

Campus Curricula Committee Meeting Agenda

August 11, 2026

8:15am - 9:30am, Fulton Hall 120

(For Faculty Senate Meeting of September 17, 2026)

Review of submitted Course Change forms:

File: 5506	ARCH ENG 2103 : Architectural Materials And Methods of Construction
File: 10412	ARCH ENG 5861 : Daylighting Design
File: 4290	CHEM ENG 5250 : Isolation and Purification of Biologicals
File: 10415	CHEM ENG 5290 : Energy Engineering
File: 10408	ENGLISH 3238 : Vikings: Legends and Lives
File: 6440	ENV ENG 5650 : Public Health Engineering
File: 4838	ENV SCI 1110 : Terra Incognita Environmental Science Freshman Seminar
File: 565	ERP 5410 : Business Intelligence, Data Science, and AI Use of Business Intelligence
File: 4423	GEOLOGY 4085 : Internship
File: 4424	GEOLOGY 5085 : Internship
File: 4425	GEOLOGY 6085 : Internship
File: 10420	HISTORY 6470 : Advanced American Environmental History
File: 4103	MATH 5604 : Introduction to Numerical Methods for Differential Equations
File: 8811	MATH 6108 : Applied Matrix Theory
File: 4060	MATH 6601 : Numerical Analysis
File: 2562	PET ENG 4010 : Ethics and Professionalism
File: 10421	PHILOS 5277 : Advanced Wilderness and its Critics
File: 10419	POL SCI 5300 : Advanced Principles of Public Policy
File: 10411	SYS ENG 5106 : Verification Evaluation and Test

Review of submitted Program Change forms:

File: 17	CHEM-MI : Chemistry Minor
File: 95	MI ENG-BS : Mining Engineering BS
File: 123	PRE-MED-MI : Pre-Medicine Minor
File: 440	PROPOSED : Environmental Policy
File: 140	SYS ENG-MS : Systems Engineering MS

Review of submitted Experimental Course forms:

File: 569	BIO SCI 3001.035 : Entomology
File: 570	BIO SCI 6001.025 : Scientific Communication
File: 562	CHEM ENG 5001.039 : Circular Economy and Bioeconomy
File: 566	COMP SCI 6001.076 : Physical Artificial Intelligence for Humanoids
File: 567	ELEC ENG 6001.059 : Power System Economics and Market

File: 561 ENGLISH 3001.055 : Steampunk in Fiction and Culture
File: 564 ENGLISH 6001.002 : Media Technology and Humanity
File: 563 ENV SCI 5001.002 : Environmental Journalism
File: 559 MATH 5001.011 : Theoretical Foundations of Data Science II
File: 565 TCH COM 6001.003 : Foundations of Responsible AI Collaboration

New Business:

CCC Calendar 2026-2027

Course Change Request

Date Submitted: 04/10/26 11:32 am

Viewing: **ARCH ENG 2103 : Architectural Materials And Methods Of Construction**

Last edit: 04/27/26 11:44 am

Changes proposed by: Stuart Baur (baur)

Programs
referencing this
course

- [ARC ENG-BS: Architectural Engineering BS](#)
- [CON E&M-MI: Construction Engineering and Management Minor](#)

Requested Effective Date	Spring 2027
Department	Civil Engineering (RCIVILEN)
Discipline	Architectural Engineering (ARCH ENG)
Course Number	2103
Title	Architectural Materials And Methods Of Construction
Abbreviated Course Title	Arch Mtrls & Mtds Const
Co-Listed Course	

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. 04/23/26 10:56 am
Subhas Venayagamoorthy (skv7d8): Approved for RCIVILEN Chair
2. 04/27/26 11:45 am
Hannah Johnson (hjh9x): Approved for CCC Secretary
3. 05/01/26 11:19 am
Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 07/27/26 8:58 am
Hannah Johnson (hjh9x): Approved

A study of the origin and properties of construction materials, methods of construction, and installation. Materials include mineral based, wood, steel, concrete, masonry, asphalt, and gypsum as components of architectural engineering.

Prerequisite(s):

Chem 1305 or ~~1310~~, Chem 1310, Chem 1319 and Sophomore standing.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	2
Laboratory	1

Total: 3

Required for Majors Yes ~~No~~

Elective for Majors No

Communication No
Intensive

Communication No
Emphasized

Grading Basis Graded

Repeatable No

Justification

Added Chem 1305 as a prerequisite

Semesters Previously Offered

Term(s) Offered as
experimental

Is this a MOTR
Course?

Reviewer

Comments

Hannah Johnson (hjh9x) (04/24/26 9:11 am): Selected yes for required for majors, selected no for elective for majors per email from Stuart Baur. Selected no for CI and CE.

Hannah Johnson (hjh9x) (04/24/26 9:16 am): Changed effective date to Spring 2027 due to the deadline for Fall 2026 having already passed.

Hannah Johnson (hjh9x) (04/27/26 11:44 am): Added 'Chem' to 1310 in prereq.

Key: 5506

[Preview Bridge](#)

Course Change Request

New Course Proposal

Date Submitted: 04/23/26 10:50 am

Viewing: **ARCH ENG 5861 : Daylighting Design**

Last edit: 04/23/26 1:19 pm

Changes proposed by: Rachel Johnson (rj84p)

Requested Effective Date	Spring 2027
Department	Civil Engineering (RCIVILEN)
Discipline	Architectural Engineering (ARCH ENG)
Course Number	5861
Title	Daylighting Design
Abbreviated Course Title	Daylighting
Co-Listed Course	

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. 04/23/26 10:56 am
Subhas Venayagamoorthy (skv7d8): Approved for RCIVILEN Chair
2. 04/27/26 11:49 am
Hannah Johnson (hjh9x): Approved for CCC Secretary
3. 05/01/26 11:19 am
Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 07/27/26 8:59 am
Hannah Johnson (hjh9x): Approved

This course focuses on daylighting technologies and design. Students will use physical model techniques to test using a Heliodon and light meters along with computer techniques for modeling and simulations utilizing such software as the Revit plugin Insight for exploring qualities of daylight with some attention to an understanding of the physical and perceptual mechanisms that shape our experience of daylight.

Prerequisite(s):

Civ Eng 4448 or Arch Eng 4448, and junior standing.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	2
Laboratory	1

Total: 3

Required for Majors No

Elective for Majors Yes

Communication No
Intensive

Communication No
Emphasized

Grading Basis Graded

Repeatable No

Justification

Course has been taught successfully for at least 3 semesters in the spring averaging 15 students per semester.

Semesters Previously Offered

Term(s) Offered as

experimental

Spring 24 and 17 students enrolled

Spring 25 and 17 students enrolled

Spring 26 and 11 students are enrolled

Previous Course

Code

Is this a MOTR

Course?

Reviewer

Comments

Hannah Johnson (hjh9x) (04/23/26 1:08 pm): Selected graded for grading basis. Added terms offered and students enrolled as an EC. (Per email from Rachel F. Johnson)

Hannah Johnson (hjh9x) (04/23/26 1:19 pm): Edited CE/ArchE, in prereq to say "Civ Eng 4448 or Arch Eng 4448,"

Key: 10412

[Preview Bridge](#)

Course Change Request

Date Submitted: 05/12/26 9:22 am

Viewing: **CHEM ENG 5250 : Isolation and Purification of Biologicals**

Last approved: 04/21/26 6:04 am

Last edit: 05/12/26 9:22 am

Changes proposed by: Christi Luks (luksc)

Programs

referencing this
course

[CH ENG-BS: Chemical Engineering BS](#)

[CHEMPRO-CT: Chemical Process Engineering CT](#)

[BIOMED-BS: Biomedical Engineering BS](#)

[BIOENG-PHD: Bioengineering PhD](#)

Other Courses

referencing this
course

[In The Catalog Prerequisites:](#)

[BME 4091 : Biomedical Engineering Design I](#)

[BME 6500 : Pharmaceutical Process Engineering](#)

[CHEM ENG 4201 : Biochemical Separations and Control Laboratory](#)

[CHEM ENG 5251 : Intermediate Bioseparations Laboratory](#)

Requested Effective
Date

Spring 2027

Department

Chemical and Biochemical Engineering
(RCHEMENG)

Discipline

Chemical Engineering (CHEM ENG)

Course Number

5250

Title

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**

Approval Path

1. 05/12/26 9:23 am
Ryan Gilbert
(rggnx): Approved
for RCHEMENG
Chair

2. 05/12/26 2:08 pm
Hannah Johnson
(hjh9x): Approved
for CCC Secretary

3. 05/18/26 2:16 pm
Theresa Swift
(thswift): Approved
for Engineering
DSCC Chair

4. 07/27/26 9:05 am
Hannah Johnson
(hjh9x): Approved

Isolation and Purification of Biologicals

Abbreviated Course Title Iso and Purif of Biolog

Co-Listed Course

Catalog Description

for Pending CCC
Agenda post

History

1. May 24, 2016 by Daniel Forciniti (forciniti)
2. Jun 16, 2022 by Christi Luks (luksc)
3. May 17, 2024 by Christi Luks (luksc)
4. Apr 21, 2026 by Christi Luks (luksc)

Isolation and purification of biologicals with emphasis on biopharmaceuticals. Principles and applications of chromatography, lyophilization, and product formulation. Use of ultrafiltration and diafiltration in the processing of protein products. Disposable technology. Generally offered in fall.

Prerequisite(s):

Preceded or accompanied by both Chem Eng 3131 ~~3131~~, and Chem Eng 3141 or by BME 3100.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors Yes

Elective for Majors No

Communication No
Intensive

Communication No
Emphasized

Grading Basis	Graded
Repeatable	No

Justification

This was poorly edited last time and inadvertently created prerequisites that were impossible for BME students to meet.

Semesters Previously Offered

Term(s) Offered as
experimental

Is this a MOTR
Course?

Reviewer
Comments

Key: 4290

[Preview Bridge](#)

Course Change Request

New Course Proposal

Date Submitted: 04/30/26 9:52 am

Viewing: **CHEM ENG 5290 : Energy Engineering**

Last edit: 04/30/26 1:49 pm

Changes proposed by: Christi Luks (luksc)

Requested Effective Date	Spring 2027
Department	Chemical and Biochemical Engineering (RCHEMENG)
Discipline	Chemical Engineering (CHEM ENG)
Course Number	5290
Title	Energy Engineering
Abbreviated Course Title	Energy Engineering
Co-Listed Course	

Catalog Description	
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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

Approval Path

1. 04/30/26 9:54 am
Ryan Gilbert (rggnx): Approved for RCHEMENG Chair
2. 05/01/26 10:16 am
Hannah Johnson (hjh9x): Approved for CCC Secretary
3. 05/11/26 11:10 am
Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 07/27/26 9:06 am
Hannah Johnson (hjh9x): Approved

An assessment of issues related to worldwide energy demand and the key engineering, environmental, industrial, governmental, and market concepts that drive decision making. Discussions of the life-cycle analysis of traditional and renewable energy sources such as fossil fuels, nuclear power, biomass, wind, solar, and geothermal.

Prerequisite(s):

Senior standing.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Communication No
Intensive

Communication No
Emphasized

Grading Basis Graded

Repeatable No

Justification

This course has been taught as Chem Eng 5001 Topic ID 022 in Spring 2026 (23 enrolled) and Spring 2025 (24) and Spring 2024 (21 enrolled).

Semesters Previously Offered

Term(s) Offered as
experimental

This course has been taught as Chem Eng 5001 Topic ID 022 in Spring 2026 (23 enrolled) and Spring 2025 (24) and Spring 2024 (21 enrolled).

Previous Course

Code

Is this a MOTR

Course?

Reviewer

Comments

Hannah Johnson (hjh9x) (04/30/26 1:49 pm): Selected graded for grading basis, added a period at the end of the prereq. Copied justification and added it to the terms offered as an EC box.

Key: 10415

[Preview Bridge](#)

Course Change Request

New Course Proposal

Date Submitted: 04/16/26 3:55 pm

Viewing: **ENGLISH 3238 : Vikings: Legends and Lives**

Last edit: 04/27/26 3:56 pm

Changes proposed by: Eric Bryan (bryane)

Requested Effective Date	Spring 2027
Department	English & Tech Communication (REGLISH)
Discipline	English (ENGLISH)
Course Number	3238
Title	Vikings: Legends and Lives
Abbreviated Course Title	Vikings
Co-Listed Course	

Catalog Description

In Workflow

1. **REGLISH Chair**
2. **CCC Secretary**
3. **Arts & Humanities 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. 04/16/26 9:22 pm
Kathryn Dolan (dolankc): Approved for REGLISH Chair
2. 04/29/26 8:52 am
Hannah Johnson (hjh9x): Approved for CCC Secretary
3. 07/20/26 12:19 pm
Alejandra Sobrado (asgx4): Approved for Arts & Humanities DSCC Chair
4. 07/27/26 9:06 am
Hannah Johnson (hjh9x): Approved

This course explores the literary and historical evidence for the lives, conquests, and customs of the Vikings and others of the medieval North during the Viking Age (roughly the eighth to the eleventh century), with special attention given to the Viking and Scandinavian presence in the British Isles.

Prerequisite(s):

English 1120.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Communication No
Intensive

Communication Yes
Emphasized

Grading Basis Graded

Repeatable No

Justification

Institutional Justification:

This course meets the major requirements for (1) a 3000-level course with geographical designation and (2) a 3000-level course with historical or cultural designation; it will also contribute to the existing Undergraduate Certificate in Medieval and Renaissance Studies. Finally, the course makes an attractive offer to non-majors requiring upper-level humanities courses. The course has been taught three times as a 3000-level experimental 'special topics'

class and has been at or near capacity each time.

