date Submitted: 03/29/19 3:29 pm

Viewing: **COMP SCI 3610 4600-: Computer Communications And Networks**

File: 2418.1

Last edit: 04/02/19 11:47 am

Changes proposed by: tauritzd

Programs referencing this course

[CMP SC-BS: Computer Science BS](#)

Requested **Fall 2019 08/14/2018**

Effective Change Date

Department Computer Science

Discipline Computer Science (COMP SCI)

Course Number **3610 4600**

Title Computer ~~Communications And~~-Networks

Abbreviated **Computer Networks Comp**

Course Title **Comm And Networks**

- In Workflow
1. RCOMPSCI 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. 03/29/19 3:12 pm  
Bruce McMillin (ff): Rollback to Initiator
  2. 03/29/19 3:31 pm  
Bruce McMillin (ff): Approved for RCOMPSCI Chair
  3. 04/02/19 11:49 am  
Brittany Parnell (ershenb): Approved for CCC Secretary
  4. 04/15/19 10:37 am  
Stephen Raper (sraper): Approved for Engineering DSCC Chair

Catalog Description

**This course covers general principles of computer networking, focusing primarily on internet protocols. It covers the TCP/IP stack, with the application layer first, moving down through link and physical layers. Topics include network virtualization, security, wireless, and mobile networks, with extensive live protocol analysis. Coursework is project based. ~~Network architecture model including physical protocols for data transmission and error detection/correction, data link concepts, LAN protocols, internetworking, reliable end-to-end service, security, and application services. Students will implement course concepts on an actual computer network.~~**

Prerequisites

A **grade of "C"** or better ~~grade~~ in Comp Sci 3800.

Field Trip Statement

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

Required for Majors <b>Yes <del>No</del></b> Elective for Majors <b>No</b>	5. 04/23/19 11:41 am Brittany Parnell (ershenb): Approved for
Justification for change: This course is required in the revised BS in CS (see DC form), moved to the 3000-level, and with an updated catalog description. This corrects the lack of coverage of computer networks in this program which is a Core-Tier1 requirement of the ACM/IEEE Computer Science Curricula 2013 - Curriculum Guidelines for Undergraduate Degree Programs in Computer Science.  Semesters previously offered as an experimental course  Co-Listed Courses:	Pending CCC Agenda post 6. 05/09/19 11:18 am Brittany Parnell (ershenb): Approved for CCC Meeting Agenda 7. 05/09/19 1:22 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair
Course Reviewer <b>ff (03/29/19 3:12 pm):</b> Rollback: ACM/IEEE curriculum requires networking as part of the BS in CS.	

Key: 2418

[Preview Bridge](#)

## Course Change Request

Date Submitted: 03/07/19 12:35 pm

Viewing: **COMP SCI 3800 : Introduction to Operating Systems**

File: 184.4

Last approved: 06/20/18 3:40 am

Last edit: 03/07/19 12:35 pm

Changes proposed by: tauritzd

Programs referencing this course	<a href="#">CP ENG-BS: Computer Engineering BS</a> <a href="#">CMP SC-BS: Computer Science BS</a>
Other Courses referencing this course	<p>In The Prerequisites:</p> <a href="#">COMP ENG 5170 : Real-Time Systems</a> <a href="#">COMP SCI 3601 : Digital Forensics</a> <a href="#">COMP SCI 3610 : Computer Communications And Networks</a> <a href="#">COMP SCI 4601 : Computer Network Concepts And Technology</a> <a href="#">COMP SCI 5205 : Real-Time Systems</a> <a href="#">COMP SCI 5600 : Computer Networks</a> <a href="#">COMP SCI 5800 : Distributed Computing</a> <a href="#">COMP SCI 5801 : The Structure Of Operating Systems</a> <a href="#">COMP SCI 5802 : Introduction to Parallel Programming and Algorithms</a>

Requested Effective Change Date	<b>Fall 2019 08/14/2018</b>
Department	Computer Science
Discipline	Computer Science (COMP SCI)
Course Number	3800
Title	Introduction to Operating Systems
Abbreviated Course Title	Intro To Operating Syst

Catalog Description	<p>This course teaches the concepts, structure, and mechanisms of Operating Systems. Topics include process management, concurrency, synchronization, deadlock, multithreading, memory management, scheduling, and internetworking. Special emphasis is given to Unix and its modern-day derivatives.</p>
---------------------	---

### In Workflow

1. **RCOMPSCI 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. 03/08/19 1:35 pm  
Bruce McMillin (ff): Approved for RCOMPSCI Chair
2. 03/12/19 11:13 am  
Brittany Parnell (ershenb): Approved for CCC Secretary
3. 03/25/19 2:01 pm  
Stephen Raper (sraper): Approved for Engineering DSCC Chair
4. 04/23/19 11:42 am  
Brittany Parnell (ershenb): Approved for

<p>Prerequisites                  A grade of "C" or better in <b>both</b> <del>all of</del> Comp Sci <b>1575</b> <del>1575, Comp Sci 1200,</del> and Comp Eng <b>2210</b>. <del>3150.</del></p>						Pending CCC Agenda post 5. 05/09/19 11:18 am Brittany Parnell (ershenb): Approved for CCC Meeting Agenda 6. 05/09/19 1:22 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair
<p>Field Trip Statement</p>						
Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3	
Required for Majors	Yes					History 1. Jun 20, 2018 by tauritzd (184.1)
Elective for Majors	No					
<p>Justification for change:                  Instructor has determined that the prereq knowledge of Comp Sci 1575 and Comp Eng 2210 are sufficient for successful completion of this course.</p>						
<p>Semesters previously offered as an experimental course</p>						
<p>Co-Listed Courses:</p>						
<p>Course Reviewer Comments</p>						

Key: 184

[Preview Bridge](#)

## Course Change Request

### New Course Proposal

Date Submitted: 03/27/19 6:44 am

Viewing: **COMP SCI 4090 : Software Engineering Capstone I**

File: 4619

Last edit: 03/27/19 10:23 am

Changes proposed by: tauritzd

Programs  
referencing this  
course

[CMP SC-BS: Computer Science BS](#)

Requested	Fall 2019
Effective Change Date	
Department	Computer Science
Discipline	Computer Science (COMP SCI)
Course Number	4090
Title	Software Engineering Capstone I
Abbreviated Course Title	SE Capstone I

#### Catalog

##### Description

This is the first course in the Software Engineering Capstone sequence covering the Software Life Cycle. Students will learn about software engineering, and work in teams to spec, design, prototype, implement, test, document, deploy and maintain a software system. This course is programming intensive, writing emphasized and addresses ethical considerations.

##### Prerequisites

A grade of "C" or better in all of Comp Sci 2300, Comp Sci 2500, Comp Sci 3610, and in one of Philos 3225, Philos 3235, Philos 4340, or Philos 4368.

##### Field Trip

##### Statement

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

Required for Majors	Yes
------------------------	-----

#### In Workflow

1. RCOMPSCI 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. 03/27/19 9:42 am  
Bruce McMillin  
(ff): Approved for  
RCOMPSCI Chair
2. 03/28/19 3:51 pm  
Brittany Parnell  
(ershenb):  
Approved for CCC  
Secretary
3. 04/15/19 10:37  
am  
Stephen Raper  
(sraper):  
Approved for  
Engineering DSCC  
Chair
4. 04/23/19 11:43  
am  
Brittany Parnell  
(ershenb):  
Approved for

<p>Elective for Majors</p>	<p>No</p>	<p>Pending CCC Agenda post</p>
<p>Justification for new course:</p>		<p>5. 05/09/19 11:19 am</p>
<p>This is the first course in the new Software Engineering Capstone sequence which is required for the revised BS in CS degree program (see DC form). This new sequence addresses concerns from stakeholders as well as accreditation feedback to ensure that all our students perform a major programming project, improve their technical writing skills, and expand their disciplinary application of ethics.</p>		<p>Brittany Parnell (ershenb): Approved for CCC Meeting Agenda</p>
<p>Semesters previously offered as an experimental course</p>		<p>6. 05/09/19 1:22 pm</p>
<p>This is a revamp of the existing Comp Sci 4096 capstone course. It is also a required course for the revised BS in CS degree program (see DC form), qualifying it for skipping the experimental phase.</p>		<p>Stephen Raper (sraper): Approved for Campus Curricula Committee Chair</p>
<p>Co-Listed Courses:</p>		
<p>Course Reviewer Comments</p>		

Key: 4619

[Preview Bridge](#)

## Course Change Request

### New Course Proposal

Date Submitted: 03/27/19 6:45 am

Viewing: **COMP SCI 4091 : Software Engineering Capstone II**

File: 4620

Last edit: 03/27/19 10:26 am

Changes proposed by: tauritzd

Programs referencing this course

[CMP SC-BS: Computer Science BS](#)

Requested: Fall 2019  
 Effective Change Date:  
 Department: Computer Science  
 Discipline: Computer Science (COMP SCI)  
 Course Number: 4091  
 Title: Software Engineering Capstone II  
 Abbreviated Course Title: SE Capstone II

**Catalog Description:** This is the second course in the Software Engineering Capstone sequence covering the Software Life Cycle. Students will learn about software engineering, and work in teams to spec, design, prototype, implement, test, document, deploy and maintain a software system. This course is programming intensive, writing emphasized and addresses ethical considerations.

**Prerequisites:** A grade of "C" or better in both Comp Sci 4090 and Comp Sci 4610.

**Field Trip Statement:**

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

**Required for Majors:** Yes

**Elective for Majors:** No

**Justification for new course:** This is the second course in the new Software Engineering Capstone sequence which is required for the revised BS in CS degree program (see DC form). This new sequence addresses concerns from stakeholders as well as accreditation feedback to ensure that all our students perform a major programming project, improve their technical writing skills, and expand their disciplinary application of ethics.

**Semesters previously offered as an:** This is a revamp of the existing Comp Sci 4097 capstone course. It is also a required course for the revised BS in CS degree program (see DC form), qualifying it for skipping the experimental phase.

- In Workflow
1. RCOMPSCI 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. 03/27/19 9:42 am  
Bruce McMillin (ff): Approved for RCOMPSCI Chair
  2. 03/28/19 3:51 pm  
Brittany Parnell (ershenb): Approved for CCC Secretary
  3. 04/15/19 10:38 am  
Stephen Raper (sraper): Approved for Engineering DSCC Chair
  4. 04/23/19 11:44 am  
Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
  5. 05/09/19 11:19 am  
Brittany Parnell

experimental  
course  
Co-Listed  
Courses:

Course Reviewer  
Comments

(ershenb):  
Approved for CCC  
Meeting Agenda  
6. 05/09/19 1:22 pm  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair

Key: 4620

[Preview Bridge](#)

## Course Change Request

Date Submitted: 03/29/19 3:31 pm

Viewing: **COMP SCI 4610 3600: Introduction to Computer Security**

File: 637.1

Last edit: 04/02/19 11:51 am

Changes proposed by: tauritzd

Programs [CMP SC-BS: Computer Science BS](#) referencing this course

Requested **Spring 2020 08/14/2018**  
 Effective Change Date  
 Department Computer Science  
 Discipline Computer Science (COMP SCI)  
 Course Number **4610 3600**  
 Title ~~Introduction to~~ Computer Security  
 Abbreviated ~~Intro~~ Computer Security  
 Course Title

Catalog Description This course **covers principles of threat-modeling, trust, encompasses threats and vulnerabilities, trust and security policies, policies, and enforcement.** ~~Topics Specific topics include cryptography, reverse engineering, software access control, risk management, systems and applications life cycle, physical security, malware analysis, authentication, access controls, operating systems hardening, virtualization, database key management, transmission security, and network security. cryptography.~~ **This class is programming intensive and project based, with case-analyses.**

Prerequisites A **grade of "C"** or better ~~grade in both~~ **Comp Sci 2500 and Comp Sci 3610. 2500.**

Field Trip Statement

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

Required for Majors **Yes** ~~No~~

Elective for Majors No

Justification for change: In the revised BS in CS (see DC form), this course is adding the Comp Sci 3610 - Computer Networks (see CC form) as prereq, and consequently being moved to 4000-level. The justification for computer networks as a prerequisite is that computer security requires so much networking knowledge, that a third of the class is currently taken up with remedial material.

- In Workflow
1. RCOMPSCI 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. 03/29/19 3:12 pm  
Bruce McMillin (ff): Rollback to Initiator
  2. 03/29/19 3:32 pm  
Bruce McMillin (ff): Approved for RCOMPSCI Chair
  3. 04/02/19 11:52 am  
Brittany Parnell (ershenb): Approved for CCC Secretary
  4. 04/15/19 10:38 am  
Stephen Raper (sraper): Approved for Engineering DSCC Chair
  5. 04/23/19 11:45 am  
Brittany Parnell (ershenb): Approved for

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

Pending CCC  
Agenda post  
6. 05/09/19 11:19  
am  
Brittany Parnell  
(ershenb):  
Approved for CCC  
Meeting Agenda  
7. 05/09/19 1:22 pm  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair

Course Reviewer **ff (03/29/19 3:12 pm):** Rollback: The justification for networks as a prerequisite is  
Comments that computer security requires so much networking, 1/3 of the class is currently  
taken up with remedial material.

