Minutes of the Campus Curricula Committee Meeting

November 18th, 2025
8:15 am, Parker Hall 203
(For Faculty Senate Meeting of December 18th, 2025)

Attendees: Cecil Eng Huang Chua, Katie Shannon, Michael Davis, Theresa Swift, Cihan Dagli, Kyle Perry, Alejandra Sobrado, Steven Raper, Petra DeWitt, Paul Runnion, Crystal Wilson, and Jade McCain.

The following curriculum forms were discussed and approved:

Course Change forms:

File: 10338	BUS 5510 : Corporate Entrepreneurship and Ecosystem Strategy
File: 4974	CHEM 2410 : Physical Chemistry I
File: 1040	CHEM ENG 2100 : Chemical Engineering Material & Energy Balances
File: 1992	CIV ENG 3334 : Water Resources Engineering
File: 10340	COMP ENG 2010 : Sophomore Seminar
File: 1627	COMP ENG 3150 : Introduction to Microcontrollers and Embedded System Design
File: 2329	COMP ENG 3151 : Digital Engineering Lab II
File: 1392	COMP ENG 4096 : Computer Engineering Senior Project I
File: 2582	COMP ENG 4097 : Computer Engineering Senior Project II
File: 1081	COMP ENG 5120 : Digital Computer Design
File: 4892	COMP SCI 3402 : Introduction to Data Science
File: 10199	COMP SCI 5111 : Bridge to Advanced Computing
File: 6047	COMP SCI 5204 : Regression Analysis
File: 4097	COMP SCI 5402 : Introduction to Data Mining
File: 4900	COMP SCI 5408 : Game Theory for Computing
File: 10201	COMP SCI 5411 : Natural Language Processing
File: 4980	COMP SCI 5420 : Introduction to Machine Learning
File: 10200	COMP SCI 5421 : Reinforcement Learning
File: 10202	COMP SCI 6411 : Large Language Models
File: 4942	ECON 3300 : Introduction to Econometrics
File: 4937	ECON 3333 : Computational Economics
File: 912	ECON 4300 : Research Methods and Applications in Economics and Business
File: 6111	ECON 4310 : Mathematical Economics
File: 4940	ECON 4538 : Advanced Econometrics
File: 908	ECON 5310 : Advanced Mathematical Economic
File: 4943	ECON 5380 : Data Intelligence using Case Studies
File: 10341	ELEC ENG 1001 : Special Topics
File: 10342	ELEC ENG 2010 : Sophomore Seminar
File: 856	ELEC ENG 2120 : Circuits II
File: 6143	ELEC ENG 2200 : Introduction to Electronic Devices