Academic Justification:

Despite the ever-growing cultural interest in the Vikings—as evinced by the popular television show *Vikings*, the upcoming cinematic release of *The Northmen*, and, specific to the British Isles, Bernard Cornwell’s novel (and subsequent television series) *The Last Kingdom*—the lives and literature of the Viking Age are poorly represented in the classroom. In courses on British literature, in particular, it is rarely more than mentioned that England and portions of Ireland and Scotland were at times ruled by Scandinavians during the Viking Age, or that Scandinavians (generically referred to as “Danes”) occupied more than half of England for better than two centuries, or that the Anglo-Saxon king Alfred the Great is called “the Great” because he defeated the seemingly invincible Danish (sometimes called “Viking”) army that held much of the north of England, or that mere weeks before the defining moment in medieval English history (William the Conqueror’s victory over Harald Godwinson of England), King Harold defeated one of the greatest sea-going Scandinavian armies of the Viking age (if events were reversed, we could easily be speaking a version of Norwegian). Yet the Vikings are there to be found, in life and literature, if we are willing to look for them.

If the scholarly, higher-educational community is willing to ignore the Vikings, popular culture clearly is not. This lack of coverage in the classroom has become rather a problem, especially in the United States. Because of the real-life Viking brutality, the word ‘Viking’ (Old Norse *víkingr*, Old English *wīcing*) was never uttered in the medieval period with anything other than scorn and fear. Not until the eighteenth- and nineteenth-century romanticization of the ancient past were the Vikings elevated to the status of heroes and demigods. Nowadays, the romanticized Viking mentality—a sense of adventure, a disregard for authority, and a certain kind of reckless courage—has placed the Vikings in the company of the Pirates of the Caribbean and the gunslingers of the American Wild West. So much may be innocent, but (often erroneously labeled) ‘Viking’ symbols and identities have made their way into extremists, typically far-right imaginations, to say nothing of the contributions of the romanticization of the North to nationalism and the Nazi identity of the twentieth century.

A correction of sorts is needed: Who were the Vikings, really? Were they anything more than seagoing murderers and thieves? Did they live according to a heroic ethic or merely a bloodthirsty one? And what status ought they hold in our modern cultural memory? This course enables students to answer these questions with particular focus on the Vikings in the British Isles because here, in the United States, we have inherited a predominately (though not wholly) British popular memory of the Vikings.

Term(s) Offered as

experimental

Spring 2023 - 21 students, Spring 2024 - 19 students, and Spring 2026 - 18 students.

Previous Course

Code

Is this a MOTR

Course?

Reviewer

Comments

Hannah Johnson (hjh9x) (04/20/26 8:05 am): Added a period after the prereq. Selected graded for grading basis, and added EC semesters taught based on email from Eric Bryan

Hannah Johnson (hjh9x) (04/20/26 9:09 am): Added number of students in each semester as an EC course from Eric Bryan.

Hannah Johnson (hjh9x) (04/20/26 3:36 pm): Removed English from the course number.

Hannah Johnson (hjh9x) (04/27/26 3:56 pm): Selected no for CI per email from Eric Bryan.

Key: 10408

[Preview Bridge](#)

Course Change Request

Date Submitted: 06/08/26 3:54 pm

Viewing: **ENV ENG 5650 : Public Health Engineering**

Also listed as: **CIV ENG 5650**

Last edit: 06/08/26 4:05 pm

Changes proposed by: Jody Seely (seelyj)

Programs
referencing this
course

CIV ENG 5650:

[CV ENG-BS: Civil Engineering BS](#)

[GEOENV-CT: Geoenvironmental Eng CT](#)

[WATERSC-MS: Water Science and Engineering MS](#)

[ENV SCI-BS: Environmental Science BS](#)

ENV ENG 5650:

[ENV SCI-BS: Environmental Science BS](#)

[ES&P-CTU: Environmental Policy and Sustainability CTU](#)

[PROPOSED: Environmental Health & Safety CT](#)

[EV ENG-BS: Environmental Engineering BS](#)

Requested Effective Date	Spring 2027
Department	Civil Engineering (RCIVILEN)
Discipline	Environmental Engineering (ENV ENG)
Course Number	5650
Title	Public Health Engineering
Abbreviated Course Title	Public Health Engr

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. 06/08/26 3:59 pm
Subhas Venayagamoorthy (skv7d8): Approved for RCIVILEN Chair
2. 06/12/26 3:09 pm
Hannah Johnson (hjh9x): Approved for CCC Secretary
3. 06/30/26 11:13 am
Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 07/27/26 9:06 am
Hannah Johnson (hjh9x): Approved

Co-Listed Course CIV ENG 5650

Department

Civil Engineering
(RCIVILEN)

for Pending CCC
Agenda post

Catalog Description

A comprehensive course dealing with the environmental aspects of public health.

Prerequisite(s):

Env Eng 2601 or Civ Eng 2601 ~~Eng 2601~~ with grade of "C" or ~~or~~ better.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Communication No
Intensive

Communication No
Emphasized

Grading Basis Graded

Repeatable No

Justification

adding co-listed prerequisite so stellar pulls correctly

Semesters Previously Offered

Term(s) Offered as
experimental

Is this a MOTR

Course?

Reviewer

Comments

Hannah Johnson (hjh9x) (06/08/26 4:05 pm): Changed effective date to Spring 2027. Added the numbers to ENV ENG 2601, selected no for CI and CE.

Key: 6440

[Preview Bridge](#)

Course Change Request

Date Submitted: 05/12/26 12:42 pm

Viewing: ENV SCI 1110 : Terra Incognita
~~Environmental Science Freshman Seminar~~

Last approved: 02/07/22 6:01 am

Last edit: 06/22/26 3:41 pm

Changes proposed by: Robin Verble (verbler)

Programs
referencing this
course

ENV SCI-BS: Environmental Science BS

Requested Effective Fall 2027
Date

Department Biological Sciences (RBIOLSCI)

Discipline Environmental Sciences (ENV SCI)

Course Number 1110

Title
Terra Incognita ~~Environmental Science Freshman Seminar~~

Abbreviated Course Env Sci Fresh Sem

Title

Co-Listed Course

In Workflow

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

Catalog Description

Approval Path

1. 05/12/26 12:58 pm
Gina Yosten
(gyxmr): Approved
for RBIOLSCI Chair
2. 06/22/26 3:42 pm
Hannah Johnson
(hjh9x): Approved
for CCC Secretary
3. 07/23/26 5:55 pm
Katie Shannon
(shannonk):
Approved for
Sciences DSCC Chair
4. 07/27/26 9:09 am
Hannah Johnson
(hjh9x): Approved
for Pending CCC
Agenda post

History

1. Feb 7, 2022 by Katie
Shannon
(shannonk)

This course introduces first-year Environmental Science majors ~~An introduction~~ to the interdisciplinary nature ~~study~~ of environmental studies while supporting their transition to college life ~~science~~ at Missouri S&T.

Through discussions, guest speakers, campus and field experiences, and collaborative activities,
students will explore how scientific, social, political, economic, and cultural perspectives
intersect in addressing environmental challenges. The seminar emphasizes critical thinking,
curiosity, and problem-solving while helping students develop academic skills, professional
identity, and connections within the Environmental Science community. Students will engage
~~become acquainted~~ with contemporary environmental issues, learn about campus ~~faculty,~~
~~facilities, and~~ resources and opportunities, and begin building ~~associated with~~ the
communication and collaborative skills necessary for success in environmental fields.
~~environmental science program at S&T. Students will also consider opportunities for personal~~

~~and professional development in environmental sciences.~~

Prerequisite(s):

Environmental Science majors only.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Recitation/Seminar/Discussion	1

Total: 1

Required for Majors Yes

Elective for Majors No

Communication No
Intensive

Communication No
Emphasized

Grading Basis Graded

Repeatable No

Justification

Recent faculty additions to our program bring new expertise in environmental studies which can be maximally utilized in a course that provides opportunities for critical thinking and exploration of the environmental-social dimensions. Additionally, the course title reflects both the uncharted territory of college (as students take the course as entering freshman) but also the new perspectives that interdisciplinary scholarship brings.

Semesters Previously Offered

Term(s) Offered as
experimental

Is this a MOTR

Course?

Reviewer

Comments

Hannah Johnson (hjh9x) (05/12/26 1:15 pm): Added period back to the end of the prereq.

Hannah Johnson (hjh9x) (06/17/26 1:30 pm): Selected no for CI and CE per email from Robin Verble.

Hannah Johnson (hjh9x) (06/22/26 3:41 pm): Change in description is elaborating on what they are teaching in the course and is not changing by more than 50%.

Key: 4838

[Preview Bridge](#)

Course Change Request

Date Submitted: 04/12/26 8:53 am

Viewing: **ERP 5410 : Business Intelligence, Data Science, and AI ~~Use of Business Intelligence~~**

Last approved: 09/12/24 6:03 am

Last edit: 04/29/26 8:55 am

Changes proposed by: Cecil Eng Huang Chua (cecq8z)

Programs

referencing this
course

- [AI-MI: Minor in Artificial Intelligence and Machine Learning in Business](#)
- [FIN TCH-MI: Minor in Financial Technology, Analytics and Transformation](#)
- [ANA&DTA-CT: Bus Analytics & Data Sci CT](#)
- [DATA WR-CT: Business Intelligence CT](#)
- [DSCMGMT-CT: Digital Supply Chain Mgmt CT](#)
- [ERP-CT: Enterprise Resource Plan CT](#)
- [DATMGTA-CT: Big Data Mgmt and Analytics CT](#)
- [DSCMGMT-MI: Digital Supply Chain Mgt Minor](#)
- [IS&T-MS: Info Science & Tech MS](#)

Other Courses

referencing this
course

- [In The Catalog Prerequisites:](#)
- [ERP 6220 : Data Modeling & Visualization Prototyping for Enterprise Decision Dashboard](#)
- [IS&T 6443 : Information Retrieval and Analysis](#)

Requested Effective Spring 2027

Date

Department Jaggi School of Business (RBUS&IT)

In Workflow

1. RBUS&IT 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. 04/24/26 3:23 pm
Cassie Elrod (cassa):
Approved for
RBUS&IT Chair
2. 04/29/26 8:56 am
Hannah Johnson
(hjh9x): Approved
for CCC Secretary
3. 04/29/26 12:07 pm
Cecil Eng Huang
Chua (cchua):
Approved for Social
Sciences DSCC Chair
4. 07/27/26 9:10 am
Hannah Johnson
(hjh9x): Approved
for Pending CCC

Discipline	Enterprise Resource Planning (ERP)	Agenda post
Course Number	5410	
Title	<u>Business Intelligence, Data Science, and AI</u> Use of Business Intelligence	History
Abbreviated Course Title	<u>Bus. Intel, Data Sci, and AI</u> Use of Business Intel	1. Nov 20, 2017 by barryf
Co-Listed Course		2. Aug 24, 2018 by ershenb
		3. Oct 29, 2018 by barryf
		4. Sep 12, 2024 by Crystal Wilson (wilsoncry)
Catalog Description		

This course introduces data-oriented techniques for business intelligence. Topics include Business Intelligence Architecture, ~~architecture~~, Business Analytics, Enterprise Reporting and their Applications in AI. ~~Enterprise Reporting~~. SAP Business Information Warehouse, SAP Analytics Cloud, ~~Business Objects~~, or similar tools will be used to access and present data, generate reports, and perform hands-on analysis.

Prerequisite(s):

IS&T 1750 or equivalent.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Communication Intensive No

Communication Emphasized No

Grading Basis	Graded
Repeatable	No

Justification

Some new AI-related content (such as a chapter in AI-based Trends in Analytics and Data Science) was added to the teaching material to align with the university's AI focus.

Semesters Previously Offered

Term(s) Offered as
experimental

Is this a MOTR
Course?

Reviewer

Comments

Hannah Johnson (hjh9x) (04/27/26 12:08 pm): Removed prereq information from the course description.

Hannah Johnson (hjh9x) (04/27/26 2:58 pm): Not changing by more than 50%, per email from Cecil Chua. Changed effective date to Spring 2027.

Hannah Johnson (hjh9x) (04/29/26 8:55 am): Capitalized the A in Architecture and in Applications in the description.

Key: 565

[Preview Bridge](#)

Course Change Request

Date Submitted: 04/27/26 9:42 am

Viewing: **GEOLOGY 4085 : Internship**

Last approved: 10/11/17 3:29 am

Last edit: 04/27/26 9:42 am

Changes proposed by: Kelly Liu (liukh)

Programs
referencing this
course

[ENV SCI-BS: Environmental Science BS](#)

Requested Effective Date	Spring 2027
Department	Earth Sciences and Engineering (RGEOSENG)
Discipline	Geology (GEOLOGY)
Course Number	4085
Title	Internship
Abbreviated Course Title	Internship
Co-Listed Course	

Catalog Description

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. 04/27/26 9:45 am
Stephen Gao (sgao):
Approved for
RGEOSENG Chair
2. 04/27/26 12:16 pm
Hannah Johnson
(hjh9x): Approved
for CCC Secretary
3. 05/01/26 11:19 am
Theresa Swift
(thswift): Approved
for Engineering
DSCC Chair
4. 07/27/26 9:10 am
Hannah Johnson
(hjh9x): Approved
for Pending CCC

History

1. Oct 11, 2017 by John Hogan (jhogan)

Students will select, with the advice of their advisor, appropriate problems for investigation through practical application of fundamental geoscience principles. The problems selected must provide higher level experiential learning. Assessment is based upon the quality of written and oral presentations and supervisor's evaluation.