Key: 637

[Preview Bridge](#)

## Course Change Request

Date Submitted: 03/07/19 10:20 am

Viewing: **EDUC 2102 : Educational Psychology**

File: 118.3

Last approved: 01/18/19 5:02 am

Last edit: 05/09/19 2:16 pm

Changes proposed by: murray

Catalog Pages referencing this course	<a href="#">Teacher Education and Certification</a>
Programs referencing this course	<a href="#">PHYSIC-BS: Physics BS</a> <a href="#">AP MATH-BS: Applied Mathematics BS</a>

Requested **Spring 2020** ~~01/07/2019~~  
 Effective Change Date  
 Department Teacher Education and Certification  
 Discipline Education (EDUC)  
 Course Number 2102  
 Title Educational Psychology  
 Abbreviated Course Title Educational Psychology

Catalog Description	Principles of psychology relevant to the field of education. Course covers theoretical and applied information on such topics as human growth and development, and cognitive and behavioral views of learning and intelligence. The course also covers motivation, creation of learning environments, measurement and evaluation of learning.				
Prerequisites	Psych 1101. <b>Must be a psychology major, or in the teacher education program.</b>				
Field Trip Statement					
Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3
Required for Majors	No				
Elective for Majors	No				

Justification for change: We do not have enough faculty to offer more sections of the class. It closes every semester due to high enrollment. The majority of students are taking it as an elective. This prevents psychology majors and students in the teacher education program from being able to take the class.

- 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. 03/07/19 12:15 pm  
Kelly Carter (carterke):  
Approved for REDUCATION Chair
  2. 03/07/19 2:55 pm  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
  3. 04/03/19 11:11 am  
Barry Flachsbart (barryf):  
Approved for Social Sciences DSCC Chair
  4. 04/23/19 11:48 am  
Brittany Parnell (ershenb):  
Approved for

This change needs to be made to both classes (psych 2300 and educ 2102).

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed Courses: PSYCH 2300 - Educational Psychology

Course Reviewer Comments **ershenb (05/09/19 2:16 pm):** Removed "or have instructor's approval to take this class." from prerequisite.

Key: 118

- Pending CCC Agenda post
- 5. 05/09/19 2:16 pm  
Brittany Parnell (ershenb):  
Approved for CCC Meeting Agenda
- 6. 05/09/19 3:30 pm  
Stephen Raper (sraper):  
Approved for Campus Curricula Committee Chair

**History**

- 1. Jan 18, 2019 by  
ershenb (118.1)

[Preview Bridge](#)

# Course Change Request

Date Submitted: 04/05/19 9:37 am

Viewing: **ELEC ENG 5210 : Fourier Optics**

File: 898.6

Last approved: 06/20/18 3:39 am

Last edit: 04/19/19 9:33 am

Changes proposed by: sweetk

Other Courses referencing this course	In The Catalog Description: <a href="#">PHYSICS 5503 : Fourier Optics</a>
---------------------------------------	--

Requested **Fall 2019 08/14/2018**  
 Effective Change Date  
 Department Electrical and Computer Engineering  
 Discipline Electrical Engineering (ELEC ENG)  
 Course Number 5210  
 Title Fourier Optics  
 Abbreviated Fourier Optics  
 Course Title

Catalog Description Applications of Fourier analysis and linear systems theory to optics. Topics include scalar diffraction theory, Fourier transforming properties of lenses, optical information processing, and imaging systems.					
Prerequisites Both Elec Eng 3430 and Elec Eng 3600 or <del>both</del> Physics <del>2401 and Physics</del> 4211.					
Field Trip Statement					
Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3
Required for Majors	No				
Elective for Majors	<b>Yes</b> <del>No</del>				

In Workflow

1. RELECENG 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. 04/06/19 7:09 pm  
Daryl Beetner  
(daryl): Approved for RELECENG Chair
2. 04/08/19 9:03 am  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 04/19/19 9:33 am  
Stephen Raper (sraper):  
Approved for Engineering DSCC Chair
4. 04/23/19 11:49 am  
Brittany Parnell (ershenb):  
Approved for

Justification for  
change:

Physics 2401 is a prerequisite for Physics 4211. Listing Physics 2401 is redundant.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed

Courses:

PHYSICS 5503 - Fourier Optics

Course Reviewer

Comments

**sraper (04/19/19 9:33 am):** Elective for majors checked.

Pending CCC

Agenda post

5. 05/09/19 2:17 pm

Brittany Parnell

(ershenb):

Approved for CCC

Meeting Agenda

6. 05/09/19 3:30 pm

Stephen Raper

(sraper):

Approved for

Campus Curricula

Committee Chair

### History

1. Jun 30, 2014 by

lahne (898.1)

2. Jun 20, 2018 by

sweetk (898.4)

Key: 898

[Preview Bridge](#)

## Course Change Request

Date Submitted: 04/13/19 5:42 pm

Viewing: **FINANCE 5160 : Corporate Finance II**

File: 2566.6

Last approved: 06/29/15 3:51 am

Last edit: 04/13/19 5:42 pm

Changes proposed by: barryf

Programs referencing this course	<a href="#">BUS&amp;MS-BS: Business and Mgmt Systems BS</a> <a href="#">FIN TCH-MI: Minor in Financial Technology (FinTech)</a> <a href="#">FINANCE-CT: Finance CT</a> <a href="#">FIN TCH-CT: Financial Technology CT</a> <a href="#">FINANCE-MI: Finance Minor</a>
Other Courses referencing this course	In The Prerequisites: <a href="#">MATH 5737 : Financial Mathematics</a>

Requested **Fall 2019** ~~01/12/2016~~

Effective Change Date

Department Business and Information Technology

Discipline Finance (FINANCE)

Course Number 5160

Title Corporate Finance II

Abbreviated Corporate Finance II

Course Title

Catalog

Description

This course provides a rigorous and consistent presentation of the theory of financial decisions. Capital markets are analyzed under assumptions of risk aversion and uncertainty. Models of modern portfolio theory are discussed including the CAPM and the Modigliani-Miller analysis.

Prerequisites

**Finance 2150 or equivalent basic corporate finance knowledge.** ~~Finance-2150-~~

Field Trip

Statement

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

In Workflow

1. **RBUSADMN 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. 04/14/19 12:51 am  
siauk: Approved for RBUSADMN Chair
2. 04/15/19 11:08 am  
Brittany Parnell (ershenb): Approved for CCC Secretary
3. 04/15/19 12:43 pm  
Barry Flachsbart (barryf): Approved for Social Sciences DSCC Chair
4. 04/23/19 11:57 am

Required for Majors: No Elective for Majors: Yes	Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
Justification for change: Most graduate students have not come through our undergraduate program and have not taken our course on corporate finance (2150). This clarifies that the knowledge is needed, even if the specific course has not been taken. For undergrads, FIN 2150 continues to be appropriate.  Semesters previously offered as an experimental course	5. 05/09/19 2:17 pm Brittany Parnell (ershenb): Approved for CCC Meeting Agenda 6. 05/09/19 3:30 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair
Co-Listed Courses:	History 1. Apr 25, 2014 by lahne (2566.1) 2. Jun 29, 2015 by barryf (2566.3)
Course Reviewer Comments	

Key: 2566

[Preview Bridge](#)

## Course Change Request

Date Submitted: 04/13/19 5:43 pm

Viewing: **FINANCE 5260 : Investments I**

File: 2190.8

Last approved: 06/29/15 3:51 am

Last edit: 04/13/19 5:43 pm

Changes proposed by: barryf

Programs referencing this course

- [BUS&MS-BS: Business and Mgmt Systems BS](#)
- [FIN TCH-MI: Minor in Financial Technology \(FinTech\)](#)
- [PROPOSED: test](#)
- [FINANCE-CT: Finance CT](#)
- [FIN TCH-CT: Financial Technology CT](#)
- [FINANCE-MI: Finance Minor](#)

Requested **Fall 2019** ~~01/12/2016~~

Effective Change

Date

Department Business and Information Technology

Discipline Finance (FINANCE)

Course Number 5260

Title Investments I

Abbreviated Investments I

Course Title

Catalog

Description

Introduction to fundamental elements of investment analysis. Students learn financial tools and gain necessary knowledge to select among alternative financial assets. Real world experience includes stock analysis, portfolio simulations and interactions with professionals in the securities industry.

Prerequisites

**Finance 2150 or equivalent basic corporate finance knowledge.** ~~Finance-2150-~~

Field Trip

Statement

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

Required for Majors      No

In Workflow

1. **RBUSADMN 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. 04/14/19 12:51 am  
siauk: Approved for RBUSADMN Chair
2. 04/15/19 11:09 am  
Brittany Parnell (ershenb): Approved for CCC Secretary
3. 04/15/19 12:43 pm  
Barry Flachsbart (barryf): Approved for Social Sciences DSCC Chair
4. 04/23/19 11:59 am

<p>Elective for Majors      Yes</p>	<p>Brittany Parnell (ershenb):</p>
<p>Justification for change:                  Most graduate students have not come through our undergraduate program and have not taken our course on corporate finance (2150). This clarifies that the knowledge is needed, even if the specific course has not been taken. For undergrads, FIN 2150 continues to be appropriate.</p> <p>Semesters previously offered as an experimental course</p> <p>Co-Listed Courses:</p>	<p>Approved for Pending CCC Agenda post</p> <p>5. 05/09/19 2:18 pm                  Brittany Parnell (ershenb):                  Approved for CCC Meeting Agenda</p> <p>6. 05/09/19 3:30 pm                  Stephen Raper (sraper):                  Approved for Campus Curricula Committee Chair</p>
<p>Course Reviewer Comments</p>	<p>History</p> <p>1. May 1, 2014 by barryf (2190.1)</p>
<p></p>	<p>2. Jun 29, 2015 by barryf (2190.5)</p>

Key: 2190

[Preview Bridge](#)

## Course Change Request

Date Submitted: 03/05/19 5:02 pm

Viewing: **GEO ENG 3249 : Fundamentals Of Computer Applications In Geological Engineering**

File: 1781.1

Last edit: 03/25/19 2:02 pm

Changes proposed by: grotekr

Programs referencing this course: [GE ENG-BS: Geological Engineering BS](#)

Requested **Spring 2020 08/01/2014**  
 Effective Change Date  
 Department Geosciences and Geological and Petroleum Engineering  
 Discipline Geological Engineering (GEO ENG)  
 Course Number 3249  
 Title Fundamentals Of Computer Applications In Geological Engineering  
 Abbreviated Course Title Fund Of Comp Appl Ge Eng

Catalog Description Applications of existing and available software packages utilizing a variety of hardware systems for geological engineering purposes. Emphasis on practical utilization of **software** ~~personal computers~~ and network operations for graphical analysis of geologic data, mapping of surface and subsurface configurations and modeling of geologic processes.

Prerequisites Geo Eng **1150**. ~~1150, Comp Sci 1970, 1980~~.

Field Trip Statement

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

Required for Majors **Yes** ~~No~~

Elective for Majors No

Justification for change: This course will now include introductory programming, so a programming course is no longer required as a prerequisite.

Semesters previously offered as an

In Workflow

1. **RGEOENG 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. 03/05/19 5:03 pm David Borrok (borrokd): Approved for RGEOENG Chair
2. 03/06/19 8:55 am Brittany Parnell (ershenb): Approved for CCC Secretary
3. 03/25/19 2:02 pm Stephen Raper (sraper): Approved for Engineering DSCC Chair
4. 04/23/19 12:28 pm Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
5. 05/09/19 2:18 pm Brittany Parnell (ershenb):

experimental  
course  
Co-Listed  
Courses:

Approved for CCC  
Meeting Agenda  
6. 05/09/19 3:30 pm  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair

Course Reviewer **sraper (03/25/19 2:02 pm)**: Changed. to required for majors.  
Comments

Key: 1781

[Preview Bridge](#)

## Course Change Request

Date Submitted: 03/05/19 5:05 pm

### Viewing: **GEO ENG 5381 : Intermediate Subsurface Hydrology And Contaminant Transport Mechs**

File: 1052.1

Last edit: 05/09/19 2:19 pm

Changes proposed by: grotekr

Programs referencing this course

- [GE ENG-BS: Geological Engineering BS](#)
- [GEO ENG-MS: GEOLOGICAL ENGINEERING MS](#)

Requested	<b>Spring 2020</b> <del>08/14/2018</del>
Effective Change Date	
Department	Geosciences and Geological and Petroleum Engineering
Discipline	Geological Engineering (GEO ENG)
Course Number	5381
Title	Intermediate Subsurface Hydrology And Contaminant Transport Mechs
Abbreviated Course Title	Int Subsurface Hydrology

Catalog Description	A study of the physical/chemical properties of rocks and sediments in the subsurface environment. Emphasis is put on waterrock properties such as permeability, capillarity, and mechanical dispersion. Both microscopic and macroscopic approaches are used.				
Prerequisites	<b>Geo Eng 5331, Geo <del>Civ-Eng 5332</del>, or Geol 4411. <del>3330 &amp; Geo Eng 5331.</del></b>				
Field Trip Statement					
Credit Hours	LEC: <b>3</b>	LAB: <b>0</b>	IND: <b>0</b>	RSD: <b>0</b>	Total: <b>3</b>
Required for Majors	No				
Elective for Majors	<b>Yes</b> <del>No</del>				

Justification for change: These prerequisites better reflect what is needed to master the material covered in this course.