File: 6145 ELEC ENG 2201 : Electronic Devices Laboratory
File: 5057 ELEC ENG 2410 : Continuous Linear Systems
File: 5058 ELEC ENG 2411 : Continuous Linear Systems Laboratory
File: 526 ELEC ENG 3100 : Electronics I
File: 528 ELEC ENG 3101 : Electronics I Laboratory
File: 525 ELEC ENG 3250 : Electronic And Photonic Devices
File: 554 ELEC ENG 3320 : Control Systems
File: 4049 ELEC ENG 3321 : Control Systems Laboratory
File: 2074 ELEC ENG 3410 : Digital Signal Processing
File: 6163 ELEC ENG 3411 : Discrete Linear Systems Laboratory
File: 4051 ELEC ENG 3430 : Digital Communications I
File: 4052 ELEC ENG 3431 : Digital Communication Laboratory
File: 6165 ELEC ENG 3500 : Electromechanics
File: 6167 ELEC ENG 3501 : Electromechanics Laboratory
File: 6169 ELEC ENG 3540 : Power System Design And Analysis
File: 6171 ELEC ENG 3541 : Power System Design And Analysis Laboratory
File: 531 ELEC ENG 3600 : Electromagnetics
File: 1388 ELEC ENG 4097 : Electrical Engineering Senior Project II
File: 1393 ENG MGT 2310 : Introduction to System Engineering
File: 6266 ENG MGT 4710 : Quality
File: 6282 ENG MGT 5410 : Industrial System Simulation
File: 594 ENG MGT 5414 : Introduction To Operations Research
File: 6291 ENG MGT 5614 : Supply Chain Management Systems
File: 1986 ENG MGT 6412 : Mathematical Programming
File: 1928 GEO ENG 5315 : Advanced Statistical Methods in Geology and Engineering
File: 1250 GEO ENG 5331 : Subsurface Hydrology
File: 1109 GEOLOGY 1111 : Introduction to Physical Geology
File: 6642 GEOLOGY 1111L : Tc - Geol 50L
File: 830 GEOLOGY 2096 : Field Geology
File: 809 GEOLOGY 3310 : Structural Geology
File: 1030 GEOLOGY 3511 : Introduction to Mineral Deposits
File: 831 GEOLOGY 4097 : Advanced Field Geology
File: 6668 GEOLOGY 4441 : Applied Geochemistry
File: 6670 GEOLOGY 4461 : Isotope Geochemistry
File: 789 GEOLOGY 4521 : Ore Microscopy
File: 6671 GEOLOGY 4631 : Advanced Igneous and Metamorphic Petrology
File: 1793 GEOLOGY 5631 : Carbonate Petrology
File: 6683 GEOLOGY 5671 : Clay Mineralogy
File: 2569 GEOPHYS 4231 : Seismic Interpretation
File: 768 GEOPHYS 5202 : Exploration and Development Seismology
File: 6726 GEOPHYS 6231 : Advanced Seismic Data Processing
File: 4407 IS&T 5520 : Data Science and Machine Learning with Python
File: 4471 IS&T 5535 : Machine Learning Algorithms and Applications

File: 2178 MATH 1212 : Survey of Calculus
File: 5004 MATH 5762 : Marketing Revolution with Machine Learning
File: 8932 MET ENG 2110 : Metallurgy For Engineers
File: 1344 MIN ENG 5522 : Ore Reserve Analysis and Geostatistics
File: 9116 NUC ENG 2105 : Introduction To Nuclear Engineering
File: 1630 NUC ENG 2406 : Reactor Operations I
File: 9279 PHYSICS 1111 : General Physics I
File: 1283 PHYSICS 1135 : Engineering Physics I
File: 1920 PHYSICS 2111 : General Physics II
File: 1919 PHYSICS 2135 : Engineering Physics II
File: 10282 SEMI ENG 3100 : Semiconductor Materials Processing
File: 10283 SEMI ENG 3101 : Semiconductor Materials Processing Laboratory
File: 10284 SEMI ENG 4100 : Semiconductor Device Simulation
File: 10285 SEMI ENG 4101 : Semiconductor Device Fabrication and Testing Laboratory
File: 652 STAT 3425 : Introduction to Biostatistics

Program Change forms:
File: 141 AE ENG-BS : Aerospace Engineering BS
File: 146 BIO SC-BA : Biological Sciences BA
File: 148 BUS&MS-BS : Business and Mgmt Systems BS
File: 150 CH ENG-BS : Chemical Engineering BS
File: 151 CHEM-BA : Chemistry BA
File: 16 CHEM-BS : Chemistry BS
File: 153 CP ENG-BS : Computer Engineering BS
File: 149 CR ENG-BS : Ceramic Engineering BS
File: 155 EL ENG-BS : Electrical Engineering BS
File: 44 ENG MG-BS : Engineering Management BS
File: 50 ENTPRNS-MI : Entrepreneurship Minor
File: 156 GE ENG-BS : Geological Engineering BS
File: 64 GL&GPH-BS : Geology and Geophysics BS
File: 86 MC ENG-BS : Mechanical Engineering BS
File: 138 MGMT-MI : Management Minor
File: 95 MI ENG-BS : Mining Engineering BS
File: 90 MT ENG-BS : Metallurgical Engineering BS
File: 104 NU ENG-BS : Nuclear Engineering BS
File: 108 PE ENG-BS : Petroleum Engineering BS
File: 427 PROPOSED : Applied Artificial Intelligence MS
File: 424 SEMI EN-BS : Semiconductor Engineering BS
File: 131 SYS EN-PHD : Systems Engineering PhD
File: 380 WARSOC-CTU : UCT - War and Society