Prerequisite(s):

Advisor's approval.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Independent Study	<u>1-15</u> 3

Total: 1-15 3

Required for Majors No

Elective for Majors Yes

Communication No
Intensive

Communication No
Emphasized

Grading Basis Graded

Repeatable No

Justification

The credit hours are being changed to variable to provide flexibility, allowing credit to more accurately reflect the time commitment and complexity of student work.

Semesters Previously Offered

Term(s) Offered as
experimental

Is this a MOTR
Course?

Reviewer
Comments

Key: 4423

[Preview Bridge](#)

Course Change Request

Date Submitted: 04/27/26 9:43 am

Viewing: **GEOLOGY 5085 : Internship**

Last approved: 07/31/24 6:06 am

Last edit: 04/27/26 12:17 pm

Changes proposed by: Kelly Liu (liukh)

Requested Effective Date	Spring 2027
Department	Earth Sciences and Engineering (RGEOENG)
Discipline	Geology (GEOLOGY)
Course Number	5085
Title	Internship
Abbreviated Course Title	Internship
Co-Listed Course	

Catalog Description

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. 04/27/26 9:45 am
Stephen Gao (sgao): Approved for RGEOENG Chair
2. 04/27/26 12:18 pm
Hannah Johnson (hjh9x): Approved for CCC Secretary
3. 05/01/26 11:19 am
Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 07/27/26 9:10 am
Hannah Johnson (hjh9x): Approved for Pending CCC

History

1. Oct 11, 2017 by John Hogan (jhogan)
2. Jul 31, 2024 by Jade McCain (jm558v)

Students will select, with their committee's advice, problems for investigation and preparation of a graduate research proposal. Problems must provide higher level experiential learning consistent with a graduate degree in geology. Assessment is based upon the quality of written and oral presentations and supervisor's evaluation. Repeatable for credit.

Prerequisite(s):

Graduate standing. ~~Standing~~.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Independent Study	<u>1-15</u> 3

Total: 1-15 3

Required for Majors No

Elective for Majors Yes ~~No~~

Communication No
Intensive

Communication No
Emphasized

Grading Basis Graded

Repeatable Yes

Justification

The credit hours are being changed to variable to provide flexibility, allowing credit to more accurately reflect the time commitment and complexity of student work.

Semesters Previously Offered

Term(s) Offered as
experimental

Is this a MOTR
Course?

Reviewer

Comments

Hannah Johnson (hjh9x) (04/27/26 12:17 pm): Placed lowercase s in standing for prereq.

Key: 4424

[Preview Bridge](#)

Course Change Request

Date Submitted: 04/27/26 9:43 am

Viewing: **GEOLOGY 6085 : Internship**

Last approved: 07/31/24 6:06 am

Last edit: 04/27/26 9:43 am

Changes proposed by: Kelly Liu (liukh)

Requested Effective Date	Spring 2027
Department	Earth Sciences and Engineering (RGEOENG)
Discipline	Geology (GEOLOGY)
Course Number	6085
Title	Internship
Abbreviated Course Title	Internship
Co-Listed Course	

Catalog Description

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. 04/27/26 9:45 am
Stephen Gao (sgao): Approved for RGEOENG Chair
2. 04/27/26 12:19 pm
Hannah Johnson (hjh9x): Approved for CCC Secretary
3. 05/01/26 11:19 am
Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 07/27/26 9:10 am
Hannah Johnson (hjh9x): Approved for Pending CCC

History

1. Oct 11, 2017 by John Hogan (jhogan)
2. Jul 31, 2024 by Jade McCain (jm558v)

Students will select, with their committee's advice, problems for investigation and preparation of a graduate research proposal. Problems must provide higher level experiential learning consistent with a graduate degree in geology. Assessment is based upon the quality of written and oral presentations and supervisor's evaluation. Repeatable for credit.

Prerequisite(s):

Graduate standing.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Independent Study	<u>1-15</u> 3

Total: 1-15 3

Required for Majors No

Elective for Majors No

Communication No
Intensive

Communication No
Emphasized

Grading Basis Graded

Repeatable Yes

Justification

The credit hours are being changed to variable to provide flexibility, allowing credit to more accurately reflect the time commitment and complexity of student work.

Semesters Previously Offered

Term(s) Offered as
experimental

Is this a MOTR
Course?

Reviewer
Comments

Key: 4425

[Preview Bridge](#)

Course Change Request

New Course Proposal

Date Submitted: 05/20/26 8:51 am

Viewing: **HISTORY 6470 : Advanced American Environmental History**

Last edit: 06/09/26 2:27 pm

Changes proposed by: Shannon Fogg (sfogg)

Programs
referencing this
course

[PROPOSED: Environmental Policy](#)

Requested Effective Date	Fall 2027
Department	History & Political Science (RHISTORY)
Discipline	History (HISTORY)
Course Number	6470
Title	Advanced American Environmental History
Abbreviated Course Title	Adv. Environmental History
Co-Listed Course	

Catalog Description

In Workflow

1. RHISTORY Chair
2. CCC Secretary
3. Arts & Humanities 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. 05/20/26 8:58 am
Shannon Fogg (sfogg): Approved for RHISTORY Chair
2. 06/09/26 2:37 pm
Hannah Johnson (hjh9x): Approved for CCC Secretary
3. 07/20/26 12:20 pm
Alejandra Sobrado (asgx4): Approved for Arts & Humanities DSCC Chair
4. 07/27/26 9:11 am
Hannah Johnson (hjh9x): Approved

This advanced course discusses the impact of human interactions with the physical environment and the natural world's influence on human civilizations with emphasis on the 19th and 20th centuries. As an advanced version of Hist 5570, it will include additional assignments and expectations. Credit cannot be earned for both Hist 4470 and Hist 6470.

Prerequisite(s):

Graduate Standing or instructor's permission.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Communication No
Intensive

Communication No
Emphasized

Grading Basis Graded

Repeatable No

Justification

Part of a new graduate certificate in Environmental Policy. Adds a graduate section of existing course.

Semesters Previously Offered

Term(s) Offered as
experimental

Previous Course

Code

Is this a MOTR

Course?

Reviewer

Comments

Hannah Johnson (hjh9x) (05/21/26 11:53 am): Selected no for CI and CE, selected graded for grading basis.

Hannah Johnson (hjh9x) (05/22/26 10:23 am): Added a period to the prereq.

Hannah Johnson (hjh9x) (06/08/26 8:18 am): Selected yes for Ci per email from Shannon Fogg.

Hannah Johnson (hjh9x) (06/08/26 9:01 am): Changed CI to no per update.

Hannah Johnson (hjh9x) (06/09/26 2:27 pm): Edited effective date to Fall 2027.

Key: 10420

[Preview Bridge](#)

Course Change Request

Date Submitted: 05/01/26 2:34 pm

Viewing: **MATH 5604 : Introduction to Numerical Methods for Differential Equations**

Last approved: 02/21/22 6:01 am

Last edit: 07/13/26 10:45 am

Changes proposed by: Qingguo Hong (qh5k5)

Programs
referencing this
course

[AP MATH-BS: Applied Mathematics BS](#)

[PROPOSED: Data Science BS](#)

Requested Effective Date	Spring 2027
Department	Mathematics & Statistics (RMATHEMA)
Discipline	Mathematics (MATH)
Course Number	5604
Title	Introduction to Numerical Methods for Differential Equations
Abbreviated Course Title	Numerical Diff Eqns
Co-Listed Course	

Catalog Description

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. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path

1. 07/08/26 1:43 pm
John Singler (singlerj): Approved for RMATHEMA Chair
2. 07/13/26 10:45 am
Crystal Wilson (wilsoncry): Approved for CCC Secretary
3. 07/23/26 5:59 pm
Katie Shannon (shannonk): Approved for Sciences DSCC Chair
4. 07/27/26 9:11 am
Hannah Johnson (hjh9x): Approved

for Pending CCC
Agenda post

History

1. Nov 3, 2014 by
imorgan
2. Feb 21, 2022 by
Paul Runnion
(prunnion)

An introduction to finite difference methods for ordinary and partial differential equations, including (1) the derivation of the numerical methods, (2) implementation of the methods in Matlab, and (3) the mathematical accuracy and stability analysis of the methods.

Prerequisite(s):

A grade of "C" or better in Math 2222, ~~2222 and~~ Math 3304, and Math 5601. ~~3304;~~
~~programming competency (preferably Matlab).~~

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Communication No
Intensive

Communication No
Emphasized

Grading Basis Graded

Repeatable No

Justification

We need the students know the polynomial interpolation in Math 5601 to derive the numerical methods. We need the students know Newton's method in Math 5601 to implement the numerical methods such as backward Euler's method.

Semesters Previously Offered

Term(s) Offered as
experimental

Is this a MOTR
Course?

Reviewer

Comments

Hannah Johnson (hjh9x) (05/01/26 3:01 pm): Changed effective date to Spring 2027 per CCC deadlines.

Key: 4103

[Preview Bridge](#)

Course Change Request

Date Submitted: 07/08/26 1:56 pm

Viewing: **MATH 6108 : Applied Matrix Theory**

Last approved: 12/25/25 6:04 am

Last edit: 07/08/26 1:56 pm

Changes proposed by: John Singler (singlerj)

Requested Effective Date	Spring 2027
Department	Mathematics & Statistics (RMATHEMA)
Discipline	Mathematics (MATH)
Course Number	6108
Title	Applied Matrix Theory
Abbreviated Course Title	Applied Matrix Theory
Co-Listed Course	

Catalog Description	
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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. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path

1. 07/08/26 1:56 pm
John Singler (singlerj): Approved for RMATHEMA Chair
2. 07/13/26 10:54 am
Crystal Wilson (wilsoncry): Approved for CCC Secretary
3. 07/23/26 5:59 pm
Katie Shannon (shannonk): Approved for Sciences DSCC Chair
4. 07/27/26 9:11 am
Hannah Johnson (hjh9x): Approved

for Pending CCC
Agenda post

History

1. Dec 25, 2025 by
Crystal Wilson
(wilsoncry)

A second course in matrix theory directed toward applications. Linear spaces, linear operators, equivalence and similarity, spectral theorem, canonical forms, congruence, inertia theorem, quadratic forms, singular value decomposition and other factorizations, generalized inverses. Applications to optimization, differential equations, stability.

Prerequisite(s):

Math 3108 and ~~or~~ Math 4209. ~~5302~~.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors No

Communication No
Intensive

Communication No
Emphasized

Grading Basis Graded

Repeatable No

Justification

MATH 6108 is a rigorous, proof-based graduate course. To be successful, students must have

prior experience with writing and understanding mathematical proofs. Adding MATH 4209 (Advanced Calculus I) as a prerequisite will help ensure that students are adequately prepared for the level of rigor expected in this course, while still aligning with the course's intended content. MATH 5302 did not help with this proof preparation and is not needed.

Semesters Previously Offered

Term(s) Offered as
experimental

Is this a MOTR
Course?

Reviewer
Comments

Key: 8811

[Preview Bridge](#)

Course Change Request

Date Submitted: 05/01/26 2:42 pm

Viewing: **MATH 6601 : Numerical Analysis**

Last approved: 07/07/14 3:48 am

Last edit: 07/13/26 10:54 am

Changes proposed by: Qingguo Hong (qh5k5)

Other Courses
referencing this
course

In The Catalog Prerequisites:

MATH 6603 : Mathematical Foundations of Finite Element Methods II

Requested Effective Date	Spring 2027
Department	Mathematics & Statistics (RMATHEMA)
Discipline	Mathematics (MATH)
Course Number	6601
Title	Numerical Analysis
Abbreviated Course Title	Numerical Analysis
Co-Listed Course	

Catalog Description

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. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar
10. CAT entry
11. Peoplesoft

Approval Path

1. 07/08/26 1:43 pm
John Singler
(singlerj): Approved for RMATHEMA Chair
2. 07/13/26 10:55 am
Crystal Wilson
(wilsoncry): Approved for CCC Secretary
3. 07/23/26 5:59 pm
Katie Shannon
(shannonk): Approved for Sciences DSCC Chair
4. 07/27/26 9:11 am
Hannah Johnson
(hjh9x): Approved

History

1. Jul 7, 2014 by
imorgan

A proof based course emphasizing theoretical analysis of convergence and accuracy of various numerical methods including approximate solutions of linear and nonlinear equations, numerical integration, and function approximation, with implementation to validate results and illustrate the methods.

Prerequisite(s):

Math 5601. ~~Any 4000 or higher level MATH course, or any instructor approved 4000 or higher level course from another discipline with a significant computational component.~~

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors No

Communication No
Intensive

Communication No
Emphasized

Grading Basis Graded

Repeatable No

Justification

The course Math 6601 is a deeper numerical analysis course based on Math 5601. For example,

we will talk about the modified Newton's method and related convergence analysis which requires the students know the Newton's method in Math 5601. We will also talk about spline approximation in Math 6601 which hopes the students know polynomial interpolation in Math 5601. We will talk about CG method in Math 6601 which hopes the students know some direct method and iterative methods for linear system from Math 5601.