Semesters previously offered as an experimental course

- In Workflow
1. **RGEOENG 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. 03/06/19 8:55 am David Borrok (borrokd): Approved for RGEOENG Chair
  2. 03/06/19 9:21 am Brittany Parnell (ershenb): Approved for CCC Secretary
  3. 03/25/19 2:03 pm Stephen Raper (sraper): Approved for Engineering DSCC Chair
  4. 04/23/19 12:28 pm Brittany Parnell (ershenb): Approved for Pending CCC Agenda post
  5. 05/09/19 2:19 pm Brittany Parnell (ershenb):

Co-Listed

Courses:

Course Reviewer **sraper (03/25/19 2:03 pm)**: checked elective for majors and modified prereqs according to DSCC member.  
Comments **ershenb (05/09/19 2:19 pm)**: checked "yes" elective for majors.

Key: 1052

Approved for CCC Meeting Agenda  
6. 05/09/19 3:30 pm  
Stephen Raper (sraper):  
Approved for  
Campus Curricula Committee Chair

[Preview Bridge](#)

## Course Change Request

Date Submitted: 04/05/19 3:19 pm

Viewing: **MIL AIR 1110 : ~~Foundations Of The U.S.~~ Air Force Heritage and Values I**

File: 1532.1

Last edit: 04/09/19 10:38 am

Changes proposed by: ungerb

Other Courses referencing this course	<u>In The Catalog Description:</u> <a href="#">MIL AIR 1120 : Foundations Of The U.S. Air Force II</a>
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Requested Effective Change Date	<b>Spring 2020 08/01/2014</b>
Department	Aerospace Studies - Air Force ROTC
Discipline	Military Science - Air Force (MIL AIR)
Course Number	1110
Title	<del>Foundations Of The U.S.</del> Air Force <b>Heritage and Values I</b>
Abbreviated Course Title	<b>Heritage and Values I Found</b> <del>U.S.Air Force I</del>

Catalog Description	This <del>survey</del> course <b>provides an introduction is designed to the Air Force, hopefully encouraging introduce</b> students to <b>pursue an AF career or at least seek additional information to be better informed about the role of the USAF. the Air Force and ROTC. Topics include: The course allows students military customs and courtesies, uniform wear, officership qualities, professionalism, Air Force core values, equal opportunity and treatment, officer benefits and opportunities and an introduction to examine general aspects of the Department of the Air Force, AF Leadership, Air Force benefits, and opportunities for AF officers. communication skills. Leadership Lab is mandatory for cadets planning on a career in the Air Force.</b>				
Prerequisites					
Field Trip Statement					
Credit Hours	LEC: <b>1</b>	LAB: <b>0</b>	IND: <b>0</b>	RSD: <b>0</b>	Total: <b>1</b>
Required for Majors	No				
Elective for Majors	No				

Justification for change: HQ AFROTC/DE (Curriculum Division) has revised the course titles and course curriculum that all 145 Air Force ROTC Detachments in the country are now required to teach. The revised catalog description above comes verbatim from HQ AFROTC/DE and reflects those curriculum changes.

In Workflow

1. RMILISCI Chair
2. CCC Secretary
3. Krista Chambers
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. 04/05/19 3:42 pm  
Brent Unger (ungerb):  
Approved for RMILISCI Chair
2. 04/09/19 11:21 am  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 04/09/19 11:59 am  
Krista Chambers (krista): Approved for krista
4. 04/23/19 1:22 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post
5. 05/09/19 2:21 pm  
Brittany Parnell (ershenb):  
Approved for CCC Meeting Agenda

v/r

BRENT J. UNGER, Lt Col, USAF  
Commander, AFROTC Det 442  
Missouri Univ of Science & Tech  
206 Harris Hall, 500 W. 13th St.  
Rolla, MO 65409-1450  
Phone: 573-341-6540  
Fax: 573-341-6541  
Email: ungerb@mst.edu  
Web: afrotc.mst.edu

6. 05/09/19 3:30 pm  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

Course Reviewer **ershenb (04/09/19 10:38 am)**: Per the email request Lt. Col Unger, added "I" to the  
Comments course title and change the effective date to SP2020.

Key: 1532

[Preview Bridge](#)

## Course Change Request

Date Submitted: 04/05/19 3:20 pm

Viewing: ~~MIL AIR 1120 : Foundations Of The U.S. Air Force~~  
**Heritage and Values II**

File: 1390.1

Last edit: 04/09/19 10:39 am

Changes proposed by: ungerb

Requested	<b>Spring 2020</b> <del>08/01/2014</del>
Effective Change Date	
Department	Aerospace Studies - Air Force ROTC
Discipline	Military Science - Air Force (MIL AIR)
Course Number	1120
Title	<del>Foundations Of The U.S.</del> Air Force <b>Heritage and Values II</b>
Abbreviated Course Title	<b>Heritage and Values II Found</b> <del>U.S. Air Force II</del>

In Workflow

- 1. RMILISCI Chair**
- 2. CCC Secretary**
- 3. Krista Chambers**
- 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

**This course provides an introduction to the Air Force, hopefully encouraging students to pursue an AF career or at least seek additional information to be better informed about the role of the USAF. This survey course is a continuation of Mil Air 1110. Covered topics include: The course allows students to examine general aspects origin of the Department Air Force, mission and organization of the Air Force, AF Leadership, Air organization of a standard Air Force benefits, and opportunities for AF officers. base, and further communication skills development. Leadership Lab is also mandatory for cadets.**

Prerequisites

Field Trip

Statement

Credit Hours      LEC: **1**      LAB: **0**      IND: **0**      RSD: **0**      Total: **1**

Required for Majors      No

Elective for Majors      No

Approval Path

- 04/05/19 3:43 pm  
Brent Unger (ungerb):  
Approved for RMILISCI Chair
- 04/09/19 11:21 am  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
- 04/09/19 11:59 am  
Krista Chambers (krista): Approved for krista
- 04/23/19 1:22 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post

Justification for

change:

HQ AFROTC/DE (Curriculum Division) has revised the course titles and course curriculum that all 145 Air Force ROTC Detachments in the country are now required to teach. The revised catalog description above comes verbatim from HQ AFROTC/DE and reflects those curriculum changes.

v/r

BRENT J. UNGER, Lt Col, USAF  
Commander, AFROTC Det 442  
Missouri Univ of Science & Tech  
206 Harris Hall, 500 W. 13th St.  
Rolla, MO 65409-1450  
Phone: 573-341-6540  
Fax: 573-341-6541  
Email: ungerb@mst.edu  
Web: afrotc.mst.edu

Semesters

previously  
offered as an  
experimental  
course

Co-Listed

Courses:

5. 05/09/19 2:21 pm  
Brittany Parnell  
(ershenb):  
Approved for CCC  
Meeting Agenda
6. 05/09/19 3:30 pm  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair

Course Reviewer **ershenb (04/09/19 10:39 am)**: Per the email request Lt. Col Unger, added "II" to the  
Comments course title and changed the effective date to SP2020.

Key: 1390

[Preview Bridge](#)

## Course Change Request

Date Submitted: 04/05/19 3:25 pm

Viewing: **MIL AIR 2110 : Team and Leadership Fundamentals I** ~~The Evolution Of USAF Air And Space Power I~~

File: 418.1

Last edit: 04/09/19 10:43 am

Changes proposed by: ungerb

Other Courses referencing this course  
In The Catalog Description:  
[MIL AIR 2120 : The Evolution Of USAF Air And Space Power II](#)

Requested **Spring 2020 08/01/2014**  
 Effective Change Date  
 Department Aerospace Studies - Air Force ROTC  
 Discipline Military Science - Air Force (MIL AIR)  
 Course Number 2110  
 Title **Team and Leadership Fundamentals I** ~~The Evolution Of USAF Air And Space Power I~~  
 Abbreviated **Ldrshp Fundamentals I** ~~Evol~~  
 Course Title **USAF Air & Sp Pwr I**

Catalog Description This course is designed to **provide a fundamental understanding** ~~examine the general aspects of both leadership air and team building. space power through a historical perspective..covering a time period from the first balloons to the beginning of the space age.~~ **It is imperative that cadets are taught from the beginning that there are many layers to leadership, including aspects that don't always jump to mind. Such things include listening, understanding themselves, being a good follower and problem solving. It provides students with a knowledge level understanding of the general elements and employment of air and space power from an institutional doctrinal and historical perspective. Examples of the importance of AF core values in historical events and in past AF leaders are pointed out. Continued development of communication skills is also emphasized. Leadership Lab is mandatory for cadets planning on a career in the Air Force.**

Prerequisites

Field Trip Statement

Credit Hours LEC: **1** LAB: **0** IND: **0** RSD: **0** Total: **1**

Required for Majors No

Elective for Majors No

In Workflow

1. RMILISCI Chair
2. CCC Secretary
3. Krista Chambers
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. 04/05/19 3:43 pm  
Brent Unger (ungerb):  
Approved for RMILISCI Chair
2. 04/09/19 11:21 am  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 04/09/19 11:59 am  
Krista Chambers (krista): Approved for krista
4. 04/23/19 1:22 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post
5. 05/09/19 2:21 pm  
Brittany Parnell (ershenb):  
Approved for CCC Meeting Agenda

Justification for change: HQ AFROTC/DE (Curriculum Division) has revised the course titles and course curriculum that all 145 Air Force ROTC Detachments in the country are now required to teach. The revised catalog description above comes verbatim from HQ AFROTC/DE and reflects those curriculum changes.

v/r

BRENT J. UNGER, Lt Col, USAF  
Commander, AFROTC Det 442  
Missouri Univ of Science & Tech  
206 Harris Hall, 500 W. 13th St.  
Rolla, MO 65409-1450  
Phone: 573-341-6540  
Fax: 573-341-6541  
Email: ungerb@mst.edu  
Web: afrotc.mst.edu

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

Course Reviewer Comments **ershenb (04/09/19 10:43 am):** Per the email request Lt. Col Unger, added "I" to the course title and changed the effective date to SP2020.

6. 05/09/19 3:31 pm  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair

Key: 418

[Preview Bridge](#)

## Course Change Request

Date Submitted: 04/05/19 3:27 pm

Viewing: **MIL AIR 2120 : Team and Leadership Fundamentals II**  
~~The Evolution Of USAF Air And Space Power II~~

File: 1092.1

Last edit: 04/09/19 10:47 am

Changes proposed by: ungerb

Requested	<b>Spring 2020</b> <del>08/01/2014</del>
Effective Change Date	
Department	Aerospace Studies - Air Force ROTC
Discipline	Military Science - Air Force (MIL AIR)
Course Number	2120
Title	<b>Team and Leadership Fundamentals II</b> <del>The Evolution Of USAF Air And Space Power II</del>
Abbreviated Course Title	<b>Ldrshp Fundamentals II Evol</b> <del>USAF Air&amp;Sp Pwr II</del>

### In Workflow

1. **RMILISCI Chair**
2. **CCC Secretary**
3. **Krista Chambers**
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. 04/05/19 3:43 pm  
Brent Unger (ungerb):  
Approved for RMILISCI Chair
2. 04/09/19 11:21 am  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 04/09/19 12:00 pm  
Krista Chambers (krista): Approved for krista
4. 04/23/19 1:22 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post

### Catalog

#### Description

This course is **designed to provide a fundamental understanding** ~~continuation~~ of **both leadership and team building.** ~~Mil Air 2110.~~ **It is imperative that cadets are taught from the beginning that there are many layers to leadership, including aspects that don't always jump to mind. Such things include listening, understanding themselves, being a good follower and problem solving.** ~~It covers a time period in Air Force history from the beginning of the space age in the early 1960's to the present...with a continued emphasis on recognizing how past leaders and events have shaped our current Air Force organization and doctrine. Communication skills exercises are continued. Leadership Lab is also mandatory for cadets.~~

#### Prerequisites

#### Field Trip Statement

Credit Hours    LEC: **1**    LAB: **0**    IND: **0**    RSD: **0**    Total: **1**

Required for Majors    No  
No

Elective for Majors	5. 05/09/19 2:21 pm Brittany Parnell
<p>Justification for change:</p> <p>HQ AFROTC/DE (Curriculum Division) has revised the course titles and course curriculum that all 145 Air Force ROTC Detachments in the country are now required to teach. The revised catalog description above comes verbatim from HQ AFROTC/DE and reflects those curriculum changes.</p>	(ershenb): Approved for CCC Meeting Agenda
v/r	6. 05/09/19 3:31 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair
<p>BRENT J. UNGER, Lt Col, USAF Commander, AFROTC Det 442 Missouri Univ of Science &amp; Tech 206 Harris Hall, 500 W. 13th St. Rolla, MO 65409-1450 Phone: 573-341-6540 Fax: 573-341-6541 Email: ungerb@mst.edu Web: afrotc.mst.edu</p>	
<p>Semesters previously offered as an experimental course</p>	
<p>Co-Listed Courses:</p>	
Course Reviewer Comments	<b>ershenb (04/09/19 10:47 am):</b> Per the email request Lt. Col Unger, added "II" to the course title and changed the effective date to SP2020.