Experimental Course forms:
File: 546 COMP SCI 5001.079: AI-Augmented Software Engineering

New Business:

- Approved General Education Update Proposal
- Approved Spring Meeting Times and Location

The meeting adjourned at 9:15 am.



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Dr. Cecil Eng Huang Chua, Chair
Missouri S&T Campus Curricula Committee

Course Change Request

New Course Proposal

Date Submitted: 10/08/25 4:16 pm

Viewing: BUS 5510 : Corporate Entrepreneurship and Ecosystem Strategy

Last edit: 10/09/25 3:38 pm

Changes proposed by: Cecil Eng Huang Chua (cecq8z)

Programs referencing this course	MGMT-MI: Management Minor BUS&MS-BS: Business and Mgmt Systems BS ENTPRNS-MI: Entrepreneurship Minor

Requested Effective Date	Fall 2026
Department	Business and Information Tech (RBUS&IT)
Discipline	Business (BUS)
Course Number	5510
Title	Corporate Entrepreneurship and Ecosystem Strategy
Abbreviated Course Title	Entrp Strat
Co-Listed Course	

Catalog Description

Course explores how established organizations identify, develop, and capitalize on innovative opportunities within dynamic ecosystems. Topics include corporate venturing, collaborative innovation, entrepreneurial leadership, public–private partnerships, and ecosystem development at the local and regional levels. Students will learn frameworks for ecosystem mapping, stakeholder analysis, strategic partnership formation, and managing intrapreneurial ventures. Emphasis is placed on real-world case studies, ecosystem projects, and applied research in various organizational contexts.

Prerequisite(s):

Corequisite(s):

Credit Hours

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. 10/08/25 4:20 pm Cassie Elrod (cassa): Approved for RBUS&IT Chair
2. 10/09/25 3:39 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/09/25 4:03 pm Cecil Eng Huang Chua (cchua): Approved for Social Sciences DSCC Chair
4. 11/03/25 3:33 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:07 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:11 am

Credit Hours

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: Yes

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Course existed as an experimental course. It is going to become a mandatory course in the BS and Mgmt Systems BS.

Semesters Previously Offered

Term(s) Offered as experimental

Previous Course Code

Is this a MOTR Course?

Reviewer Comments: **Jade McCain (jm558v) (10/09/25 3:38 pm):** Selected "no" for elective for majors.

Key: 10338

Preview Bridge

Course Change Request

Date Submitted: 10/27/25 9:27 am

Viewing: CHEM 2410 : Physical Chemistry I

Last approved: 03/25/24 6:01 am

Last edit: 10/27/25 9:27 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	CHEM-BA: Chemistry BA CHEM-BS: Chemistry BS
Other Courses referencing this course	In The Catalog Prerequisites: CHEM 2420 : Physical Chemistry II CHEM 3419 : Physical Chemistry Laboratory I

Requested Effective Date	Fall 2026
Department	Chemistry (RCHEMIST)
Discipline	Chemistry (CHEM)
Course Number	2410
Title	Physical Chemistry I
Abbreviated Course Title	Physical Chemistry I
Co-Listed Course	

Catalog Description

A study of the laws of thermodynamics, transport phenomena, kinetic theory, and chemical kinetics with applications to states of matter, solutions, chemical reactions, and equilibria.