Semesters Previously Offered

Term(s) Offered as
experimental

Is this a MOTR
Course?

Reviewer

Comments

Hannah Johnson (hjh9x) (05/01/26 3:01 pm): Changed effective date to Spring 2027 per CCC deadlines.

Hannah Johnson (hjh9x) (07/08/26 2:05 pm): Added a period after the prereq.

Key: 4060

[Preview Bridge](#)

Course Change Request

A deleted record cannot be edited

Course Inactivation Proposal

Date Submitted: 04/15/26 11:00 am

Viewing: **PET ENG 4010 : Ethics and Professionalism**

Last approved: 01/13/17 3:14 am

Last edit: 04/27/26 1:21 pm

Changes proposed by: Mingzhen Wei (weim)

Justification for this
inactivation request

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. 04/15/26 11:03 am
Stephen Gao (sgao):
Approved for
RGEOENG Chair
2. 04/27/26 1:22 pm
Hannah Johnson
(hjh9x): Approved
for CCC Secretary
3. 05/11/26 11:10 am
Theresa Swift
(thswift): Approved
for Engineering
DSCC Chair
4. 07/27/26 9:11 am
Hannah Johnson
(hjh9x): Approved

for Pending CCC
Agenda post

History

1. Jan 13, 2017 by
Shari Dunn-Norman
(caolila)

It was offered only for Fall 2025 to catch up PE1120 requirement.

Requested Effective Spring 2027
Date

Department Earth Sciences and Engineering (RGEOSENG)

Discipline Petroleum Engineering (PET ENG)

Course Number 4010

Title Ethics and Professionalism

Abbreviated Course Ethics and Prof
Title

Co-Listed Course

Catalog Description

Topics related to Ethics and Professionalism. Lifelong learning, teamwork and discussion of current events. (Course cannot be used for graduate credit).

Prerequisite(s):

Senior standing in Pet Eng.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	1

Total: 1

Required for Majors Yes

Elective for Majors No

Communication
Intensive

Communication
Emphasized

Grading Basis Graded

Repeatable No

Justification

Semesters Previously Offered

Term(s) Offered as
experimental

Previous Course
Code

Is this a MOTR
Course?

Reviewer
Comments

Key: 2562

[Preview Bridge](#)

Course Change Request

New Course Proposal

Date Submitted: 05/20/26 8:58 am

Viewing: **PHILOS 5277 : Advanced Wilderness and its Critics**

Last edit: 05/26/26 10:02 am

Changes proposed by: Shannon Fogg (sfogg)

Programs
referencing this
course

PROPOSED: Environmental Policy

Requested Effective Date	Fall 2027
Department	Arts, Languages & Philosophy (RPHILOS)
Discipline	Philosophy (PHILOS)
Course Number	5277
Title	Advanced Wilderness and its Critics
Abbreviated Course Title	Adv. Wilderness & its Critics
Co-Listed Course	

Catalog Description

In Workflow

1. **RPHILOS** Chair
2. **CCC** Secretary
3. **Arts & Humanities**
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. 05/20/26 9:13 am
Irina Ivliyeva
(ivliyeva): Approved
for RPHILOS Chair
2. 06/09/26 2:37 pm
Hannah Johnson
(hjh9x): Approved
for CCC Secretary
3. 07/20/26 12:21 pm
Alejandra Sobrado
(asgx4): Approved
for Arts &
Humanities DSCC
Chair
4. 07/27/26 9:12 am
Hannah Johnson
(hjh9x): Approved

Wilderness is one of the most contested areas of environmental work today. This advanced course examines wilderness as both idea and policy, from ethical, aesthetic, social scientific, and comparative perspectives. Students will learn the history of national parks and federally designated wilderness in the U.S. and consider contemporary debates concerning its future, with special focus on critical responses by ecofeminist and decolonial thinkers. As an advanced version of Philos 3277, it will include additional assignments and expectations. Credit cannot be earned for both Philos 3277 and Philos 5277.

Prerequisite(s):

Graduate standing or instructor's permission.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Communication No

Intensive

Communication No

Emphasized

Grading Basis Graded

Repeatable No

Justification

Adds a graduate section of an undergraduate course for new certificate in Environmental Policy.

Semesters Previously Offered

Term(s) Offered as
experimental

Previous Course
Code

Is this a MOTR
Course?

Reviewer
Comments

Hannah Johnson (hjh9x) (05/21/26 11:54 am): Selected no for CI and CE, selected graded for grading basis.

Hannah Johnson (hjh9x) (05/26/26 10:02 am): Changed effective term to Fall 2027 per email from Shannon Fogg.

Key: 10421

[Preview Bridge](#)

Course Change Request

New Course Proposal

Date Submitted: 05/20/26 8:45 am

Viewing: **POL SCI 5300 : Advanced Principles of Public Policy**

Last edit: 06/08/26 8:19 am

Changes proposed by: Shannon Fogg (sfogg)

Programs

referencing this
course

PROPOSED: Environmental Policy

Requested Effective Fall 2027
Date

Department History & Political Science (RHISTORY)

Discipline Political Science (POL SCI)

Course Number 5300

Title
Advanced Principles of Public Policy

Abbreviated Course Adv. Public Policy Principles
Title

Co-Listed Course

Catalog Description

In Workflow

1. RHISTORY Chair
2. CCC Secretary
3. Arts & Humanities
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. 05/20/26 8:58 am
Shannon Fogg
(sfogg): Approved
for RHISTORY Chair
2. 06/09/26 2:37 pm
Hannah Johnson
(hjh9x): Approved
for CCC Secretary
3. 07/20/26 12:21 pm
Alejandra Sobrado
(asgx4): Approved
for Arts &
Humanities DSCC
Chair
4. 07/27/26 9:12 am
Hannah Johnson
(hjh9x): Approved

This course presents an advanced study of public policy in the United States. Students analyze the policy process, the resulting policy choices and the impact of the choices on the American people. As an advanced version of Pol Sci 3300, it will include additional assignments and expectations. Credit cannot be earned for both Pol Sci 3300 and Pol Sci 5300.

Prerequisite(s):

Graduate standing or instructor's permission.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors Yes

Elective for Majors Yes

Communication No
Intensive

Communication No
Emphasized

Grading Basis Graded

Repeatable No

Justification

Required course for new graduate certificate in Environmental Policy

Semesters Previously Offered

Term(s) Offered as
experimental

Previous Course

Code

Is this a MOTR

Course?

Reviewer

Comments

Hannah Johnson (hjh9x) (05/22/26 10:29 am): Added a period to the prereq. Selected graded for grading basis.

Hannah Johnson (hjh9x) (05/26/26 10:01 am): Changed effective term to Fall 2027 per email from Shannon Fogg.

Hannah Johnson (hjh9x) (06/08/26 8:19 am): Selected no for CI and CE per email from Shannon Fogg.

Key: 10419

[Preview Bridge](#)

Course Change Request

New Course Proposal

Date Submitted: 04/21/26 1:01 pm

Viewing: **SYS ENG 5106 : Verification Evaluation and Test**

Last edit: 05/04/26 9:29 am

Changes proposed by: Cihan Dagli (dagli)

Programs
referencing this
course

[SYS ENG-MS: Systems Engineering MS](#)

Requested Effective Date	Spring 2027
Department	Engineering Mgt & Sys Engr (RENGMNGT)
Discipline	Systems Engineering (SYS ENG)
Course Number	5106
Title	Verification Evaluation and Test
Abbreviated Course Title	Verification Evaluation Test
Co-Listed Course	

Catalog Description

In Workflow

1. **RENGMNGT 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. 04/21/26 1:15 pm
Amaury Lendasse (altmg): Approved for RENG MNGT Chair
2. 05/05/26 11:54 am
Hannah Johnson (hjh9x): Approved for CCC Secretary
3. 05/12/26 9:51 am
Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 07/27/26 9:05 am
Hannah Johnson (hjh9x): Approved

Introduction to systems engineering techniques and relevant regulatory regimes for performing Verification, Evaluation and Test on products across several industries. These include military and civil avionics, aircraft, medical devices, pharmaceuticals, and others. Topics covered are verification methods, interpretation applicable documents in specification and data items in contract documents, describing environmental qualification conditions in regulations, analyzing to tailor and flow down verification requirements to suppliers, understanding how to make a verification or certification case to various regulatory agencies.

Prerequisite(s):

Graduate standing.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Communication Yes
Intensive

Communication No
Emphasized

Grading Basis Graded

Repeatable No

Justification

Systems Engineering MS graduate program review by The Boeing Company and International Council of Systems Engineering INCOSE that recognizes our academic programs as an alternative to the INCOSE knowledge exam as a way for individuals to prove their systems engineering knowledge while they are being considered for becoming an Associate Systems

Engineering Professional (ASEP) or Certified Systems Engineering Professional (CSEP) advised us to add a course on Verification Evaluation and Test to our core courses.

Semesters Previously Offered

Term(s) Offered as
experimental

Previous Course
Code

Is this a MOTR
Course?

Reviewer

Comments

Hannah Johnson (hjh9x) (04/22/26 8:27 am): Selected no for required for majors, selected yes for elective for majors, selected yes for CI and no for CE, and selected graded for grading basis per email from Cihan Dagli.

Hannah Johnson (hjh9x) (05/04/26 9:29 am): Added graduate standing as the prereq, per email from Cihan Dagli.

Key: 10411

[Preview Bridge](#)

Program Change Request

Date Submitted: 03/06/26 9:32 am

Viewing: **CHEM-MI : Chemistry Minor**

Last approved: 12/03/19 4:24 pm

Last edit: 04/29/26 8:30 am

Changes proposed by: Crystal Wilson (wilsoncry)

Catalog Pages Using
this Program

[Chemistry](#)

Effective Catalog
Edition FS2027-SP2028

Start Term Fall 2027

Program Type [Minor](#)

Academic Level [Undergraduate](#)

Program Code CHEM-MI

Department Chemistry

Discipline Chemistry

Title

In Workflow

1. **RCHEMIST Chair**
2. **CCC Secretary**
3. **Sciences DSCC Chair**
4. **Pending CCC
Agenda post**
5. **CCC Meeting
Agenda**
6. Campus Curricula
Committee Chair
7. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar

Approval Path

1. 03/06/26 9:34 am
Chariklia Sotiriou-
Leventis (cslevent):
Approved for
RCHEMIST Chair
2. 03/09/26 10:07 am
Crystal Wilson
(wilsoncry):
Approved for CCC
Secretary
3. 03/19/26 11:20 am
Katie Shannon
(shannonk):
Approved for
Sciences DSCC Chair
4. 03/30/26 2:17 pm
Hannah Johnson
(hjh9x): Rollback to
RCHEMIST Chair for
Pending CCC
Agenda post

5. 04/16/26 3:27 pm
Chariklia Sotiriou-Leventis (cslevent):
Approved for
RCHEMIST Chair
6. 04/29/26 8:34 am
Hannah Johnson
(hjh9x): Approved
for CCC Secretary
7. 07/23/26 5:55 pm
Katie Shannon
(shannonk):
Approved for
Sciences DSCC Chair
8. 07/27/26 9:03 am
Hannah Johnson
(hjh9x): Approved
for Pending CCC
Agenda post

History

1. Apr 28, 2014 by
Thomas Schuman
(tschuman)
2. Jun 27, 2016 by
Klaus Woelk
(woelkk)
3. Dec 3, 2019 by
Thomas Schuman
(tschuman)

Chemistry Minor

CIP Code

Program Requirements and Description

Minor in Chemistry

A minor in chemistry requires a minimum of 18 hours of chemistry course work. ~~work selected in conjunction~~

~~with a chemistry faculty advisor. The required courses are CHEM 1100, CHEM 1310, CHEM 1319, CHEM 1320, and CHEM 2210. The required courses are CHEM 1100, CHEM 1310, CHEM 1319, CHEM 1320, CHEM 2210 and either CHEM 2219 or CHEM 2289. Five additional hours of chemistry are to be selected from CHEM 1510 or other Chem 2000, 3000, and 4000-level courses. Six additional hours are to be selected from chemistry courses numbered 3000 level or above. A~~ A minimum grade of "C" is required for each course counted toward the minor. A maximum ~~Five additional hours~~ of 6 credit hours of transfer credit may ~~chemistry are to~~ be used to satisfy the course requirements.
~~selected from CHEM 1510 or other Chem 2000, 3000, and 4000-level courses.~~

Justification for
request

Removed Chem 2289 per department request as the course is no longer offered and has been hidden in the catalog.

Attach Budget

System Approval
Letter

MDHE Approval

Supporting
Documents

Reviewer
Comments

Hannah Johnson (hjh9x) (03/30/26 2:17 pm): Rollback: Rolling back to adjust to meet minor requirements.

Hannah Johnson (hjh9x) (04/03/26 1:11 pm): Added the six credit hours numbered at 3000 level or above, and added that a max of 6 credit hours can be transferred in. Rearranged per email from Paul Nam.

Hannah Johnson (hjh9x) (04/29/26 8:30 am): Changed effective date and term to Fall 2027.