Key: 1092

[Preview Bridge](#)

## Course Change Request

Date Submitted: 04/05/19 3:30 pm

Viewing: **MIL AIR 3110 : Leading People & Effective Communication I** ~~Air Force Leadership Studies I~~

File: 419.1

Last edit: 04/09/19 10:49 am

Changes proposed by: ungerb

Programs referencing this course  
[CMP SC-BS: Computer Science BS](#)  
[MC ENG-BS: Mechanical Engineering BS](#)

Other Courses referencing this course  
 In The Catalog Description:  
[MIL AIR 3120 : Air Force Leadership Studies II](#)

Requested **Spring 2020** ~~08/01/2014~~

Effective Change Date

Department Aerospace Studies - Air Force ROTC

Discipline Military Science - Air Force (MIL AIR)

Course Number 3110

Title **Leading People & Effective Communication I** ~~Air Force Leadership Studies I~~

Abbreviated **Effective Comm I** ~~Air Force~~

Course Title ~~Ldrshp Stu I~~

Catalog Description

**This course is designed** ~~includes a Leadership Lab that provides the students the opportunity to build on the apply leadership fundamentals taught in AS200. and management principles. Cadets will have~~ This course introduces students to the **opportunity to utilize their leadership and management skills as they begin more required of a leadership role in the detachment. an Air Force junior officer. The goal is for cadets to have a more in-depth understanding of how to effectively lead people, and provide them with the tools to use in their leadership roles. Special topics include leadership ethics, the Air Force personnel and evaluation systems, and management fundamentals. Through the use of classroom tools that include case studies, Air Force leadership and management situations are examined and practical applications of studies concepts are exercised. The principles and theories**

In Workflow

1. **RMILISCI Chair**
2. **CCC Secretary**
3. **Krista Chambers**
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. 04/05/19 3:44 pm  
Brent Unger (ungerb):  
Approved for RMILISCI Chair
2. 04/09/19 11:21 am  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 04/09/19 12:00 pm  
Krista Chambers (krista): Approved for krista
4. 04/23/19 1:22 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post

~~of ethical behavior as well as the complete understanding of the individual responsibility and authority of an Air Force officer are stressed. This course includes a Leadership Lab that provides the students the opportunity to apply leadership and management principles.~~

Prerequisites

Field Trip  
Statement

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

Required for  
Majors              No

Elective for  
Majors              No

5. 05/09/19 2:22 pm  
Brittany Parnell  
(ershenb):  
Approved for CCC  
Meeting Agenda
6. 05/09/19 3:31 pm  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair

Justification for change:      HQ AFROTC/DE (Curriculum Division) has revised the course titles and course curriculum that all 145 Air Force ROTC Detachments in the country are now required to teach. The revised catalog description above comes verbatim from HQ AFROTC/DE and reflects those curriculum changes.

v/r

BRENT J. UNGER, Lt Col, USAF  
Commander, AFROTC Det 442  
Missouri Univ of Science & Tech  
206 Harris Hall, 500 W. 13th St.  
Rolla, MO 65409-1450  
Phone: 573-341-6540  
Fax: 573-341-6541  
Email: ungerb@mst.edu  
Web: afrotc.mst.edu

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

Course Reviewer      **ershenb (04/09/19 10:49 am)**: Per the email request Lt. Col Unger, added "I" to the  
Comments              course title and changed the effective date to SP2020.

Key: 419

[Preview Bridge](#)

## Course Change Request

Date Submitted: 04/05/19 3:32 pm

Viewing: **MIL AIR 3120 : Leading People & Effective Communication II** ~~Air Force Leadership Studies II~~

File: 1093.1

Last edit: 04/09/19 10:50 am

Changes proposed by: ungerb

Programs referencing this course

- [CMP SC-BS: Computer Science BS](#)
- [MC ENG-BS: Mechanical Engineering BS](#)

Requested **Spring 2020** ~~08/01/2014~~

Effective Change

Date

Department Aerospace Studies - Air Force ROTC

Discipline Military Science - Air Force (MIL AIR)

Course Number 3120

Title **Leading People & Effective Communication II** ~~Air Force Leadership Studies II~~

Abbreviated **Effective Comm II** ~~Air Force~~

Course Title ~~Ldrshp Stu II~~

Catalog

Description

~~This course is a continuation of Mil Air 3110. Emphasis is placed on professional knowledge, communication skills, and ethical behavior. Varied Air Force peculiar formats and situations are offered to apply learned listening, writing, and speaking skills. This course is designed includes a Leadership Lab that provides the students the opportunity to build on the apply leadership fundamentals taught in AS200. and management principles. Cadets will have the opportunity to utilize their skills as they begin more of a leadership role in the detachment. The goal is for cadets to have a more in-depth understanding of how to effectively lead people, and provide them with the tools to use in their leadership roles.~~

Prerequisites

Field Trip

Statement

In Workflow

1. **RMILISCI Chair**
2. **CCC Secretary**
3. **Krista Chambers**
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. 04/05/19 3:44 pm  
Brent Unger (ungerb):  
Approved for RMILISCI Chair
2. 04/09/19 11:21 am  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 04/09/19 12:00 pm  
Krista Chambers (krista):  
Approved for krista
4. 04/23/19 1:22 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post

Credit Hours	LEC: <b>3</b>	LAB: <b>0</b>	IND: <b>0</b>	RSD: <b>0</b>	Total: <b>3</b>	5. 05/09/19 2:22 pm Brittany Parnell (ershenb): Approved for CCC Meeting Agenda
Required for Majors	No					6. 05/09/19 3:31 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair
Elective for Majors	No					
<p>Justification for change:</p> <p>HQ AFROTC/DE (Curriculum Division) has revised the course titles and course curriculum that all 145 Air Force ROTC Detachments in the country are now required to teach. The revised catalog description above comes verbatim from HQ AFROTC/DE and reflects those curriculum changes.</p> <p>v/r</p> <p>BRENT J. UNGER, Lt Col, USAF Commander, AFROTC Det 442 Missouri Univ of Science &amp; Tech 206 Harris Hall, 500 W. 13th St. Rolla, MO 65409-1450 Phone: 573-341-6540 Fax: 573-341-6541 Email: ungerb@mst.edu Web: afrotc.mst.edu</p> <p>Semesters previously offered as an experimental course</p> <p>Co-Listed Courses:</p>						
Course Reviewer	<b>ershenb (04/09/19 10:50 am):</b> Per the email request Lt. Col Unger, added "II" to the					
Comments	course title and changed the effective date to SP2020.					

Key: 1093

[Preview Bridge](#)

## Course Change Request

Date Submitted: 04/05/19 3:37 pm

Viewing: **MIL AIR 4110 : National Security, Leadership Responsibilities & Commissioning Preparation I** ~~National Security Affairs/Preparation For Active Duty I~~

File: 420.1

Last edit: 04/09/19 10:52 am

Changes proposed by: ungerb

Programs referencing this course	<a href="#">CMP SC-BS: Computer Science BS</a> <a href="#">MC ENG-BS: Mechanical Engineering BS</a>
Other Courses referencing this course	<u>In The Catalog Description:</u> <a href="#">MIL AIR 4120 : National Security Affairs/Preparation For Active Duty II</a>

Requested Effective Change Date	<b>Spring 2020 08/01/2014</b>
Department	Aerospace Studies - Air Force ROTC
Discipline	Military Science - Air Force (MIL AIR)
Course Number	4110
Title	<b>National Security, Leadership Responsibilities &amp; Commissioning Preparation I</b> <del>National Security Affairs/Preparation For Active Duty I</del>
Abbreviated Course Title	<b>Ntl Security Issues I</b> <del>Nsa/Prep Active Duty I</del>

Catalog Description	<del>This course examines national security policies, processes, and issues along with Air Force strategy and doctrine. The AS400 cadet should comprehend special topics include Air Force roles and missions, the basic elements roles of national security policy and process. various federal government departments, military organizations and functions, and the concept of joint operations. The student should comprehend the air and space power operations as well as understand selected roles of the military in society and current domestic and international issues affecting the military profession. Within this structure, continued emphasis is given to refining communication skills. This course includes a Leadership Laboratory that provides advanced leadership experiences, giving students the opportunity to apply the leadership and management principles of this course.</del>				
Prerequisites					
Field Trip Statement					
Credit Hours	LEC: <b>3</b>	LAB: <b>0</b>	IND: <b>0</b>	RSD: <b>0</b>	Total: <b>3</b>

- In Workflow
1. RMILISCI Chair
  2. CCC Secretary
  3. Krista Chambers
  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. 04/05/19 3:45 pm  
Brent Unger (ungerb):  
Approved for RMILISCI Chair
  2. 04/09/19 11:21 am  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
  3. 04/09/19 12:00 pm  
Krista Chambers (krista): Approved for krista
  4. 04/23/19 1:22 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post
  5. 05/09/19 2:22 pm  
Brittany Parnell (ershenb):  
Approved for CCC Meeting Agenda

Required for Majors	No	6. 05/09/19 3:31 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair
Elective for Majors	No	
Justification for change:	<p>HQ AFROTC/DE (Curriculum Division) has revised the course titles and course curriculum that all 145 Air Force ROTC Detachments in the country are now required to teach. The revised catalog description above comes verbatim from HQ AFROTC/DE and reflects those curriculum changes.</p> <p>v/r</p> <p>BRENT J. UNGER, Lt Col, USAF                  Commander, AFROTC Det 442                  Missouri Univ of Science &amp; Tech                  206 Harris Hall, 500 W. 13th St.                  Rolla, MO 65409-1450                  Phone: 573-341-6540                  Fax: 573-341-6541                  Email: ungerb@mst.edu                  Web: afrotc.mst.edu</p>	
Semesters previously offered as an experimental course		
Co-Listed Courses:		
Course Reviewer Comments	<p><b>ershenb (04/09/19 10:52 am):</b> Per the email request Lt. Col Unger, added "I" to the course title and changed the effective date to SP2020.</p>	

Key: 420

[Preview Bridge](#)

## Course Change Request

Date Submitted: 04/05/19 3:39 pm

Viewing: **MIL AIR 4120 : National Security, Leadership Responsibilities & Commissioning Preparation II** ~~National Security Affairs/Preparation For Active Duty II~~

File: 748.1

Last edit: 04/09/19 10:53 am

Changes proposed by: ungerb

Programs referencing this course	<a href="#">EL ENG-BS: Electrical Engineering BS</a> <a href="#">CMP SC-BS: Computer Science BS</a> <a href="#">MC ENG-BS: Mechanical Engineering BS</a>
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Requested **Spring 2020** ~~08/01/2014~~

Effective Change Date

Department Aerospace Studies - Air Force ROTC

Discipline Military Science - Air Force (MIL AIR)

Course Number 4120

Title **National Security, Leadership Responsibilities & Commissioning Preparation II** ~~National Security Affairs/Preparation For Active Duty II~~

Abbreviated **Ntl Security Issues II**

Course Title ~~Nsa/Prep Active Duty II~~

Catalog Description	<p><b>The AS400 cadet should comprehend the basic elements of national security policy and process.</b> <del>Continuation of Mil Air 4110. The student should comprehend This final course of the air Air Force ROTC curriculum examines officership, advanced leadership ethics, military law, current Air Force issues, regional studies, core values, and space power operations as well as understand selected roles of the military in society and current domestic and international issues affecting the military profession.</del> <del>preparation for active duty. This course includes a Leadership Laboratory that provides leadership experiences, giving students the opportunity to apply the leadership and management principles of this course.</del></p>
Prerequisites	
Field Trip Statement	

### In Workflow

1. **RMILISCI Chair**
2. **CCC Secretary**
3. **Krista Chambers**
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. 04/05/19 3:45 pm  
Brent Unger (ungerb):  
Approved for RMILISCI Chair
2. 04/09/19 11:21 am  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 04/09/19 12:01 pm  
Krista Chambers (krista): Approved for krista
4. 04/23/19 1:22 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post

Credit Hours	LEC: <b>3</b>	LAB: <b>0</b>	IND: <b>0</b>	RSD: <b>0</b>	Total: <b>3</b>	5. 05/09/19 2:22 pm Brittany Parnell (ershenb): Approved for CCC Meeting Agenda 6. 05/09/19 3:31 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair
Required for Majors	No					
Elective for Majors	No					

Justification for change:

HQ AFROTC/DE (Curriculum Division) has revised the course titles and course curriculum that all 145 Air Force ROTC Detachments in the country are now required to teach. The revised catalog description above comes verbatim from HQ AFROTC/DE and reflects those curriculum changes.

v/r

BRENT J. UNGER, Lt Col, USAF  
 Commander, AFROTC Det 442  
 Missouri Univ of Science & Tech  
 206 Harris Hall, 500 W. 13th St.  
 Rolla, MO 65409-1450  
 Phone: 573-341-6540  
 Fax: 573-341-6541  
 Email: ungerb@mst.edu  
 Web: afrotc.mst.edu

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer **ershenb (04/09/19 10:53 am)**: Per the email request Lt. Col Unger, added "II" to the Comments course title and changed the effective date to SP2020.