Prerequisite(s):

Physics 1111 or Physics 1135 or Physics 1145, and Math 1215. ~~1215 or Math 1221.~~

Corequisite(s):

Credit Hours

Credit Hours

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
10. CAT entry
11. Peoplesoft

Approval Path

1. 10/27/25 9:29 am Chariklia Sotiriou-Leventis (cslevent): Approved for RCHEMIST Chair
2. 10/27/25 9:37 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/31/25 1:23 pm Katie Shannon (shannonk): Approved for Sciences DSCC Chair
4. 11/03/25 3:33 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:08 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:12 am

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Mar 25, 2024 by Thomas Schuman (tschuman)

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed Math 1221 as it has been removed from the listing in the catalog as it has not been offered since fall 2016.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 4974

Preview Bridge

Course Change Request

Date Submitted: 10/03/25 9:02 am

Viewing: CHEM ENG 2100 : Chemical Engineering Material & Energy Balances

Last approved: 06/16/22 6:01 am

Last edit: 10/03/25 9:02 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	CH ENG-BS: Chemical Engineering BS BIOMED-BS: Biomedical Engineering BS SEMI EN-BS: Semiconductor Engineering BS EV ENG-BS: Environmental Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: CHEM ENG 2110 : Chemical Engineering Thermodynamics I CHEM ENG 3111 : Numerical Computing in Chemical and Biochemical Engineering CHEM ENG 3120 : Chemical Engineering Thermodynamics II

Requested Effective Date	Fall 2026
Department	Chemical and Biochemical Engineering (RCHEMENG)
Discipline	Chemical Engineering (CHEM ENG)
Course Number	2100
Title	Chemical Engineering Material & Energy Balances
Abbreviated Course Title	Chem Eng Mat and E Bal
Co-Listed Course	

Catalog Description

The application of mathematics, physics and chemistry to industrial chemical processes. The use of equations of state, chemical reaction stoichiometry, and the conservation of mass and energy to solve chemical engineering problems.

Prerequisite(s):

A grade of "C" or better in Chem 1320 or Geology 3410 and in Math 1215; ~~1215 or Math 1221;~~ preceded or accompanied by Physics 1135.

Corequisite(s):

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. 10/03/25 9:15 am Ryan Gilbert (rggnx): Approved for RCHEMENG Chair
2. 10/03/25 10:04 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/09/25 7:48 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:33 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:08 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:12 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. May 4, 2015 by Christi Luks (luksc)
2. Oct 21, 2016 by Daniel Forciniti (forcinit)
3. May 7, 2018 by Daniel Forciniti (forcinit)
4. Jun 16, 2022 by Christi Luks (luksc)

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	4

Total: 4

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed Math 1221 from the CC form. This course is not printed in the catalog and has not been taught since fall 2016.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer
Comments

Key: 1040

Preview Bridge

Course Change Request

Date Submitted: 10/02/25 11:48 am

Viewing: CIV ENG 3334 : Water Resources Engineering

Last approved: 06/20/19 3:39 am

Last edit: 10/02/25 11:48 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	CV ENG-BS: Civil Engineering BS EV ENG-BS: Environmental Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: CIV ENG 5338 : Hydrologic Engineering

Requested Effective Date	Fall 2026
Department	Civil Engineering (RCIVILEN)
Discipline	Civil Engineering (CIV ENG)
Course Number	3334
Title	Water Resources Engineering
Abbreviated Course Title	Water Resources Engr
Co-Listed Course	

Catalog Description

An introduction to the engineering of water resources; flow in closed conduits, pumps, flow in open channels, surface water hydrology, rainfall analysis, hydrograph analysis, flow routing; and ground-water hydrology.

Prerequisite(s):

A grade of "C" or better in Civ Eng 3330 and in one of Stat 3113 ~~3111, Stat 3113, Stat 3115,~~ or Stat 3117.