Program Change Request

Date Submitted: 06/24/26 6:09 pm

Viewing: **MI ENG-BS : Mining Engineering BS**

Last approved: 06/17/26 11:42 am

Last edit: 07/08/26 3:25 pm

Changes proposed by: Stephen Casey (caseysc)

Catalog Pages Using
this Program
[Mining Engineering](#)

Effective Catalog Edition	FS2027-SP2028
Start Term	Fall 2027
Program Type	Bachelor of Science
Academic Level	Undergraduate
Program Code	MI ENG-BS
Department	Mining and Explosives Engineering
Discipline	Mining Engineering
Title	

In Workflow

1. RMINENG 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

Approval Path

1. 07/08/26 9:45 am
Kwame Awuah-Offei (kabp3): Approved for RMINENG Chair
2. 07/08/26 3:44 pm
Hannah Johnson (hjh9x): Approved for CCC Secretary
3. 07/19/26 9:43 am
Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 07/27/26 9:03 am
Hannah Johnson (hjh9x): Approved for Pending CCC Agenda post

History

1. Apr 28, 2014 by Kwame Awuah-Offei (kabp3)
2. Jan 30, 2015 by Tina Alobaidan (cifarellit)
3. Jun 28, 2017 by Tina Alobaidan (cifarellit)
4. Mar 21, 2018 by Tina Alobaidan (cifarellit)
5. Jul 6, 2020 by ershenb
6. Nov 1, 2021 by Stephen Casey (caseysc)
7. Jun 14, 2022 by Kwame Awuah-Offei (kabp3)
8. Oct 5, 2023 by Jennifer Pohlsander (jpnfd)
9. Jan 29, 2024 by Stephen Casey (caseysc)
10. Sep 20, 2024 by Stephen Casey (caseysc)
11. Jul 1, 2025 by Stephen Casey (caseysc)
12. Dec 24, 2025 by Crystal Wilson (wilsoncry)
13. Jun 2, 2026 by Stephen Casey (caseysc)
14. Jun 8, 2026 by Hannah Johnson

(hjh9x)

15. Jun 8, 2026 by
Hannah Johnson
(hjh9x)

16. Jun 17, 2026 by
Crystal Wilson
(wilsoncry)

Mining Engineering BS

CIP Code 14.2101 - Mining and Mineral Engineering.

Program Requirements and Description

Bachelor of Science Mining Engineering

The Mining Engineering program at Missouri S&T is characterized by its focus on the scientific basics of engineering and its innovative application to the extraction of (critical) minerals to meet societal needs. Indeed, the underlying theme of this educational program is the application of basic science to engineering practice by solving engineering problems related to mineral extraction. These problems include the safe and sustainable extraction of minerals to power green energy. The necessary interrelations among the various topics, the engineering disciplines, and the other professions as they naturally come together in the solution of real-world problems are emphasized as research, analysis, synthesis, and design are presented and discussed through classroom and laboratory instruction.

Incoming students who state the Mining Engineering preference are required to complete [MIN ENG 1912](#) during the first or second semester on campus.

For the Bachelor of Science degree in Mining Engineering a minimum of 128 credit hours is required. These requirements are in addition to credit received for algebra, trigonometry, and basic ROTC courses. A student must maintain at least two grade points per credit hour for all courses taken in the student's major department, and an average of at least two grade points per credit hour must be maintained in Mining Engineering.

The Mining Engineering program must meet Missouri S&T general education requirements as stipulated in the catalog.

Freshman Year

First Semester	Credits	Second Semester	Credits
CHEM 1100	1	GEO ENG 1150	3
CHEM 1305	4	HISTORY 1200 , or 1300 , or 1310 , or POL SCI 1200	3
CHEM 1319	1	MATH 1215	4
ENGLISH 1120	3	MECH ENG 1720	3

<u>FR ENG 1100</u>	1	<u>PHYSICS 1135</u>	4
<u>MATH 1214</u> or <u>1211</u>	4		
<u>MIN ENG 1912</u>	2		
	16		17
Sophomore Year			
First Semester	Credits	Second Semester	Credits
<u>CIV ENG 2200</u>	3	<u>MATH 3304</u>	3
General Education Elective¹	3	<u>MECH ENG 2350</u>	2
<u>ECON 1100</u> or <u>1200²</u>	<u>3</u>	<u>MECH ENG 2527</u>	3
<u>MATH 2222</u>	4	<u>MIN ENG 2412</u>	3
<u>MIN ENG 2925</u>	2	<u>PHYSICS 2135</u>	4
<u>MIN ENG 3912</u>	2		
<u>MIN ENG 3913</u>	3		
	17		15
Junior Year			
First Semester	Credits	Second Semester	Credits
<u>CIV ENG 2210</u>	3	<u>ENGLISH 1160</u> , or <u>3560</u> , or <u>SPM S 1185</u>	3
<u>ECON 3512²</u>	3	<u>MIN ENG 4512</u>	3
<u>GEOLOGY 3310</u>	3	<u>MIN ENG 5522</u>	3
<u>MIN ENG 5932</u>	3	<u>MIN ENG 5823</u>	3
<u>NUC ENG 3221</u> or <u>CIV ENG 3330</u>	3	<u>MIN ENG 5933</u>	3
<u>STAT 3113</u>	3		
	18		15
Senior Year			
First Semester	Credits	Second Semester	Credits
General Education Elective ¹	3	General Education Elective ¹	3
<u>MIN ENG 4096</u>	3	<u>MIN ENG 4097</u>	3
<u>MIN ENG 5113</u>	3	<u>MIN ENG 5742</u>	3
<u>MIN ENG 5612</u> or <u>EXP ENG 5612</u>	3	Technical Elective ^{3,4,5,6,7,8}	3
<u>MIN ENG 5912</u>	3	Technical Elective ^{3,4,5,6,7,8}	3
	15		15
Total Credits: 128			

1

General Education Elective must fulfill the Missouri S&T general education requirements applicable to the student's catalog year.

2

General Education Elective, Mining Engineering program requirement.

3

Coal Emphasis: MIN ENG 5322, MIN ENG 5422 or an approved substitute course must be taken as a Technical Electives.

4

Explosives Engineering Emphasis: [EXP ENG 5622](#) and [MIN ENG 5823](#) or [EXP ENG 5922](#) have to be taken as Technical Electives.

5

Mining and the Environment Emphasis: [GEO ENG 5233](#) and [GEO ENG 5235](#), or approved substitute courses have to be taken as Technical Electives.

6

Mining Health and Safety Emphasis: [ENG MGT 4330](#), [MIN ENG 3002](#), or other approved substitute courses must be taken as Technical Electives.

7

Quarrying Engineering Emphasis: Two of the following courses have to be taken as Technical Electives: [CIV ENG 3116](#), [MIN ENG 5212](#), [MIN ENG 5412](#).

8

Sustainable Development Emphasis: [ECON 4440](#), [POL SCI 3310](#), or other approved substitute courses must be taken as Technical Electives.

Graduating Mining Engineers Examination

Mining engineering students must complete the Fundamentals of Engineering Examination prior to graduation as a senior assessment requirement. A passing grade is not required to earn a B.S. degree in mining engineering; however it is the first step toward becoming a registered professional engineer. This requirement is part of the Missouri S&T assessment process.

Coal Emphasis

Senior Year

MIN ENG 5322	Coal Mining Methods (or approved substitute course.)	3
MIN ENG 5422	Coal Preparation (or approved substitute course.)	3

Explosives Engineering Emphasis

Senior Year

~~Courses have to be taken as technical electives.~~

EXP ENG 5622	Blasting Design And Technology	3
MIN ENG 5823	Rock Mechanics	3
or EXP ENG 5922	Tunneling & Underground Construction Techniques	

Mining and the Environment Emphasis

Senior Year

<u>GEO ENG 5233</u>	Risk Assessment In Environmental Studies (or approved substitute course.)	3
<u>GEO ENG 5235</u>	Environmental Geological Engineering (or approved substitute course.)	3

Mining Health and Safety Emphasis

Senior Year		
<u>ENG MGT 4330</u>	Human Factors (or approved substitute course.)	3
<u>MIN ENG 3002</u>	Mine Rescue (or approved substitute course.)	3

Quarrying Engineering Emphasis

Senior Year		
Choose two of the following which have to be taken as Technical Electives.		
<u>CIV ENG 3116</u>	Construction Materials, Properties And Testing	3
<u>MIN ENG 5212</u>	Aggregates and Quarrying	3
<u>MIN ENG 5412</u>	Aggregates Materials Sizing and Characterization	3

Sustainable Development Emphasis

Senior Year		
<u>ECON 4440</u>	Environmental And Natural Resource Economics (or approved substitute course.)	3
<u>POL SCI 3310</u>	Public Policy Analysis (or approved substitute course.)	3

Justification for
request

Change Gen Ed in First Semester Sophomore year to ECON 1100 or ECON 1200, as these courses are prerequisite for ECON/MIN ENG 3512 in First Semester Junior Year.

Attach Budget

System Approval
Letter

MDHE Approval

Supporting Documents [FS 2024 Course Change Requests.pdf](#)

Reviewer

Comments

Hannah Johnson (hjh9x) (07/08/26 1:52 pm): Removed the title from the course listed in footnote 6.

Hannah Johnson (hjh9x) (07/08/26 2:49 pm): Added 'or approved substitute course.' to the courses listed in Emphasis areas of Coal and Mining and the Environment.

Hannah Johnson (hjh9x) (07/08/26 3:25 pm): Removed the line 'courses have to be taken as technical electives' from the Explosives Engineering Emphasis course listing. Edited to clarify footnote 7 with approval from Dr. Kwame Awuah-Offei while keeping the same requirements and course listings.

Program Change Request

Date Submitted: 05/29/26 1:58 pm

Viewing: **PRE-MED-MI : Pre-Medicine Minor**

Last approved: 06/14/22 4:25 pm

Last edit: 07/23/26 6:02 pm

Changes proposed by: Katie Shannon (shannonk)

Catalog Pages Using
this Program
[Prehealth Professions](#)

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Minor
Academic Level	Undergraduate
Program Code	PRE-MED-MI
Department	College of Arts & Sciences
Discipline	Pre-Medicine
Title	

In Workflow

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

Approval Path

1. 02/27/26 9:51 am
Hannah Johnson (hjh9x): Approved for CCC Secretary
2. 02/27/26 9:55 am
Crystal Wilson (wilsoncry): Rollback to CCC Secretary for Pending CCC Agenda post
3. 02/27/26 9:57 am
Hannah Johnson (hjh9x): Approved for CCC Secretary
4. 02/27/26 10:04 pm
Katie Shannon (shannonk): Approved for Sciences DSCC Chair
5. 03/02/26 12:10 pm
Hannah Johnson

- (hjh9x): Approved
for Pending CCC
Agenda post
6. 03/17/26 11:25 am
Hannah Johnson
(hjh9x): Rollback to
Initiator
7. 03/19/26 10:01 am
Hannah Johnson
(hjh9x): Rollback to
Initiator
8. 07/13/26 11:16 am
Crystal Wilson
(wilsoncry):
Approved for CCC
Secretary
9. 07/23/26 6:02 pm
Katie Shannon
(shannonk):
Approved for
Sciences DSCC Chair
10. 07/27/26 9:03 am
Hannah Johnson
(hjh9x): Approved
for Pending CCC
Agenda post

History

1. Mar 31, 2014 by
pantaleoa
2. Mar 31, 2014 by
pantaleoa
3. Dec 11, 2017 by
David Westenberg
(djwesten)
4. Apr 28, 2020 by
Katie Shannon
(shannonk)
5. Feb 3, 2021 by Katie
Shannon

Pre-Medicine Minor

CIP Code

Program Requirements and Description

Premedicine Minor

It is recommended that students seeking the Pre-Medicine minor declare their intentions as soon as possible. Students completing the Pre-Medicine minor curriculum in addition to their BA/BS curriculum will have completed all requirements for admission to most Medical, Dental, Veterinary or other health profession programs. However, it is important to consult with a member of the Pre-Health Professions Advisory Committee to ensure you are completing the necessary coursework for your desired profession. ~~The Pre-Medicine minor is not intended for a student majoring in Chemistry, Biological Sciences or Chemical and Biochemical Engineering which already offer a Pre-Medicine approved curriculum.~~ Required courses for the Pre-Medicine minor are:

BIO SCI 1213 & BIO SCI 1219	Principles of Biology & General Biology Lab	4
or BIO SCI 1113 & BIO SCI 1219	General Biology & General Biology Lab	
<u>BIO SCI 2213</u> & <u>BIO SCI 2219</u>	Cell Biology and Cell Biology Laboratory	4
<u>CHEM 1310</u> & <u>CHEM 1319</u> & <u>CHEM 1320</u> & <u>CHEM 1100</u>	General Chemistry I and General Chemistry Laboratory and General Chemistry II and Introduction To Laboratory Safety & Hazardous Materials	9
<u>CHEM 2210</u> & <u>CHEM 2219</u> & <u>CHEM 2220</u> & <u>CHEM 2229</u>	Organic Chemistry I and Organic Chemistry I Lab and Organic Chemistry II and Organic Chemistry II Lab	8
<u>PHYSICS 1145</u> or <u>PHYSICS 1135</u>	College Physics I Engineering Physics I	4
<u>PHYSICS 2145</u>	College Physics II	4

or <u>PHYSICS 2135</u>	Engineering Physics II	
MATH 1211	Calculus I-B	4
or MATH 1212	Survey of Calculus	
or MATH 1214	Calculus I	
One of the following courses (taking all four courses is strongly encouraged):		
BIO SCI 2223	General Genetics	
<u>PREMED 3010</u>	Communication Workshop for the Pre-Health Student	1
<u>Two of the following courses :</u>		<u>6</u>
<u>BIO SCI 3313</u>	<u>Microbiology</u>	<u>3</u>
<u>BIO SCI 3333</u>	Human Anatomy and Physiology I	3
<u>BIO SCI 3343</u>	Human Anatomy and Physiology II	3
<u>BIO SCI 3483</u>	<u>Biomedical Problems</u>	<u>3</u>
<u>CHEM 4610</u>	General Biochemistry	3
<u>CHEM 4620</u>	<u>Metabolism</u>	<u>3</u>
<u>CHEM 4650</u>	<u>Medicinal Chemistry</u>	<u>3</u>
<u>PSYCH 3501</u>	<u>Drugs and Behavior</u>	<u>3</u>
<u>PSYCH 4510</u>	<u>Clinical Psychology</u>	<u>3</u>
<u>PSYCH 4590</u>	<u>Health Psychology</u>	<u>3</u>

Justification for
request

making this minor available to all majors. Making PREMED course required and removing
Calculus and General Biology, adding 6 hours required 3000 or above

Attach Budget

System Approval
Letter

MDHE Approval

Supporting
Documents

Reviewer

Comments

Crystal Wilson (wilsoncry) (02/27/26 9:55 am): Rollback: Rollback because it needs to go to the DSCC.