Key: 748

[Preview Bridge](#)

## Course Change Request

Date Submitted: 03/22/19 11:56 am

Viewing: **NUC ENG 4577 ~~3377~~: Nuclear Forensics and Radiochemistry**

File: 4087.3

Last approved: 06/30/14 3:55 am

Last edit: 03/28/19 3:49 pm

Changes proposed by: castanoc

Requested **Fall 2019** ~~08/01/2014~~  
 Effective Change Date  
 Department Mining & Nuclear Engineering  
 Discipline Nuclear Engineering (NUC ENG)  
 Course Number **4577** ~~3377~~  
 Title Nuclear Forensics and Radiochemistry  
 Abbreviated Nuc Forensic & Rad Chem  
 Course Title

In Workflow

1. **NUC ENG 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

Catalog Description  
 Learn the fundamentals of radiochemistry and its application to the broad field of Nuclear Forensics. Includes a review of nuclear science and cosmochemistry (the origin of the chemical elements), a historical review of spent fuel reprocessing techniques including solvent extraction. A broad review of the modern nuclear forensics field and its importance.

Prerequisites  
**Nuc Eng** ~~NUC ENG~~-2105 recommended.

Field Trip Statement  
 n/a

Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3
Required for Majors	No				
Elective for Majors	Yes				

Approval Path

1. 03/20/19 4:02 pm Hyoung-Koo Lee (leehk): Approved for NUC ENG Chair
2. 03/22/19 11:50 am Brittany Parnell (ershenb): Rollback to Initiator
3. 03/22/19 1:41 pm Hyoung-Koo Lee (leehk): Approved for NUC ENG Chair
4. 03/28/19 3:49 pm Brittany Parnell (ershenb): Approved for CCC Secretary

Justification for change:

This course is suitable for undergraduate seniors and we want to create a graduate version of this course which is dual-listed as Nuc Eng 5577. The course number Nuc Eng 4577 is a better description of the current course.

Semesters  
previously  
offered as an  
experimental  
course

Spring 2012, Spring 2013, Spring **2014**, **Fall 2016**, **Fall 2018** ~~2014~~

Co-Listed  
Courses:

Course Reviewer

Comments

**ershenb (03/22/19 11:50 am):** Rollback: Rolled back per the request of Dr. Alajo for a number change

Key: 4087

- 5. 04/15/19 10:21 am  
Stephen Raper (sraper):  
Approved for Engineering DSCC Chair
- 6. 04/23/19 1:23 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post
- 7. 05/09/19 2:23 pm  
Brittany Parnell (ershenb):  
Approved for CCC Meeting Agenda
- 8. 05/09/19 3:31 pm  
Stephen Raper (sraper):  
Approved for Campus Curricula Committee Chair

**History**

- 1. Jun 30, 2014 by Carlos Henry Castano (castanoc)

[Preview Bridge](#)

## Course Change Request

### New Course Proposal

Date Submitted: 03/27/19 2:54 pm

Viewing: **NUC ENG 5577 : Advanced Nuclear Forensics and Radiochemistry**

File: 4623

Last edit: 05/09/19 2:24 pm

Changes proposed by: castanoc

Requested	Fall 2019
Effective Change Date	
Department	Mining & Nuclear Engineering
Discipline	Nuclear Engineering (NUC ENG)
Course Number	5577
Title	Advanced Nuclear Forensics and Radiochemistry
Abbreviated Course Title	Adv Nuc Foren & RadChem

In Workflow

1. **NUC ENG 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

**Catalog Description**  
 Fundamentals of radiochemistry, including nuclear science, cosmochemistry, spent fuel reprocessing, with details on solvent extraction. We will review case studies in Nuclear Forensics. This advanced section also includes experiments on radiochemistry and demonstrate experimental nuclear forensics techniques. Dual listed with Nuc Eng 4577.

**Prerequisites**

**Field Trip Statement**

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

**Required for Majors**      Yes

**Elective for Majors**      No

**Justification for new course:**      We are creating a graduate certificate in Nuclear Non-Proliferation

**Semesters previously offered as an experimental course**

**Co-Listed Courses:**

**Approval Path**

1. 03/22/19 1:41 pm  
Hyoung-Koo Lee (leehk): Approved for NUC ENG Chair
2. 03/26/19 2:54 pm  
Brittany Parnell (ershenb): Rollback to Initiator
3. 03/28/19 12:50 pm  
Hyoung-Koo Lee (leehk): Approved for NUC ENG Chair
4. 03/28/19 3:50 pm  
Brittany Parnell (ershenb): Approved for CCC Secretary
5. 04/15/19 10:23 am  
Stephen Raper (sraper): Approved for

Course Reviewer Comments	<p><b>ershenb (03/26/19 2:54 pm)</b>: Rollback: Per email with Dr. Alajo, NUC 5577 needs to have "advanced" in the title with an accompanying course description (needs to differentiate with an advanced application against NUC ENG 4577(3377).</p> <p><b>sraper (04/15/19 10:23 am)</b>: as this is a grad certificate course and not a degree, no need for required for majors.</p> <p><b>ershenb (05/09/19 2:24 pm)</b>: checked "yes" required for majors.</p>	<p>Engineering DSCC Chair</p> <p>6. 04/23/19 1:23 pm Brittany Parnell (ershenb): Approved for Pending CCC Agenda post</p> <p>7. 05/09/19 2:25 pm Brittany Parnell (ershenb): Approved for CCC Meeting Agenda</p> <p>8. 05/09/19 3:31 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair</p>
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Key: 4623

[Preview Bridge](#)

## Course Change Request

### New Experimental Course Proposal

Date Submitted: 03/08/19 3:42 pm

Viewing: **COMP SCI 5001.003 : Game Theory for Computing**

File: 4596

Last edit: 04/23/19 1:33 pm

Changes proposed by: tauritzd

Requested	Fall 2019
Effective Change Date	
Department	Computer Science
Discipline	Computer Science (COMP SCI)
Course Number	5001
Topic ID	003
Experimental Title	Game Theory for Computing
Experimental Abbreviated Course Title	Game Theory for CS
Instructors	Venkata Nadendla

Experimental Catalog Description	This course introduces the mathematical and computational foundations of game theory, and its applications in computer science. Topics include rationality, non-cooperative (such as adversarial) games, dynamic games (temporal dynamics), Bayesian games (information asymmetry), and cooperative game theory (alliances and strategic teaming).	Approval Path 1. 03/11/19 2:43 am Bruce McMillin (ff): Approved for RCOMPSCI Chair 2. 03/12/19 11:14 am Brittany Parnell (ershenb): Approved for CCC Secretary 3. 03/25/19 2:01 pm Stephen Raper (sraper): Approved for Engineering DSCC Chair 4. 04/23/19 11:46 am Brittany Parnell (ershenb): Approved for Pending CCC Agenda post 5. 05/09/19 4:15 pm Brittany Parnell (ershenb): Approved for CCC Meeting Agenda 6. 05/10/19 7:33 am Stephen Raper (sraper): Approved for Campus Curricula Committee Chair
Prerequisites	A grade of "C" or better in both Comp Sci 2500 and Math 3108, and in one of Stat 3113, Stat 3115, Stat 3117, or Stat 5643.	
Field Trip Statement		
Credit Hours	LEC: 3      LAB: 0      IND: 0      RSD: 0      Total: 3	

Justification for new course:	Game theory is quickly gaining significance in modeling strategic interactions between competing entities in various real-world applications such as cybersecurity, robotics and networking. This course fills a void in the CS department's offerings to cover this important field.
Semester(s) previously taught	None
Co-Listed Courses:	
Course Reviewer Comments	

Key: 4596

7. 05/10/19 10:47  
am  
Marita Tibbetts  
(tibbettsmg):  
Approved for CAT  
entry

[Preview Bridges](#)

## Course Change Request

### New Experimental Course Proposal

Date Submitted: 03/08/19 3:41 pm

Viewing: **COMP SCI 5001.004 : Introduction to Virtual Reality**

File: 4598

Last edit: 04/23/19 1:34 pm

Changes proposed by: tauritzd

Requested	Fall 2019
Effective Change Date	
Department	Computer Science
Discipline	Computer Science (COMP SCI)
Course Number	5001
Topic ID	004
Experimental Title	Introduction to Virtual Reality
Experimental Abbreviated Course Title	Intro to Virtual Reality
Instructors	Chaman Sabharwal

Experimental Catalog Description	Covers virtual reality fundamentals: user interface (parameter pane, construction pane, network panes), application design facets (networks of nodes, navigation of networks for design and interactive visualization exploiting geometric transformations, digital assets, lights, cameras, animation), and simple applications to particles, dynamics, and fluids.	In Workflow 1. <b>RCOMPSCI Chair</b> 2. <b>CCC Secretary</b> 3. <b>Engineering DSCC Chair</b> 4. <b>Pending CCC Agenda post</b> 5. <b>CCC Meeting Agenda</b> 6. <b>Campus Curricula Committee Chair</b> 7. <b>CAT entry</b> 8. <b>Registrar</b>
Prerequisites	A grade of "C" or better in both Comp Sci 3200 and Math 3108.	
Field Trip Statement		
Credit Hours	LEC: 3      LAB: 0      IND: 0      RSD: 0      Total: 3	

Justification for new course:	Virtual Reality (VR) is becoming increasingly popular for real-world use in everything ranging from entertainment to emergency & military personnel training to telemedicine. This course fills a void in the CS curriculum to provide the technical foundation for building future VR systems.	Approval Path 1. 03/11/19 2:44 am Bruce McMillin (ff): Approved for RCOMPSCI Chair 2. 03/12/19 11:16 am Brittany Parnell (ershenb): Approved for CCC Secretary 3. 03/25/19 2:01 pm Stephen Raper (sraper): Approved for Engineering DSCC Chair 4. 04/23/19 11:47 am Brittany Parnell (ershenb): Approved for Pending CCC Agenda post 5. 05/09/19 4:16 pm Brittany Parnell (ershenb): Approved for CCC Meeting Agenda 6. 05/10/19 7:33 am Stephen Raper (sraper): Approved for Campus Curricula Committee Chair
Semester(s) previously taught	None	
Co-Listed Courses:		

Course Reviewer Comments	
--------------------------	--

Key: 4598

7. 05/10/19 10:47  
am  
Marita Tibbetts  
(tibbettsmg):  
Approved for CAT  
entry

[Preview Bridges](#)

## Course Change Request

### New Experimental Course Proposal

Date Submitted: 03/08/19 3:42 pm

Viewing: **COMP SCI 6001.003 : Algorithmic Game Theory**

File: 4597

Last edit: 04/23/19 1:39 pm

Changes proposed by: tauritzd

Requested	Fall 2019
Effective Change Date	
Department	Computer Science
Discipline	Computer Science (COMP SCI)
Course Number	6001
Topic ID	003
Experimental Title	Algorithmic Game Theory
Experimental Abbreviated Course Title	Algorithmic Game Theory
Instructors	Venkata Nadendla