Hannah Johnson (hjh9x) (03/17/26 11:25 am): Rollback: Rolling back because the minor is not aligned with the minor policy regarding 6 credit hours at level 3XXX or higher.

Hannah Johnson (hjh9x) (03/19/26 10:01 am): Rollback: Rolling back because the minor is not aligned with the minor policy regarding 6 credit hours at level 3XXX or higher.

Program Change Request

New Program Proposal

Date Submitted: 05/21/26 12:32 pm

Viewing: **PROPOSED : Environmental Policy**

Last edit: 06/09/26 2:20 pm

Changes proposed by: Shannon Fogg (sfogg)

Effective Catalog Edition	FS2027-SP2028
Start Term	Fall 2027
Program Type	Certificate
CIM Prospectus	
Academic Level	Graduate
Program Code	PROPOSED
Department	History & Political Science
Discipline	Political Science
Offered by	
Title	

In Workflow

1. RHISTORY Chair
2. CCC Secretary
3. Arts & Humanities 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

Approval Path

1. 05/20/26 10:47 am
Shannon Fogg (sfogg): Rollback to Initiator
2. 05/20/26 10:50 am
Shannon Fogg (sfogg): Approved for RHISTORY Chair
3. 05/21/26 11:51 am
Hannah Johnson (hjh9x): Rollback to Initiator
4. 05/21/26 12:33 pm
Shannon Fogg (sfogg): Approved for RHISTORY Chair
5. 06/09/26 2:37 pm
Hannah Johnson (hjh9x): Approved for CCC Secretary

6. 07/20/26 12:22 pm

Alejandra Sobrado
(asgx4): Approved
for Arts &
Humanities DSCC
Chair

7. 07/27/26 9:04 am

Hannah Johnson
(hjh9x): Approved
for Pending CCC
Agenda post

Environmental Policy

CIP Code 44.0599 - Public Policy Analysis, Other.

Purpose

The purpose of the Graduate Certificate in Environmental Policy is to prepare students to participate effectively in environmental policymaking as professionals in government, industry, civil society, and academia. Navigating the complex intersection of environmental science and public policy requires students to develop analytical and leadership skills while acquiring domain-specific knowledge and expertise. This program equips students with both, preparing graduates to evaluate environmental challenges, develop and implement effective policy responses, and promote supporting and compliant practices across diverse organizations and settings. Upon completing the certificate, students are empowered to help drive positive environmental change and support sustainable outcomes at local, national, and global scales.

For students, including graduate students across multiple Master's and PhD programs, recent B.Sc. Environmental Science graduates, and working professionals, the certificate offers a focused pathway for advanced specialization. Adding interdisciplinary dimension and structure to existing offerings, the program helps learners become more competitive candidates for diverse roles in government, corporate sustainability, nonprofit organizations, and consulting, and for further graduate study.

The certificate also aims to serve as a curricular offering aligned with major research initiatives on campus, including the Bio-X initiative, the Critical Minerals and Materials for Advanced Energy Tech Hub, and other interdisciplinary efforts. By training the next generation of environmental specialists in public policy, this certificate promises to help extend the impact of scientific and engineering research into the arenas where regulatory and governance decisions are made.

Intended Audience

Distance (online) Students

Main Campus Students

Program-Specific

Admission

The Graduate Certificate in Environmental Policy is open to all persons who hold a B.S. degree or are currently accepted into a graduate degree program at Missouri S&T. Once admitted to the program, the student must take the four designated courses (provided in the curriculum section). To receive a Graduate Certificate, the student must have an average cumulative grade point of 3.0 or better in the certificate courses. Once admitted to the program, a student will be given six years to complete the program.

Students admitted to the Environmental Policy Graduate Certificate Program will have non-degree graduate status; however, they will earn graduate credit for the course they complete. Students who do not have all the prerequisite courses necessary to begin the courses in the Environmental Policy Graduate Certificate Program will be allowed to take "bridge" courses at either the graduate or undergraduate level to prepare for the formal certificate courses.

Program Requirements and Description

Environmental Policy

The Graduate Certificate in Environmental Policy prepares learners to participate effectively in environmental policy making through a program of advanced, structured, and interdisciplinary study. Core coursework introduces the structures and functions of public institutions, including legislative, administrative, and regulatory systems, and examines how environmental policies are formulated, implemented and evaluated. Specialized courses allow students to explore substantive areas of environmental policy, ranging from climate change mitigation and the energy transition to resource management and environmental justice. Students develop practical skills, abilities, and knowledge spanning public policy analysis and deliberation, environmental planning, evidence-based decision-making, ethical reasoning, and beyond.

The Graduate Certificate in Environmental Policy is open to all persons who hold a B.S. degree or are currently accepted into a graduate degree program at Missouri S&T. Once admitted to the program, the student must take four courses (see below). To receive the certificate, the student must have an average cumulative grade point of 3.0 or better in the certificate courses. Once admitted to the program, a student will have six years to complete the program.

Required Courses:

POL SCI 4320	The Politics of Innovation	3
POL SCI 5300	Advanced Principles of Public Policy ¹	3

Choose two from the following:		
<u>BIO SCI 6100</u>	Biology Citizen Science	3
<u>ECON 6440</u>	Advanced Environmental and Natural Resource Economics	3
<u>EDUC 5330</u>	Community-Based Participatory Action Research	3
<u>ENV ENG 5640</u>	Environmental Law And Regulations	3
<u>ENV ENG 5642</u>	Sustainability, Population, Energy, Water, and Materials	3
<u>ENV SCI 6560</u>	Environmental Ecology and Management	3
<u>ENV SCI 6667</u>	Disaster Management in Changing Climates	3
<u>HISTORY 6470</u>	Advanced American Environmental History	3
<u>NUC ENG 5507</u>	Nuclear Policy	3
<u>NUC ENG 5509</u>	Nuclear Nonproliferation	3
<u>PHILOS 4350</u>	Environmental Ethics and Justice	3
<u>PHILOS 4665</u>	Creating Future Cities	3
<u>PHILOS 5277</u>	Advanced Wilderness and its Critics	3
1		
Students who have completed <u>POL SCI 3300</u> may substitute another approved course in the certificate program in place of <u>POL SCI 5300</u> , subject to approval by the certificate program director.		

Justification for
request

See above program description and purpose. New graduate certificate in Policy

Attach Budget

System Approval Letter [New Grad Cert - Environmental Policy.pdf](#)

MDHE Approval

Supporting Documents [Proposal for Grad Certificate in Environmental Policy.pdf](#)
[Provost Approval.docx](#)
[Dean signature.pdf](#)
[Program Change \(PC\) Form Env Pol.docx](#)

Reviewer

Comments

Shannon Fogg (sfogg) (05/20/26 10:47 am): Rollback: CIP COde

Hannah Johnson (hjh9x) (05/21/26 11:51 am): Rollback: Update effective catalog year and format of the Program Requirements and Description section.

Hannah Johnson (hjh9x) (05/21/26 1:04 pm): Combined the two course listings into one, added a footnote per request from Shannon Fogg.

Hannah Johnson (hjh9x) (05/22/26 8:02 am): Removed space in between 3.0 in the description.

Crystal Wilson (wilsoncry) (06/03/26 9:05 am): Corrected grammar and formatting.

Hannah Johnson (hjh9x) (06/09/26 2:20 pm): Added supporting document.

Program Change Request

Date Submitted: 04/21/26 3:54 pm

Viewing: **SYS ENG-MS : Systems Engineering MS**

Last approved: 06/14/24 1:17 pm

Last edit: 05/01/26 1:31 pm

Changes proposed by: Cihan Dagli (dagli)

Catalog Pages Using
this Program
[Systems Engineering](#)

Effective Catalog Edition	FS2027-SP2028
Start Term	Fall 2027
Program Type	Master of Science
Academic Level	Graduate
Program Code	SYS ENG-MS
Department	Engineering Mgt & Sys Engr
Discipline	Systems Engineering
Title	

In Workflow

1. **RENGMNGT 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

Approval Path

1. 04/21/26 3:57 pm
Amaury Lendasse (altmg): Approved for RENG MNGT Chair
2. 05/05/26 11:54 am
Hannah Johnson (hjh9x): Approved for CCC Secretary
3. 05/12/26 9:51 am
Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 07/27/26 9:04 am
Hannah Johnson (hjh9x): Approved for Pending CCC Agenda post

History

1. Jun 12, 2014 by pantaleoa
2. Jul 21, 2014 by pantaleoa
3. Jun 19, 2015 by Stephen Raper (sraper)
4. Jul 24, 2015 by pantaleoa
5. Apr 19, 2016 by pantaleoa
6. May 16, 2016 by pantaleoa
7. Jun 14, 2019 by Sarah Johnson (johsarah)
8. Jun 14, 2024 by David Enke (enke)

Systems Engineering MS

CIP Code

Program Requirements and Description

The M.S. degree program is offered on the Rolla campus and several locations and by distance education throughout including the United States and selected international locations. ~~West County Continuing Education Center in St. Louis, and by distance education throughout the United States and selected international locations.~~ Distance course lectures are archived upon completion of the lecture and all lectures are available to students through streaming video during the semester for review. These courses can be reached from anywhere at any time. It is feasible to obtain a Missouri S&T non-thesis M.S. degree regardless of your location. The M.S. non-thesis program requires completion of at least 30 credit hours at 5XXX level or higher ~~10 three-credit hour courses~~ approved by the academic advisor. The M.S. with thesis option requires 36 credit hours including a minimum of 6 credit hours of graduate research. ~~the thesis.~~ All students are required to take the following:

CORE Courses

SYS ENG 5101

System Engineering and Analysis

3

<u>SYS ENG 5106</u>	<u>Verification Evaluation and Test</u>	<u>3</u>
<u>SYS ENG 6102</u>	Information Based Design	3
<u>SYS ENG 6103</u>	<u>Systems Life Cycle Costing</u>	3
<u>SYS ENG 6104</u>	Systems Architecting	3
<u>SYS ENG 6196</u>	Systems Engineering Capstone	3
<u>SYS ENG 6542</u>	Model Based Systems Engineering	3

Specialization Courses

Specialization courses provides students with the ability to address his/her technology needs in the context of the overall Systems Engineering program. These graduate courses can be selected from engineering or the physical science department as long as they are approved by the program director.

One of the graduate certificates may be substituted for a specialization track with the permission of the program director.

Justification for
request

Systems Engineering MS graduate program review by The Boeing Company and International Council of Systems Engineering INCOSE that recognizes our academic programs as an alternative to the INCOSE knowledge exam as a way for individuals to prove their systems engineering knowledge while they are being considered for becoming an Associate Systems Engineering Professional (ASEP) or Certified Systems Engineering Professional (CSEP) advised us to add a course on Verification Evaluation and Test to our core courses.

Attach Budget

System Approval
Letter

MDHE Approval

Supporting
Documents

Reviewer

Comments

Hannah Johnson (hjh9x) (04/23/26 8:49 am): Alphabetized course listing.

Hannah Johnson (hjh9x) (04/27/26 1:25 pm): Hyperlinked Sys Eng 5106 in the course list.

Hannah Johnson (hjh9x) (04/27/26 1:26 pm): Changed effective catalog year and term to be for Fall 2027.

Hannah Johnson (hjh9x) (05/01/26 1:11 pm): Changed wording of "10 three-credit hour" to

'30 credit hours' and added terminology to reflect course must be taken at 5xxx level or higher for the MS non-thesis requirements in top section. Changed " the thesis" in the MS thesis requirement sentence in the top section to say: a minimum of 6 credit hours of graduate research. These changes in wording and updated terminology were approved by Cihan Dagli.

Hannah Johnson (hjh9x) (05/01/26 1:31 pm): Removed " including the West County Continuing Education Center in St. Louis," in first sentence, per email from Cihan Dagli.

Experimental Change Request

New Proposal

Date Submitted: 07/08/26 11:43 am

Viewing: **BIO SCI 3001.035: Entomology**

Last edit: 07/24/26 8:33 am

Changes proposed by: Gina Yosten (gyxmr)

Requested Effective Date	Spring 2027
Department	Biological Sciences (RBIOLSCI)
Discipline	Biological Sciences (BIO SCI)
Course Number	3001
Topic ID	035
Experimental Title	

In Workflow

1. RBIOLSCI 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. 07/08/26 11:45 am
Gina Yosten (gyxmr): Approved for RBIOLSCI Chair
2. 07/08/26 1:54 pm
Hannah Johnson (hjh9x): Approved for CCC Secretary
3. 07/23/26 5:52 pm
Katie Shannon (shannonk): Approved for Sciences DSCC Chair
4. 07/27/26 9:00 am
Hannah Johnson (hjh9x): Approved for Pending CCC Agenda post

Experimental Entomology

Abbreviated Course

Title

Co-Listed Course

Instructors

Theo Sumnicht

Experimental

Catalog Description

An introduction to the biology, diversity, ecology, evolution, and identification of insects, with emphasis on their structure, physiology, behavior, classification, and ecological significance. Students will examine the roles of insects in natural and managed ecosystems, including pollination, decomposition, agriculture, public health, and conservation.

Prerequisite(s)

Bio Sci 1223.

Corequisite(s)

Field Trip

Statement

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Grading Basis Graded

Repeatable No

Justification for
experimental
course:

Entomology is a foundational discipline within the biological sciences that is currently absent from the Department of Biological Sciences curriculum. Insects comprise more than half of all described living species and play essential roles in ecosystem function, agriculture,

conservation, human health, and environmental monitoring. As interest in biodiversity, pollinator conservation, vector-borne diseases, and ecosystem resilience continues to grow, an undergraduate course in entomology will provide students with valuable knowledge and practical skills that complement existing coursework in ecology, evolution, environmental science, and organismal biology.

Offering this course as an experimental course will allow the department to assess student interest, evaluate instructional approaches, and refine course content prior to proposing it as a permanent catalog offering. The course will also strengthen field-based learning opportunities, support undergraduate research, and enhance preparation for careers and graduate study in biology, environmental science, agriculture, wildlife management, conservation, public health, and related disciplines.

Reviewer

Comments

Hannah Johnson (hjh9x) (07/08/26 1:12 pm): Removed BIO SCI from the course number. Removed title of course from prereq, lowercased the appropriate letters and added a period. Selected yes for elective for majors, selected graded for grading basis. Removed "Prerequisite: BIO SCI 1223 Biodiversity." from the catalog description.

Hannah Johnson (hjh9x) (07/24/26 8:33 am): Assigned 035 as the topic ID.

Experimental Change Request

New Proposal

Date Submitted: 07/21/26 2:32 pm

Viewing: **BIO SCI 6001.025: Scientific Communication**

Last edit: 07/24/26 8:34 am

Changes proposed by: Gina Yosten (gyxmr)

Requested Effective Date	Spring 2027
Department	Biological Sciences (RBIOLSCI)
Discipline	Biological Sciences (BIO SCI)
Course Number	6001
Topic ID	025
Experimental Title	

In Workflow

1. **RBIOLSCI 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. 07/21/26 2:33 pm
Gina Yosten (gyxmr): Approved for RBIOLSCI Chair
2. 07/22/26 11:30 am
Hannah Johnson (hjh9x): Approved for CCC Secretary
3. 07/23/26 5:52 pm
Katie Shannon (shannonk): Approved for Sciences DSCC Chair
4. 07/27/26 9:00 am
Hannah Johnson (hjh9x): Approved for Pending CCC Agenda post

Experimental Scientific Communication

Abbreviated Course

Title

Co-Listed Course

Instructors

Gina Yosten

Experimental

Catalog Description

Development of effective written and oral communication skills for the biological and biomedical sciences. Students will learn to locate, critically evaluate, and interpret primary scientific literature; communicate scientific concepts to technical and non-technical audiences; and prepare professional scientific documents and presentations. Emphasis is placed on scientific writing, literature analysis, data presentation, oral communication, visual design, and ethical communication of biological and biomedical research. Students will develop skills needed for careers in research, healthcare, industry, and science communication.

Prerequisite(s)

Enrollment in a graduate program.

Corequisite(s)

Field Trip

Statement

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Grading Basis Graded

Repeatable No

Justification for
experimental
course:

Effective communication is a critical skill for graduate students in the biological and biomedical sciences, yet formal training in scientific communication is often limited. This course will provide instruction in critically evaluating the scientific literature and communicating research through scientific writing, oral presentations, and audience-appropriate communication for both technical and lay audiences.

The course supports the department's goal of preparing graduates for careers in academia, industry, healthcare, and government while strengthening skills essential for publishing, grant writing, interdisciplinary collaboration, and public engagement. Offering the course on an experimental basis will allow the department to assess student demand and refine the curriculum before proposing it as a permanent offering.

Reviewer

Comments

Hannah Johnson (hjh9x) (07/21/26 3:20 pm): Selected yes for majors, and selected graded for grading basis.

Hannah Johnson (hjh9x) (07/24/26 8:34 am): Assigned 025 for topic ID.

Experimental Change Request

New Proposal

Date Submitted: 04/30/26 9:40 am

Viewing: **CHEM ENG 5001.039: Circular Economy and Bioeconomy**

Last edit: 05/11/26 1:46 pm

Changes proposed by: Christi Luks (luksc)

Requested Effective Date	Spring 2027
Department	Chemical and Biochemical Engineering (RCHEMENG)
Discipline	Chemical Engineering (CHEM ENG)
Course Number	5001
Topic ID	039
Experimental Title	

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. CAT entry
8. Registrar

Approval Path

1. 04/30/26 9:47 am
Ryan Gilbert (rggnx): Approved for RCHEMENG Chair
2. 05/01/26 10:16 am
Hannah Johnson (hjh9x): Approved for CCC Secretary
3. 05/11/26 11:10 am
Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 07/27/26 9:00 am
Hannah Johnson (hjh9x): Approved for Pending CCC Agenda post

Circular Economy and Bioeconomy

Experimental Circular and Bio Economy

Abbreviated Course

Title

Co-Listed Course

Instructors

Dr. Amber Pete

Experimental

Catalog Description

Principles and practice of circular economy and bioeconomy design as applied to chemical and biochemical engineering systems. Topics include life cycle assessment, plastic waste valorization, lignocellulosic biorefinery engineering, fermentation, energy conversion and storage, green hydrogen, industrial symbiosis, sustainability policy, and applied machine learning for process optimization.

Prerequisite(s)

Graduate standing or Chem Eng 3101 or BME 3100.

Corequisite(s)

Field Trip

Statement

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Grading Basis Graded

Repeatable No

Justification for
experimental
course:

Industry has shifted toward sustainable materials, renewable energy and closed-loop resource systems. This course addresses the circular economy with bioeconomy principles to improve students' industry readiness.

Reviewer

Comments

Hannah Johnson (hjh9x) (04/30/26 1:46 pm): Edited the p in practice to be lowercase in the description, edited ChE in the prereq to be Chem Eng, added a period at the end of the prereq. Selected graded for grading basis.

Hannah Johnson (hjh9x) (05/11/26 1:46 pm): Assigned 039 to topic ID.

Experimental Change Request

New Proposal

Date Submitted: 06/12/26 10:11 am

Viewing: **COMP SCI 6001.076: Physical Artificial Intelligence for Humanoids**

Last edit: 07/13/26 10:42 am

Changes proposed by: Venkata Sriram Siddhardh Nadendla (nadendla)

Requested Effective Date	Fall 2026
Department	Computer Science (RCOMPSCI)
Discipline	Computer Science (COMP SCI)
Course Number	6001
Topic ID	076
Experimental Title	

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. 06/12/26 11:47 am
Seung-Jong Park (spxzb): Approved for RCOMPSCI Chair
- 2. 06/12/26 1:50 pm
Hannah Johnson (hjh9x): Approved for CCC Secretary
- 3. 06/30/26 11:13 am
Theresa Swift (thswift): Approved for Engineering DSCC Chair
- 4. 07/27/26 9:01 am
Hannah Johnson (hjh9x): Approved for Pending CCC Agenda post

Experimental Physical AI

Abbreviated Course

Title

Co-Listed Course

Instructors

Seung-Jong Park

Experimental

Catalog Description

Students will learn to implement Vision-Language-Action Models (VLA) and Diffusion models and other advanced topics to control humanoids. The course offers multiple hands-on activities (e.g. individual presentations and team projects) in both simulation environments (e.g. MuJoCo) and real physical environments (e.g. HighTorque Mini Hi).

Prerequisite(s)

A grade of "C" or better in Comp Sci 5400 and Comp Sci 6411.

Corequisite(s)

Field Trip

Statement

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Grading Basis Graded

Repeatable No

Justification for
experimental
course:

This is the first course in S&T's curriculum on physical AI, which is a novel field in artificial intelligence. A course on Physical AI for Humanoids doesn't just teach students how to build robots; it teaches them how to program the future of labor, logistics, and healthcare. It moves

the curriculum past the screen and into the physical world, where the most profound breakthroughs of the next two decades will take place.

Reviewer

Comments

Hannah Johnson (hjh9x) (06/12/26 12:20 pm): Changed topic ID from .013 to TBD.

Hannah Johnson (hjh9x) (06/12/26 1:20 pm): Selected graded for grading basis.

Hannah Johnson (hjh9x) (06/12/26 1:22 pm): Edited credit hours and credit hours total to say 3 instead of 3.0.

Hannah Johnson (hjh9x) (07/13/26 10:42 am): Changed TBD in the topic ID to .076.

Experimental Change Request

New Proposal

Date Submitted: 06/24/26 12:06 am

Viewing: **ELEC ENG 6001.059: Power System Economics and Market**

Last edit: 07/13/26 10:45 am

Changes proposed by: Rui Bo (boru)

Requested Effective Date	Spring 2027
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	6001
Topic ID	059
Experimental Title	

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. CAT entry
- 8. Registrar

Approval Path

- 1. 06/24/26 8:46 am
Jonathan Kimball (kimballjw):
Approved for RELECENG Chair
- 2. 06/24/26 9:40 am
Hannah Johnson (hjh9x): Approved for CCC Secretary
- 3. 06/30/26 11:13 am
Theresa Swift (thswift): Approved for Engineering DSCC Chair
- 4. 07/27/26 9:01 am
Hannah Johnson (hjh9x): Approved for Pending CCC Agenda post

Power System Economics and Market

Experimental Power System Economics
Abbreviated Course
Title

Co-Listed Course

Instructors

Rui Bo

Experimental

Catalog Description

This course introduces the economic operation of power systems under market environment. It will cover fundamental concepts of microeconomics, organization, and operation of electricity markets, market participants strategies, operational reliability and ancillary services, network congestion and related LMP and transmission rights.

Prerequisite(s)

Math 2222.

Corequisite(s)

Field Trip

Statement

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors No

Grading Basis Graded

Repeatable No

Justification for
experimental
course:

provide a new course to students who are interested in understanding the economic operation

of power systems under market environment. It is not covered in existing courses and yet valuable in research and industry practices.

Reviewer

Comments

Hannah Johnson (hjh9x) (06/24/26 9:38 am): Removed 'Special Topics -' from the Experimental Title. Lowercased Math and added a period to the prereq. Selected graded for grading basis.

Hannah Johnson (hjh9x) (07/13/26 10:45 am): Changed topic ID from TBD to 059.

Experimental Change Request

New Proposal

Date Submitted: 04/27/26 6:17 pm

Viewing: **ENGLISH 3001.055: Steampunk in Fiction and Culture**

Last edit: 07/21/26 2:57 pm

Changes proposed by: Kristine Swenson (kswenson)

Requested Effective Date	Spring 2027
Department	English & Tech Communication (REGLISH)
Discipline	English (ENGLISH)
Course Number	3001
Topic ID	055
Experimental Title	

In Workflow

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

Approval Path

1. 04/27/26 6:26 pm
Kathryn Dolan (dolankc): Approved for REGLISH Chair
2. 04/29/26 8:50 am
Hannah Johnson (hjh9x): Approved for CCC Secretary
3. 07/20/26 12:18 pm
Alejandra Sobrado (asgx4): Approved for Arts & Humanities DSCC Chair
4. 07/27/26 9:01 am
Hannah Johnson (hjh9x): Approved for Pending CCC Agenda post

Steampunk in Fiction and Culture

Experimental Steampunk

Abbreviated Course

Title

Co-Listed Course

Instructors

Kristine Swenson

Experimental

Catalog Description

This course examines “Steampunk,” a retro-futuristic subgenre of science fiction that imagines an alternative history where 19th century industrial technology—specifically steam power—remains the dominant force of progress. It blends the aesthetics and social sensibilities of the 19th century with futuristic, anachronistic inventions like airships, clockwork robots, and mechanical computers. Students will engage with literary texts, film, and 19th century science through historical and creative projects.

Prerequisite(s)

English 1120.

Corequisite(s)

Field Trip

Statement

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Grading Basis Graded

Repeatable No

Justification for
experimental

course:

Our Science Fiction course (English 2243) is very popular with students who have been asking for additional SF courses. Steampunk plays to faculty strengths in ETC (19th c.) and H&PS (History of Science and Technology students), and to S&T students' interest in combining engineering and science concepts with fictional narratives.

Reviewer

Comments

Hannah Johnson (hjh9x) (04/28/26 8:48 am): Placed a period at the end of the prereq.

Hannah Johnson (hjh9x) (04/28/26 10:56 am): Selected graded for grading basis. Edited 19th-century and 19th c in description to be formatted the same throughout the description to be 19th century.

Hannah Johnson (hjh9x) (07/21/26 2:57 pm): Assigned course ID with 055.