In Workflow

1. RCOMPSCI Chair
2. CCC Secretary
3. Engineering DSCC Chair
4. Pending CCC Agenda post
5. CCC Meeting Agenda
6. Campus Curricula Committee Chair
7. CAT entry
8. Registrar

Approval Path

1. 03/11/19 2:44 am  
Bruce McMillin  
(ff): Approved for RCOMPSCI Chair
2. 03/12/19 11:18 am  
Brittany Parnell  
(ershenb): Approved for CCC Secretary
3. 03/25/19 2:01 pm  
Stephen Raper  
(sraper): Approved for Engineering DSCC Chair
4. 04/23/19 11:47 am  
Brittany Parnell  
(ershenb): Approved for Pending CCC Agenda post
5. 05/09/19 4:16 pm  
Brittany Parnell  
(ershenb): Approved for CCC Meeting Agenda
6. 05/10/19 7:33 am  
Stephen Raper  
(sraper): Approved for Campus Curricula Committee Chair

Experimental Catalog Description	This course covers aggregation of social preferences and mechanism design, with emphasis on computational complexity/efficiency and robustness in the context of real-world applications. Case studies on wireless spectrum auctions, matching markets, network routing, and security applications will be presented. Students will conduct a major term project.				
Prerequisites	A grade of "C" or better in Comp Sci 5200 and in one of Comp Sci 5400, Comp Sci 5401, or Comp Sci 5001 - Game Theory for Computing.				
Field Trip Statement					
Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3
Justification for new course:	Algorithmic Game Theory is increasingly employed to design mechanisms under complex (potentially adversarial) interactions in various real-world application domains such as economics, cyber security, and critical infrastructure protection. This course fills a void in the CS department's offering to cover this important field.				
Semester(s) previously taught	None				
Co-Listed Courses:					
Course Reviewer Comments					

Key: 4597

7. 05/10/19 10:51  
am  
Marita Tibbetts  
(tibbettsmg):  
Approved for CAT  
entry

[Preview Bridges](#)

## Course Change Request

### New Experimental Course Proposal

Date Submitted: 02/25/19 10:46 am

Viewing: **COMP SCI 6001.004 : Introduction to Quantum Computing**

File: 4595

Last edit: 04/23/19 1:40 pm

Changes proposed by: tauritzd

Requested	Fall 2019
Effective Change Date	
Department	Computer Science
Discipline	Computer Science (COMP SCI)
Course Number	6001
Topic ID	004
Experimental Title	Introduction to Quantum Computing
Experimental Abbreviated Course Title	Quantum Computing
Instructors	George Markowsky

Experimental Catalog Description	This course provides an introduction to the emerging field of quantum computation. The course will cover such topics as complex numbers and Hilbert space, basic quantum mechanics, quantum gates, Deutsch's algorithm, Shor's algorithm, Grover's algorithm, quantum programming, theoretical foundations of quantum computing, and open problems in quantum computing.	Approval Path 1. 03/04/19 5:04 pm Bruce McMillin (ff): Approved for RCOMPSCI Chair 2. 03/05/19 8:15 am Brittany Parnell (ershenb): Approved for CCC Secretary 3. 03/25/19 2:01 pm Stephen Raper (sraper): Approved for Engineering DSCC Chair 4. 04/23/19 11:48 am Brittany Parnell (ershenb): Approved for Pending CCC Agenda post 5. 05/09/19 4:17 pm Brittany Parnell (ershenb): Approved for CCC Meeting Agenda 6. 05/10/19 7:33 am Stephen Raper (sraper): Approved for Campus Curricula Committee Chair 7. 05/10/19 10:51 am
Prerequisites	A grade of "C" or better in Comp Sci 5200.	
Field Trip Statement		
Credit Hours	LEC: 3      LAB: 0      IND: 0      RSD: 0      Total: 3	
Justification for new course:	Quantum computing is a very significant area of research in computer science at the present time, and has the potential to revolutionize the field. It is important that we offer students the possibility of learning about this emerging field.	
Semester(s) previously taught	None	
Co-Listed Courses:		
Course Reviewer Comments		

Key: 4595

Marita Tibbetts  
(tibbettsmg):  
Approved for CAT  
entry

[Preview Bridge](#)

## Course Change Request

### New Experimental Course Proposal

Date Submitted: 03/18/19 1:38 pm

Viewing: **GEOPHYS 6001.001 : Advanced Geophysical Data Analysis**

File: 4622

Last edit: 04/23/19 1:43 pm

Changes proposed by: liukh

Requested	Summer 2019
Effective Change Date	
Department	Geosciences and Geological and Petroleum Engineering
Discipline	Geophysics (GEOPHYS)
Course Number	6001
Topic ID	001
Experimental Title	Advanced Geophysical Data Analysis
Experimental Abbreviated Course Title	Adv Geophys Data Analys
Instructors	Kelly Liu

Experimental Catalog Description	Applications of advanced time series and spatial series analysis techniques to geophysical data. Topics covered include digitization and aliasing of geophysical signals, frequency and wavenumber spectra, digital filtering and linear systems theory. Hands-on data processing exercises will provide theoretical knowledge as applied to geophysical investigations				
Prerequisites	Comp Sci 1970 and Comp Sci 1980 or equivalents.				
Field Trip Statement					
Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3

Justification for new course:	This course will teach the fundamental knowledge of data analysis to provide the foundation to the students for advanced real-world data-driven discovery.
Semester(s) previously taught	Summer, 2019
Co-Listed Courses:	

Course Reviewer Comments

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. **CAT entry**
8. **Registrar**

Approval Path

1. 03/18/19 1:59 pm  
David Borrok (borrokd):  
Approved for RGEOSENG Chair
2. 03/22/19 2:51 pm  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 04/08/19 12:22 pm  
Katie Shannon (shannonk):  
Approved for Sciences DSCC Chair
4. 04/23/19 12:30 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post
5. 05/09/19 4:18 pm  
Brittany Parnell (ershenb):  
Approved for CCC Meeting Agenda
6. 05/10/19 7:33 am  
Stephen Raper (sraper):  
Approved for Campus Curricula Committee Chair

Key: 4622

7. 05/10/19 10:53  
am  
Marita Tibbetts  
(tibbettsmg):  
Approved for CAT  
entry

[Preview Bridges](#)

# Course Change Request

## New Experimental Course Proposal

Date Submitted: 04/04/19 11:08 am

Viewing: **MATH 5001.002 : Introduction to Finite Element**

### Methods

File: 4626

Last edit: 04/23/19 1:47 pm

Changes proposed by: prunnion

Requested	Fall 2019
Effective Change Date	
Department	Mathematics & Statistics
Discipline	Mathematics (MATH)
Course Number	5001
Topic ID	002
Experimental Title	Introduction to Finite Element Methods
Experimental Abbreviated Course Title	Intro to FEM
Instructors	Xiaoming He

Experimental Catalog Description	Introduction to finite element methods for the approximate solution of partial differential equations. Construction and implementation of finite element basis functions, finite element interpolation, and finite element approximations for basic elliptic and parabolic equations.				
Prerequisites	Any instructor approved 4000 or higher level course with a significant computational component.				
Field Trip Statement					
Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3

#### In Workflow

1. **RMATHEMA Chair**
2. **CCC Secretary**
3. **Sciences DSCC Chair**
4. **Pending CCC Agenda post**
5. **CCC Meeting Agenda**
6. **Campus Curricula Committee Chair**
7. **CAT entry**
8. **Registrar**

#### Approval Path

1. 04/04/19 11:25 am  
sclark: Approved for RMATHEMA Chair
2. 04/04/19 6:31 pm  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 04/15/19 3:35 pm  
Katie Shannon (shannonk):  
Approved for Sciences DSCC Chair
4. 04/23/19 1:22 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post
5. 05/09/19 4:18 pm  
Brittany Parnell (ershenb):

Justification for

new course:

Our previous finite elements course, Math 6602, was proving an insufficient introduction to the topic, especially for non-majors. This 5000-level course is intended to provide a far less theoretical introduction for both non-majors and majors alike. We anticipate that this new course may lead to changes in the existing 6000-level course to allow us to increase the amount of theory covered at the 6000-level, since the 5000-level is far less theoretical.

Semester(s)

previously taught

Co-Listed

Courses:

Approved for CCC

Meeting Agenda

6. 05/10/19 7:34 am

Stephen Raper

(sraper):

Approved for

Campus Curricula

Committee Chair

7. 05/10/19 10:54

am

Marita Tibbetts

(tibbettsmg):

Approved for CAT

entry

Course Reviewer

Comments

Key: 4626

[Preview Bridge](#)

## Course Change Request

### New Experimental Course Proposal

Date Submitted: 04/16/19 2:08 pm

Viewing: **MATH 6001.006 : Numerical Analysis in Computational Fluid Dynamics**

File: 4632

Last edit: 04/24/19 9:45 am

Changes proposed by: prunion

Requested	Fall 2019
Effective Change Date	
Department	Mathematics & Statistics
Discipline	Mathematics (MATH)
Course Number	6001
Topic ID	006
Experimental Title	Numerical Analysis in Computational Fluid Dynamics
Experimental Abbreviated Course Title	Num Analysis in CFD
Instructors	Nan Jiang

Experimental Catalog Description	Numerical analysis in finite element computational fluid dynamics. Topics include continuous inf-sup condition and its discrete analogue, stability of the discrete pressure, properties of the solutions, time-stepping schemes, and stability and convergence of the finite element methods for the time-dependent Navier-Stokes equations.	In Workflow 1. <b>RMATHEMA Chair</b> 2. <b>CCC Secretary</b> 3. <b>Sciences DSCC Chair</b> 4. <b>Pending CCC Agenda post</b> 5. <b>CCC Meeting Agenda</b> 6. <b>Campus Curricula Committee Chair</b> 7. <b>CAT entry</b> 8. <b>Registrar</b>
Prerequisites	Math 5325.	
Field Trip Statement		
Credit Hours	LEC: 3      LAB: 0      IND: 0      RSD: 0      Total: 3	Approval Path 1. 04/16/19 2:24 pm sclark: Approved for RMATHEMA Chair 2. 04/16/19 3:39 pm Brittany Parnell (ershenb): Approved for CCC Secretary 3. 04/23/19 3:53 pm Katie Shannon (shannonk): Approved for Sciences DSCC Chair 4. 04/24/19 9:43 am Brittany Parnell

Justification for new course:	This course leverages the expertise of our faculty to grow our graduate offerings in an expanding area of mathematics.	(ershenb): Approved for Pending CCC Agenda post 5. 05/09/19 4:18 pm Brittany Parnell (ershenb): Approved for CCC Meeting Agenda 6. 05/10/19 7:34 am Stephen Raper (sraper): Approved for Campus Curricula Committee Chair 7. 05/10/19 12:22 pm
Semester(s) previously taught	None	
Co-Listed Courses:		

Course Reviewer Comments	
--------------------------	--

Key: 4632

Marita Tibbetts  
(tibbettsmg):  
Approved for CAT  
entry

[Preview Bridge](#)

# Course Change Request

Date Submitted: 04/05/19 11:45 am

Viewing: **PET ENG 3320 : Petrophysics**

File: 4189.4

Last approved: 10/16/17 3:27 am

Last edit: 04/08/19 8:14 am

Changes proposed by: reflori

Programs [PE ENG-BS: Petroleum Engineering BS](#)  
referencing this course

Requested **Fall 2019 08/17/2015**  
Effective Change Date  
Department Geosciences and Geological and Petroleum Engineering  
Discipline Petroleum Engineering (PET ENG)  
Course Number 3320  
Title Petrophysics  
Abbreviated Course Title Petrophysics

Catalog Description  
**Properties** ~~Fundamental properties~~ of petroleum reservoir rocks, including lithology, porosity, absolute permeability, pore surface area, relative and effective permeability, fluid saturations, rock wettability, capillary characteristics, acoustic properties, and electrical properties. Darcy's law for single phase linear **horizontal,** ~~horizontal and~~ tilted **and flow and** radial flow.

Prerequisites  
Preceded or accompanied by both Pet Eng 2510 and Physics 1135.