Experimental Change Request

New Proposal

Date Submitted: 06/10/26 1:34 pm

Viewing: **ENGLISH 6001.002: Media Technology and Humanity**

Last edit: 07/21/26 2:59 pm

Changes proposed by: Kathryn Dolan (dolankc)

Requested Effective Date	Fall 2026
Department	English & Tech Communication (REGLISH)
Discipline	English (ENGLISH)
Course Number	6001
Topic ID	002
Experimental Title	

In Workflow

- REGLISH Chair
- CCC Secretary
- Arts & Humanities DSCC Chair
- Pending CCC Agenda post
- CCC Meeting Agenda
- Campus Curricula Committee Chair
- CAT entry
- Registrar

Approval Path

- 06/10/26 1:36 pm
Kathryn Dolan (dolankc): Approved for REGLISH Chair
- 06/17/26 9:19 am
Hannah Johnson (hjh9x): Approved for CCC Secretary
- 07/20/26 12:19 pm
Alejandra Sobrado (asgx4): Approved for Arts & Humanities DSCC Chair
- 07/27/26 9:01 am
Hannah Johnson (hjh9x): Approved for Pending CCC Agenda post

Media Technology and Humanity

Experimental Media Tech and Hum

Abbreviated Course

Title

Co-Listed Course

Instructors

Eric Bryan

Experimental

Catalog Description

This course approaches communication technologies and generative artificial intelligence from a humanistic perspective by exploring how the most essential aspects of our humanity may be affected by the three great cultural transitions in the history of communication technologies: (1) the introduction of literacy, (2) the introduction of the printing press, and (3) the rapid expansion of communication technologies of the twentieth and twenty-first centuries—namely, email, smart phones, social media, and generative artificial intelligence.

Prerequisite(s)

Corequisite(s)

Field Trip

Statement

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Grading Basis Graded

Repeatable No

Justification for
experimental

course:

MS redesign and expansion

Reviewer

Comments

Hannah Johnson (hjh9x) (06/10/26 2:05 pm): Selected yes for elective for majors, selected graded for grading basis.

Hannah Johnson (hjh9x) (07/21/26 2:59 pm): Assigned 002 to Topic ID.

Experimental Change Request

New Proposal

Date Submitted: 05/14/26 4:19 pm

Viewing: **ENV SCI 5001.002: Environmental Journalism**

Last edit: 07/24/26 8:54 am

Changes proposed by: Robin Verble (verbler)

Requested Effective Date	Spring 2027
Department	Biological Sciences (RBIOLSCI)
Discipline	Environmental Sciences (ENV SCI)
Course Number	5001
Topic ID	002
Experimental Title	

In Workflow

1. **RBIOLSCI Chair**
2. **CCC Secretary**
3. **RENGGLISH Chair**
4. **CCC Secretary**
5. **Arts & Humanities DSCC Chair**
6. **Sciences DSCC Chair**
7. **Pending CCC Agenda post**
8. **CCC Meeting Agenda**
9. Campus Curricula Committee Chair
10. CAT entry
11. Registrar

Approval Path

1. 05/12/26 12:58 pm
Gina Yosten
(gyxmr): Approved for RBIOLSCI Chair
2. 05/12/26 2:10 pm
Hannah Johnson
(hjh9x): Approved for CCC Secretary
3. 05/14/26 12:58 pm
Hannah Johnson
(hjh9x): Rollback to Initiator
4. 05/15/26 4:16 pm
Gina Yosten
(gyxmr): Approved for RBIOLSCI Chair
5. 06/02/26 11:09 am

Crystal Wilson
(wilsoncry):
Approved for CCC
Secretary

6. 06/02/26 4:51 pm
Kathryn Dolan
(dolankc): Approved
for RENGLISH Chair

7. 06/03/26 7:42 am
Crystal Wilson
(wilsoncry):
Approved for CCC
Secretary

8. 07/21/26 11:21 am
Alejandra Sobrado
(asgx4): Approved
for Arts &
Humanities DSCC
Chair

9. 07/23/26 5:56 pm
Katie Shannon
(shannonk):
Approved for
Sciences DSCC Chair

10. 07/27/26 9:02 am
Hannah Johnson
(hjh9x): Approved
for Pending CCC
Agenda post

Environmental Journalism

Experimental Env Journal

Abbreviated Course

Title

Co-Listed Course SP&M S 5001 - Special Topics

Instructors

Margret Grebowicz

Experimental

Catalog Description

This course will equip students to investigate, analyze, and communicate complex environmental issues for diverse audiences. Students will identify and write compelling stories that illuminate environmental issues, often in human terms, using a variety of journalistic forms. In addition to readings in the sciences, assignments will require original research, reportage, photography, and peer-to-peer editing.

Prerequisite(s)

Environmental Science undergraduate major or permission of instructor.

Corequisite(s)

Field Trip

Statement

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Grading Basis Graded

Repeatable No

Justification for
experimental
course:

Environmental issues increasingly shape public policy, economic development, public health, and community resilience, yet many scientific findings fail to reach broad audiences in clear, compelling, and actionable ways. Missouri S&T students in environmental science need opportunities to develop not only technical expertise, but also the communication skills necessary to translate complex environmental data into accessible narratives for policymakers, industry leaders, and the public. An Environmental Journalism course directly supports this need by training students to investigate environmental topics critically, synthesize interdisciplinary information, and communicate evidence-based stories through written, visual, and multimedia formats.

The course complements the scientific and technical rigor of the Environmental Science program by emphasizing applied communication, public engagement, and ethical reporting. Through original research, reportage, photography, and peer editing, students will strengthen skills in observation, interviewing, data interpretation, and audience-centered communication. These competencies are increasingly valuable in careers related to sustainability, environmental consulting, public outreach, regulatory agencies, nonprofit advocacy, and science communication.

In addition, the course aligns with Missouri S&T's mission to prepare graduates for leadership in addressing real-world challenges. Environmental problems such as water quality, energy transition, land use, climate resilience, and environmental justice require professionals who can bridge the gap between science and society. By teaching students to frame environmental issues in human terms while maintaining scientific accuracy, this course fosters informed civic engagement and prepares graduates to contribute meaningfully to interdisciplinary environmental problem-solving.

Finally, the course provides students with experiential learning opportunities that integrate research, creativity, and collaboration. The emphasis on field reporting, multimedia storytelling, and peer review encourages active learning and professional skill development while broadening students' understanding of how environmental narratives influence public perception and decision-making. As environmental communication becomes increasingly important across scientific and technical professions, this course fills a valuable curricular need within the Environmental Science program at Missouri S&T.

Reviewer

Comments

Hannah Johnson (hjh9x) (05/12/26 1:35 pm): Added period to the prereq.

Hannah Johnson (hjh9x) (05/12/26 1:36 pm): Selected graded for grading basis.

Hannah Johnson (hjh9x) (05/12/26 1:36 pm): Removed 'none' from Corequisite and Field Trip Statement.

Hannah Johnson (hjh9x) (05/14/26 12:58 pm): Rollback: Per request from Robin Verble, needing to add a co-listing course.

Hannah Johnson (hjh9x) (07/24/26 8:54 am): Assigned 002 to the topic ID.

Experimental Change Request

New Proposal

Date Submitted: 04/03/26 11:54 am

Viewing: **MATH 5001.011: Theoretical Foundations of Data Science II**

Last edit: 07/23/26 5:57 pm

Changes proposed by: Jeffrey Humpherys (jh339)

Requested Effective Date	Fall 2026
Department	Mathematics & Statistics (RMATHEMA)
Discipline	Mathematics (MATH)
Course Number	5001
Topic ID	011
Experimental Title	

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. 04/14/26 10:17 am
John Singler (singlerj): Approved for RMATHEMA Chair
2. 04/29/26 8:59 am
Hannah Johnson (hjh9x): Approved for CCC Secretary
3. 07/23/26 5:59 pm
Katie Shannon (shannonk): Approved for Sciences DSCC Chair
4. 07/27/26 9:02 am
Hannah Johnson (hjh9x): Approved for Pending CCC Agenda post

Experimental Theor Found Data Sci II

Abbreviated Course

Title

Co-Listed Course

Instructors

Jeffrey Humpherys

Experimental

Catalog Description

We continue our exploration of machine learning from an information theoretic point of view. In this second semester, we focus on dimensionality reduction and latent variable modeling using high-dimensional probability, information theory, and mathematical modeling.

Topics include dimensionality reduction and random projections, with emphasis on the consequences of the Restricted Isometry Property and the Johnson–Lindenstrauss lemma. We also study latent variable models and probabilistic graphical models, including Markov models and state-space methods (such as Kalman filtering). These frameworks provide a unified perspective on inference, representation, and uncertainty in complex systems. Causal inference models are also examined.

Prerequisite(s)

A grade of "C" or better in Math 2222, Math 3108, Math 4209, and programming competency. One of the following: Math 5001: Theoretical Foundations of Data Science I, Stat 3117, or Math 5680.

Corequisite(s)

Field Trip

Statement

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Grading Basis Graded

Repeatable No

Justification for
experimental
course:

The topics of this experimental course reflect current interests of our faculty and graduate students. In addition, the course topics align with our department's current data science focus.

Reviewer

Comments

Hannah Johnson (hjh9x) (04/20/26 4:16 pm): Selected graded for grading basis per email from Jeffrey Humpherys.

Hannah Johnson (hjh9x) (04/29/26 8:58 am): Removed roman numerals from the listed prereqs.

Katie Shannon (shannonk) (07/23/26 5:57 pm): Edited prerequisites with feedback from DSCC and Paul Runnion

Experimental Change Request

New Proposal

Date Submitted: 06/10/26 1:36 pm

Viewing: **TCH COM 6001.003: Foundations of Responsible AI Collaboration**

Last edit: 07/21/26 3:01 pm

Changes proposed by: Kathryn Dolan (dolankc)

Requested Effective Date	Fall 2026
Department	English & Tech Communication (REGLISH)
Discipline	Technical Communication (TCH COM)
Course Number	6001
Topic ID	003
Experimental Title	

In Workflow

- REGLISH Chair
- CCC Secretary
- Arts & Humanities DSCC Chair
- Pending CCC Agenda post
- CCC Meeting Agenda
- Campus Curricula Committee Chair
- CAT entry
- Registrar

Approval Path

- 06/10/26 1:36 pm
Kathryn Dolan (dolankc): Approved for REGLISH Chair
- 06/17/26 9:19 am
Hannah Johnson (hjh9x): Approved for CCC Secretary
- 07/20/26 12:22 pm
Alejandra Sobrado (asgx4): Approved for Arts & Humanities DSCC Chair
- 07/27/26 9:03 am
Hannah Johnson (hjh9x): Approved for Pending CCC Agenda post

Foundations of Responsible AI Collaboration

Experimental Foundations of Resp AI
Abbreviated Course
Title

Co-Listed Course

Instructors
Jossalyn Gale

Experimental
Catalog Description

Foundations of Responsible AI Collaboration is the entry course for the AI Literacy certificate and introduces students to responsible collaboration with generative AI in academic and professional contexts. Drawing on rhetoric, technical communication, and humanities perspectives, the course examines how AI systems shape knowledge production, authorship, and decision-making across disciplines. Using a human-in-the-loop framework, students learn to design structured AI workflows that incorporate planning, generation, critique, verification, and revision. Through project-based learning, students develop discipline-specific AI collaboration processes that integrate ethical judgment, information literacy, and human oversight.

Prerequisite(s)

Corequisite(s)

Field Trip
Statement

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3
Required for Majors No
Elective for Majors No
Grading Basis Graded
Repeatable No

Justification for
experimental
course:

MS redesign and expansion

Reviewer

Comments

Hannah Johnson (hjh9x) (06/10/26 2:07 pm): Selected graded for grading basis.

Hannah Johnson (hjh9x) (07/21/26 3:01 pm): Assigned Topic ID of 003.

2026-2027 CCC Calendar



CCC Meetings are from 8:15am – 9:30am in Fulton Hall 120 (*August 2026- December 2026*)

CCC INFORMATION	Department submission to Registrar <i>Fridays</i>	DSCC submission to Registrar <i>Fridays</i>	CCC Meeting <i>Tuesdays</i>	Faculty Senate Meeting <i>Thursdays</i>
EC forms for Fall 2026 & Affecting CC forms for Summer 2027 & Spring 2027	July 10, 2026	July 24, 2026	August 11, 2026	September 17, 2026
Non-affecting CC forms for Summer 2027 & Spring 2027	August 14, 2026	September 4, 2026	September 22, 2026	October 22, 2026
	September 4, 2026	September 25, 2026	October 13, 2026	November 12, 2026
Affecting CC forms for Fall 2027	October 2, 2026	October 23, 2026	November 10, 2026	December 10, 2026
EC forms for Spring 2027	December 4, 2026	December 18, 2026	January 12, 2027	February 11, 2027
	January 8, 2027	January 29, 2027	February 16, 2027	March 18, 2027
	February 12, 2027	March 5, 2027	March 23, 2027	April 22, 2027
DC forms for Fall 2027	March 5, 2027	March 26, 2027	April 13, 2027	May 13, 2027
EC forms for Summer 2027 & non- affecting CC forms for Fall 2027	April 2, 2027	April 23, 2027	May 11, 2027	June 24, 2027
EC forms for Fall 2027	TBD	TBD	TBD	TBD

Official dates and location for Spring 2027 CCC meetings will be determined at a later date.