Field Trip Statement

Credit Hours	LEC: 2	LAB: 1	IND: 0	RSD: 0	Total: 3
Required for Majors	Yes				
	No				

In Workflow

1. **RGEOENG 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. 04/05/18 5:55 pm David Borrok (borrokd): Approved for RGEOENG Chair
2. 04/06/18 2:25 pm Brittany Parnell (ershenb): Rollback to Initiator
3. 04/06/19 3:45 pm David Borrok (borrokd): Approved for RGEOENG Chair
4. 04/08/19 8:14 am Brittany Parnell (ershenb): Approved for CCC Secretary

<p>Elective for Majors</p>	<p>5. 04/19/19 9:33 am Stephen Raper</p>
<p>Justification for change: When this course was created the old reservoir engineering (core) lab Pet Eng 3529 was blended into this course. These labs are now performed as part of Pet Eng 3320. Pet Eng 3529 included the communications component aspect for the degree. Hence Pet Eng 3320 should have been designated as communications emphasis. This submission is only for that change.</p> <p>Semesters previously offered as an experimental course None. This is a required course.</p> <p>Co-Listed Courses:</p>	<p>(srapar): Approved for Engineering DSCC Chair</p> <p>6. 04/23/19 1:23 pm Brittany Parnell (ershenb): Approved for Pending CCC Agenda post</p> <p>7. 05/09/19 2:26 pm Brittany Parnell (ershenb): Approved for CCC Meeting Agenda</p> <p>8. 05/09/19 3:31 pm Stephen Raper</p>
<p>Course Reviewer Comments <b>ershenb (04/06/18 11:10 am):</b> removed "Communication emphasis" from catalog description per the request of Dr Shari Dunn-Norman. <b>ershenb (04/06/18 2:25 pm):</b> Rollback: Rollback per the request of Dr. Shari Dunn-Norman</p>	<p>(srapar): Approved for Campus Curricula Committee Chair</p> <p>History</p> <p>1. Oct 16, 2017 by reflori</p>

Key: 4189

[Preview Bridge](#)

# Course Change Request

Date Submitted: 03/29/19 10:51 am

Viewing: **PET ENG 3330 : Well Logging**

File: 1045.2

Last approved: 06/22/15 3:46 am

Last edit: 04/02/19 1:58 pm

Changes proposed by: reflori

Programs referencing this course	<a href="#">PE ENG-BS: Petroleum Engineering BS</a> <a href="#">GE ENG-BS: Geological Engineering BS</a> <a href="#">GL&amp;GPH-BS: Geology and Geophysics BS</a>
Other Courses referencing this course	<u>In The Prerequisites:</u> <a href="#">PET ENG 4441 : Well Stimulation</a>

In Workflow

1. **RGEOENG 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

Requested **Spring 2020** ~~08/17/2015~~  
 Effective Change Date

Department Geosciences and Geological and Petroleum Engineering

Discipline Petroleum Engineering (PET ENG)

Course Number 3330

Title Well Logging

Abbreviated Well Logging

Course Title

Approval Path

1. 03/29/19 11:37 am  
David Borrok (borrokd):  
Approved for RGEOENG Chair
2. 04/02/19 1:58 pm

Catalog Description	An introduction to the electrical, nuclear, and acoustic properties of rocks: theory and interpretation of conventional well logs.				
Prerequisites	Physics 2135 or 2111; Pet Eng <b>3320</b> . <del>3520</del> .				
Field Trip Statement					
Credit Hours	LEC: 2	LAB: 1	IND: 0	RSD: 0	Total: 3
Required for Majors	Yes				

- Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 04/15/19 10:26 am  
Stephen Raper (sraper):  
Approved for Engineering DSCC Chair
4. 04/23/19 1:23 pm  
Brittany Parnell (ershenb):

<p>Elective for Majors      No</p>	<p>Approved for Pending CCC</p>
<p>Justification for change:                  Pet Eng 3320 is a new course on Petrophysics designed to precede Well Logging.</p> <p>Semesters previously offered as an experimental course</p> <p>Co-Listed Courses:</p>	<p>Agenda post</p> <p>5. 05/09/19 2:26 pm                  Brittany Parnell (ershenb):                  Approved for CCC Meeting Agenda</p> <p>6. 05/09/19 3:31 pm                  Stephen Raper (sraper):                  Approved for Campus Curricula Committee Chair</p>
<p>Course Reviewer Comments</p>	<p>History</p> <p>1. Jun 22, 2015 by reflori (1045.1)</p>

Key: 1045

[Preview Bridge](#)

## Course Change Request

Date Submitted: 03/29/19 10:53 am

Viewing: **PET ENG 3520 : Petroleum Reservoir Engineering**

File: 2614.1

Last edit: 04/15/19 10:27 am

Changes proposed by: reflori

Programs referencing this course	<a href="#">PE ENG-BS: Petroleum Engineering BS</a> <a href="#">GE ENG-BS: Geological Engineering BS</a>
Other Courses referencing this course	<u>In The Prerequisites:</u> <a href="#">PET ENG 3330 : Well Logging</a> <a href="#">PET ENG 3529 : Petroleum Reservoir Laboratory</a> <a href="#">PET ENG 4097 : Petroleum Engineering Design</a> <a href="#">PET ENG 4311 : Reservoir Characterization</a> <a href="#">PET ENG 4410 : Well Performance and Production Systems</a> <a href="#">PET ENG 4431 : Well Completion Design</a> <a href="#">PET ENG 4441 : Well Stimulation</a> <a href="#">PET ENG 4511 : Applied Petroleum Reservoir Engineering</a> <a href="#">PET ENG 4520 : Well Test Analysis</a> <a href="#">PET ENG 4531 : Natural Gas Engineering</a> <a href="#">PET ENG 4590 : Petroleum Economics and Asset Valuation</a> <a href="#">PET ENG 4611 : Secondary Recovery Of Petroleum</a> <a href="#">PET ENG 4621 : Fundamentals Of Petroleum Reservoir Simulation</a> <a href="#">PET ENG 4631 : Applied Reservoir Simulation</a> <a href="#">PET ENG 4710 : Finite Element Analysis with Applications in Petroleum Engineering</a> <a href="#">PET ENG 6431 : Advanced Well Completion Design</a> <a href="#">PET ENG 6441 : Advanced Well Stimulation</a> <a href="#">PET ENG 6521 : Advanced Well Test Analysis</a> <a href="#">PET ENG 6551 : Advanced Reservoir Engineering II</a>

Requested	<b>Spring 2020</b> <del>08/14/2018</del>
Effective Change Date	
Department	Geosciences and Geological and Petroleum Engineering
Discipline	Petroleum Engineering (PET ENG)
Course Number	3520
Title	Petroleum Reservoir Engineering
Abbreviated Course Title	Petr Reservoir Engr

In Workflow

1. **RGEOENG 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. 03/29/19 11:37 am  
David Borrok (borrokd):  
Approved for RGEOENG Chair
2. 04/02/19 2:03 pm  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 04/15/19 10:27 am  
Stephen Raper (sraper):  
Approved for Engineering DSCC Chair
4. 04/23/19 1:24 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post
5. 05/09/19 3:15 pm  
Brittany Parnell

Catalog Description	Properties of reservoir formations and fluids; reservoir volumetrics, reservoir statics, reservoir dynamics. Darcy's law and the mechanics of single and multiphase fluid flow through reservoir rock, capillary phenomena, material balance, reservoir drive mechanisms.					(ershenb): Approved for CCC Meeting Agenda 6. 05/09/19 3:31 pm Stephen Raper (sraper): Approved for Campus Curricula Committee Chair
Prerequisites	Accompanied or preceded by Pet Eng <b>2510</b> , <b>Pet Eng 3320</b> . <del>2510</del> .					
Field Trip Statement						
Credit Hours	LEC: <b>3</b>	LAB: <b>0</b>	IND: <b>0</b>	RSD: <b>0</b>	Total: <b>3</b>	
Required for Majors	<b>Yes</b> <del>No</del>					
Elective for Majors	No					

Justification for change: The former lab for Pet Eng 3520 is now included in Pet Eng 3320 Petrophysics which is a new course serving as the foundation of Pet Eng 3520.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer **sraper (04/15/19 10:27 am)**: Changed to required for major.  
Comments

Key: 2614

[Preview Bridge](#)

# Course Change Request

Date Submitted: 03/29/19 10:55 am

Viewing: **PET ENG 4097 : Petroleum Engineering Design**

File: 285.1

Last edit: 04/15/19 10:28 am

Changes proposed by: reflori

Programs [PE ENG-BS: Petroleum Engineering BS](#)  
referencing this course

Requested **Fall 2019 08/14/2018**  
Effective Change Date  
Department Geosciences and Geological and Petroleum Engineering  
Discipline Petroleum Engineering (PET ENG)  
Course Number 4097  
Title Petroleum Engineering Design  
Abbreviated Petroleum Engr Design  
Course Title

Catalog Description  
Senior capstone design project(s) based on industry data. Application of reservoir engineering: drilling and production engineering principles to evaluate and solve an industry problem such as a new field development, evaluation of an existing reservoir asset, or analysis of field re-development.

Prerequisites  
Pet Eng **3520** ~~3520~~, ~~Pet Eng 3410~~, and senior standing.

Field Trip Statement

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

Required for Majors    **Yes** ~~No~~

Elective for Majors    No

### In Workflow

1. **RGEOENG 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. 03/29/19 11:37 am  
David Borrok (borrokd):  
Approved for RGEOENG Chair
2. 04/02/19 2:05 pm  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 04/15/19 10:28 am  
Stephen Raper (sraper):  
Approved for Engineering DSCC Chair
4. 04/23/19 1:24 pm  
Brittany Parnell (ershenb):

Justification for  
change:

One of the former pre-reqs, Pet Eng 3410, doesn't exist.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

Course Reviewer  
Comments

**sraper (04/15/19 10:28 am):** changed to required for major.

Approved for  
Pending CCC  
Agenda post

5. 05/09/19 3:16 pm

Brittany Parnell  
(ershenb):

Approved for CCC  
Meeting Agenda

6. 05/09/19 3:31 pm

Stephen Raper  
(sraper):

Approved for

Campus Curricula  
Committee Chair

Key: 285

[Preview Bridge](#)

## Course Change Request

Date Submitted: 03/29/19 10:56 am

Viewing: **PET ENG 4311 : Reservoir Characterization**

File: 1671.6

Last approved: 10/21/16 3:05 pm

Last edit: 04/02/19 2:07 pm

Changes proposed by: reflori

Requested	<b>Spring 2020</b> <del>08/14/2018</del>
Effective Change Date	
Department	Geosciences and Geological and Petroleum Engineering
Discipline	Petroleum Engineering (PET ENG)
Course Number	4311
Title	Reservoir Characterization
Abbreviated Course Title	Reservoir Characteriz

In Workflow

1. **RGEOSENG 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

<table border="0"> <tr> <td>Catalog Description</td> <td colspan="5">The integration and extrapolation of Geologic, Geophysical, and Petroleum Engineering data for flow model construction.</td> </tr> <tr> <td>Prerequisites</td> <td colspan="5">Pet Eng 3520 and Pet Eng <b>3330</b>. <del>3310</del>.</td> </tr> <tr> <td>Field Trip Statement</td> <td colspan="5"></td> </tr> <tr> <td>Credit Hours</td> <td>LEC: 3</td> <td>LAB: 0</td> <td>IND: 0</td> <td>RSD: 0</td> <td>Total: 3</td> </tr> <tr> <td>Required for Majors</td> <td colspan="5">No</td> </tr> <tr> <td>Elective for Majors</td> <td colspan="5">Yes</td> </tr> </table>	Catalog Description	The integration and extrapolation of Geologic, Geophysical, and Petroleum Engineering data for flow model construction.					Prerequisites	Pet Eng 3520 and Pet Eng <b>3330</b> . <del>3310</del> .					Field Trip Statement						Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3	Required for Majors	No					Elective for Majors	Yes					<p><b>Approval Path</b></p> <ol style="list-style-type: none"> <li>1. 03/29/19 11:37 am David Borrok (borrokd): Approved for RGEOSENG Chair</li> <li>2. 04/02/19 2:07 pm Brittany Parnell (ershenb): Approved for CCC Secretary</li> <li>3. 04/15/19 10:29 am Stephen Raper (sraper): Approved for Engineering DSCC Chair</li> <li>4. 04/23/19 1:24 pm Brittany Parnell (ershenb): Approved for Pending CCC Agenda post</li> </ol>
Catalog Description	The integration and extrapolation of Geologic, Geophysical, and Petroleum Engineering data for flow model construction.																																				
Prerequisites	Pet Eng 3520 and Pet Eng <b>3330</b> . <del>3310</del> .																																				
Field Trip Statement																																					
Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3																																
Required for Majors	No																																				
Elective for Majors	Yes																																				
<p>Justification for change: Pet Eng 3330 is the new number for Well Logging, not 3310.</p> <p>Semesters previously offered as an experimental course</p> <p>Co-Listed Courses:</p>	<ol style="list-style-type: none"> <li>5. 05/09/19 3:16 pm Brittany Parnell</li> </ol>																																				
<p>Course Reviewer Comments</p>																																					

Key: 1671

(ershenb):  
Approved for CCC  
Meeting Agenda  
6. 05/09/19 3:31 pm  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair

#### History

1. Oct 21, 2016 by  
patty (1671.1)

[Preview Bridge](#)

# Course Change Request

Date Submitted: 03/29/19 10:58 am

Viewing: **PET ENG 4431 : Well Completion Design**

File: 1299.1

Last edit: 04/15/19 10:29 am

Changes proposed by: reflori

Other Courses referencing this course	In The Prerequisites: <a href="#">PET ENG 6431 : Advanced Well Completion Design</a>
---------------------------------------	---

Requested **Spring 2020** ~~08/14/2018~~  
 Effective Change Date  
 Department Geosciences and Geological and Petroleum Engineering  
 Discipline Petroleum Engineering (PET ENG)  
 Course Number 4431  
 Title Well Completion Design  
 Abbreviated Well Completion Design  
 Course Title

Catalog Description					
An overview of the hardware, fluids and processes employed in completing oil and gas wells. Examination of types of well completions and considerations in their design. Introduction to downhole mechanics and tubing movement and stress calculations.					
Prerequisites					
Pet Eng <del>4410. 3520.</del>					
Field Trip Statement					
Credit Hours	LEC: <b>3</b>	LAB: <b>0</b>	IND: <b>0</b>	RSD: <b>0</b>	Total: <b>3</b>
Required for Majors	No				
Elective for Majors	<b>Yes</b> <del>No</del>				

In Workflow

1. **RGEOENG 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. 03/29/19 11:37 am  
David Borrok (borrokd):  
Approved for RGEOENG Chair
2. 04/02/19 2:15 pm  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 04/15/19 10:29 am  
Stephen Raper (sraper):  
Approved for Engineering DSCC Chair
4. 04/23/19 1:24 pm  
Brittany Parnell (ershenb):

Justification for  
change:

Pet Eng 4410 is our Production course, a better pre-req than 3520 Reservoir Engineering.

Semesters  
previously  
offered as an  
experimental  
course

Co-Listed  
Courses:

Approved for  
Pending CCC  
Agenda post

5. 05/09/19 3:17 pm

Brittany Parnell  
(ershenb):  
Approved for CCC  
Meeting Agenda

6. 05/09/19 3:31 pm

Stephen Raper  
(sraper):  
Approved for  
Campus Curricula

Committee Chair

Course Reviewer

Comments

**sraper (04/15/19 10:29 am):** changed to elective for major.

Key: 1299

[Preview Bridge](#)

## Course Change Request

Date Submitted: 03/29/19 10:59 am

Viewing: **PET ENG 4611 : Secondary Recovery Of Petroleum**

File: 1266.1

Last edit: 05/09/19 3:19 pm

Changes proposed by: reflori

Other Courses referencing this course

In The Prerequisites:  
[PET ENG 6631 : A Survey Of Improved Recovery Processes](#)

Requested **Fall 2019** ~~08/14/2018~~  
 Effective Change Date  
 Department Geosciences and Geological and Petroleum Engineering  
 Discipline Petroleum Engineering (PET ENG)  
 Course Number 4611  
 Title Secondary Recovery Of Petroleum  
 Abbreviated Course Title Secondary Recovery -Petr

Catalog Description Oil recovery by water injection. Effects of wettability, capillary pressure, relative permeability, mobility ratio on displacement, sweep, and recovery efficiencies. Piston-like and Buckley-Leverett models. Fractional flow and frontal advance equation. Oil recovery prediction methods for linear and pattern waterfloods in single and multi-layered reservoirs.

Prerequisites Pet Eng **3520**. ~~3520~~, ~~Pet Eng 3529~~.

Field Trip Statement

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

Required for Majors No

Elective for Majors **Yes** ~~No~~

Justification for change: Pet Eng 3520 is the only pre-req needed for this course. Drop 3529....

Semesters previously offered as an experimental course

- In Workflow
1. **RGEOSENG 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. 03/29/19 11:37 am  
David Borrok (borrokd):  
Approved for RGEOSENG Chair
  2. 04/02/19 2:17 pm  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
  3. 04/15/19 10:30 am  
Stephen Raper (sraper):  
Approved for Engineering DSCC Chair
  4. 04/23/19 1:24 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post
  5. 05/09/19 3:19 pm  
Brittany Parnell

Co-Listed

Courses:

Course Reviewer **sraper (04/15/19 10:30 am)**: changed to elective for major.  
Comments

Key: 1266

(ershenb):

Approved for CCC

Meeting Agenda

6. 05/09/19 3:31 pm

Stephen Raper

(sraper):

Approved for

Campus Curricula

Committee Chair

[Preview Bridge](#)

## Course Change Request

Date Submitted: 03/29/19 11:01 am

Viewing: **PET ENG 4720 : Mechanical Earth Modeling**

File: 919.1

Last edit: 04/15/19 10:31 am

Changes proposed by: reflori

Programs [PE ENG-BS: Petroleum Engineering BS](#)  
 referencing this course

Requested **Spring 2020** ~~08/14/2018~~  
 Effective Change Date  
 Department Geosciences and Geological and Petroleum Engineering  
 Discipline Petroleum Engineering (PET ENG)  
 Course Number 4720  
 Title Mechanical Earth Modeling  
 Abbreviated Course Title Mech Earth Modeling

Catalog Description This course introduces the work process necessary to create the Mechanical Earth Model's principle components, formation in-situ stress and strength. 1-D modelign methods are reviewed and extended to 3-D; and the integration of MEM with well design is shown. An MEM model will be created and compared to actual field results.

Prerequisites Pet Eng ~~3330~~ **3310** and Geology 3310.

Field Trip Statement

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

Required for Majors **Yes** ~~No~~

Elective for Majors No

Justification for change: Pet Eng 3330 is the new number for Pet Eng 3310 Well Logging.

Semesters previously offered as an experimental course

- In Workflow
1. **RGEOENG 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. 03/29/19 11:37 am  
David Borrok (borrokd):  
Approved for RGEOENG Chair
  2. 04/02/19 2:18 pm  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
  3. 04/15/19 10:31 am  
Stephen Raper (sraper):  
Approved for Engineering DSCC Chair
  4. 04/23/19 1:24 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post
  5. 05/09/19 3:20 pm  
Brittany Parnell

Co-Listed

Courses:

Course Reviewer **sraper (04/15/19 10:31 am)**: changed to required for majors.  
Comments

Key: 919

(ershenb):

Approved for CCC

Meeting Agenda

6. 05/09/19 3:31 pm

Stephen Raper

(sraper):

Approved for

Campus Curricula

Committee Chair

[Preview Bridge](#)

## Course Change Request

Date Submitted: 03/29/19 11:02 am

Viewing: **PET ENG 4811 : Offshore Petroleum Technology**

File: 2142.1

Last edit: 04/15/19 10:32 am

Changes proposed by: reflori

Requested	<b>Spring 2020</b> <del>08/01/2014</del>
Effective Change Date	
Department	Geosciences and Geological and Petroleum Engineering
Discipline	Petroleum Engineering (PET ENG)
Course Number	4811
Title	Offshore Petroleum Technology
Abbreviated Course Title	Offshore Petr Tech

- In Workflow
1. **RGEOSENG 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

Catalog Description	An introduction to the development of oil and gas fields offshore, including offshore leasing, drilling, well completions, production facilities, pipelines, and servicing. Subsea systems, and deepwater developments are also included. This course is suitable for mechanical, electrical and civil engineering students interested in ultimately working offshore.				
Prerequisites	<b>Pet Eng 3520.</b>				
Field Trip Statement					
Credit Hours	LEC: <b>3</b>	LAB: <b>0</b>	IND: <b>0</b>	RSD: <b>0</b>	Total: <b>3</b>
Required for Majors	No				
Elective for Majors	<b>Yes</b> <del>No</del>				

- Approval Path
1. 03/29/19 11:37 am  
David Borrok (borrokd):  
Approved for RGEOSENG Chair
  2. 04/02/19 2:20 pm  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
  3. 04/15/19 10:32 am  
Stephen Raper (sraper):  
Approved for Engineering DSCC Chair
  4. 04/23/19 1:24 pm  
Brittany Parnell (ershenb):  
Approved for Pending CCC Agenda post
  5. 05/09/19 3:21 pm  
Brittany Parnell

Justification for change: This course previously had no pre-req listed. It needed one, and Pet Eng 3520 is the best choice.

Semesters previously offered as an experimental course

Co-Listed Courses:

Course Reviewer **sraper (04/15/19 10:32 am)**: changed to elective for majors.  
Comments

Key: 2142

(ershenb):

Approved for CCC  
Meeting Agenda

6. 05/09/19 3:31 pm

Stephen Raper

(sraper):

Approved for  
Campus Curricula  
Committee Chair

[Preview Bridge](#)

# Course Change Request

Date Submitted: 03/29/19 11:03 am

Viewing: **PET ENG 6431 : Advanced Well Completion Design**

File: 4175.2

Last approved: 05/04/15 3:20 am

Last edit: 05/09/19 3:23 pm

Changes proposed by: reflori

Requested **Spring 2020** ~~08/17/2015~~

Effective Change

Date

Department Geosciences and Geological and Petroleum Engineering

Discipline Petroleum Engineering (PET ENG)

Course Number 6431

Title Advanced Well Completion Design

Abbreviated Adv **Well** Compl **Design** ~~Des~~

Course Title

### In Workflow

1. **RGEOENG 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

### Catalog

#### Description

Overview of hardware, fluids and processes employed in completing oil and gas wells. Types of well completions and design considerations. Downhole mechanics, tubing movement and stress calculations. Advanced concepts in well completion design and review of well completions literature.

#### Prerequisites

Pet Eng **4410. 3520. Students may not earn credit for both Pet Eng 4431 and Pet Eng 6431.**

#### Field Trip

#### Statement

Credit Hours	LEC: 3	LAB: 0	IND: 0	RSD: 0	Total: 3
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Required for Majors No

Elective for Majors No

### Approval Path

1. 03/29/19 11:38 am  
David Borrok (borrokd):  
Approved for RGEOENG Chair
2. 04/02/19 2:21 pm  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 04/15/19 10:32 am  
Stephen Raper (sraper):  
Approved for Engineering DSCC Chair
4. 04/23/19 1:25 pm  
Brittany Parnell (ershenb):

Justification for change:

Pet Eng 4410 is our Production class which is the most appropriate pre-req for completions.

Semesters previously offered as an experimental course

Not sure, but several.

Co-Listed

Courses:

Course Reviewer

Comments

**ershenb (05/09/19 3:23 pm):** Removed "Students may not earn credit for both Pet Eng 4431 and Pet Eng 6431."

Approved for Pending CCC Agenda post

5. 05/09/19 3:23 pm

Brittany Parnell (ershenb):

Approved for CCC Meeting Agenda

6. 05/09/19 3:31 pm

Stephen Raper (sraper):

Approved for Campus Curricula Committee Chair

History

1. May 4, 2015 by reflori

Key: 4175

[Preview Bridge](#)

## Course Change Request

Date Submitted: 03/29/19 11:05 am

Viewing: **PET ENG 6621 : Advanced Applied Reservoir Simulation**

File: 79.1

Last edit: 03/29/19 11:05 am

Changes proposed by: reflori

Requested **Fall 2019** ~~08/14/2014~~  
 Effective Change  
 Date  
 Department Geosciences and Geological and Petroleum  
 Engineering  
 Discipline Petroleum Engineering (PET ENG)  
 Course Number 6621  
 Title Advanced Applied Reservoir Simulation  
 Abbreviated Adv Appld Reservoir  
 Course Title Simulation

In Workflow

1. **RGEOENG 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

Catalog

Description

Advanced simulation of actual reservoir problems using both field and individual well models to determine well spacing, production effects of secondary and enhanced recovery processes, future rate predictions and recovery, coning effects, relative permeability adjustments and other history matching techniques.

Prerequisites

Pet Eng **4621 or equivalent.** ~~5621.~~

Field Trip

Statement

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

Required for Majors      No

Elective for Majors      No

Approval Path

1. 03/29/19 11:38 am  
David Borrok (borrokd):  
Approved for RGEOENG Chair
2. 04/02/19 2:25 pm  
Brittany Parnell (ershenb):  
Approved for CCC Secretary
3. 04/15/19 10:32 am  
Stephen Raper (sraper):  
Approved for Engineering DSCC Chair
4. 04/23/19 1:25 pm  
Brittany Parnell (ershenb):

Justification for change:

Pet Eng 5621 didn't exist. Pet Eng 4621 is the proper pre-req.

Semesters previously

offered as an  
experimental  
course

Co-Listed  
Courses:

Course Reviewer  
Comments

Approved for  
Pending CCC  
Agenda post  
5. 05/09/19 3:26 pm  
Brittany Parnell  
(ershenb):  
Approved for CCC  
Meeting Agenda  
6. 05/09/19 3:31 pm  
Stephen Raper  
(sraper):  
Approved for  
Campus Curricula  
Committee Chair

Key: 79

[Preview Bridge](#)