Corequisite(s):

Credit Hours

Credit Hours

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. 10/20/25 12:54 pm Subhas Venayagamoorthy (skv7d8): Approved for RCIVILEN Chair
2. 10/23/25 11:24 am Crystal Wilson (wilsoncry): Approved for CCC Secretary
3. 10/30/25 11:01 am Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:33 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:08 am Jade McCain (jm558v): Approved for CCC Meeting

Agenda
6. 11/21/25 11:12 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jun 20, 2019 by Jody Seely (seelyj)

Credit Type	Credit Hours
Lecture	3
Laboratory	1

Total: 4

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed stat courses the math department says is being inactivated per their email sent to departments on September 15.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 1992

Preview Bridge

Course Change Request

New Course Proposal

Date Submitted: 10/14/25 12:05 pm

Viewing: COMP ENG 2010 : Sophomore Seminar

Last edit: 10/30/25 10:55 am

Changes proposed by: R.Joe Stanley (stanleyj)

Programs referencing this course	CP ENG-BS: Computer Engineering BS EL ENG-BS: Electrical Engineering BS

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Computer Engineering (COMP ENG)
Course Number	2010
Title	Sophomore Seminar
Abbreviated Course Title	Soph Seminar
Co-Listed Course	

Catalog Description

Discussion of current topics.

Prerequisite(s):

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

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

Approval Path

1. 10/14/25 12:21 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 3:55 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:53 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:33 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:08 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:12 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Credit Type	Credit Hours
Recitation/Seminar/Discussion	1

Total: 1

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Moving the seminar content out of Elec Eng 2120 into this course. Approved by ECE faculty on Apr 17, 2025. The content includes a discussion of current and relevant topics.

Semesters Previously Offered

Term(s) Offered as experimental

Previous Course Code

Is this a MOTR Course?

Reviewer Comments: **Jade McCain (jm558v) (10/30/25 10:55 am):** Added grading basis and punctuation.

Key: 10340

Preview Bridge

Course Change Request

Date Submitted: 10/16/25 12:16 pm

Viewing: COMP ENG 3150 : Introduction to Microcontrollers and Embedded System Design

Formerly known as: **COMP ENG 3550**

Last approved: 11/27/23 6:01 am

Last edit: 10/16/25 1:41 pm

Changes proposed by: R.Joe Stanley (stanleyj)

Programs referencing this course	**COMP ENG 3150:** CP ENG-BS: Computer Engineering BS EL ENG-BS: Electrical Engineering BS CP ENG-MI: Computer Engineering Minor CMP SC-BS: Computer Science BS
Other Courses referencing this course	In The Catalog Prerequisites: **COMP ENG 3150:** COMP ENG 3110 : Computer Organization and Design COMP ENG 3151 : Digital Engineering Lab II COMP ENG 4096 : Computer Engineering Senior Project I COMP ENG 4410 : Introduction to Computer Communication Networks COMP ENG 5120 : Digital Computer Design COMP ENG 5151 : Digital Systems Design Laboratory COMP ENG 5160 : Embedded Processor System Design COMP ENG 5170 : Real-Time Systems COMP ENG 5410 : Introduction to Computer Communication Networks COMP ENG 5430 : Wireless Networks COMP ENG 5620 : Signal Integrity in High-Speed Digital & Mixed Signal Design COMP SCI 5205 : Real-Time Systems COMP SCI 5803 : Principles of Computer Architecture ELEC ENG 5430 : Wireless Networks ELEC ENG 5620 : Signal Integrity in High-Speed Digital & Mixed Signal Design SYS ENG 5323 : Wireless Networks

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Computer Engineering (COMP ENG)

In Workflow

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

Approval Path

1. 10/14/25 12:25 pm Jonathan Kimball (kimballjw): Rollback to Initiator
2. 10/16/25 12:30 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
3. 10/16/25 1:42 pm Jade McCain (jm558v): Approved for CCC Secretary
4. 10/28/25 2:53 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
5. 11/03/25 3:33 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
6. 11/21/25 11:08 am

Course Number	3150
Title	Introduction to Microcontrollers and Embedded System Design
Abbreviated Course Title	Intro Micro Embed Design
Co-Listed Course	

Catalog Description

Microcontroller-based digital system design methodology and techniques. Topics include basic machine organization, interface design, and C and assembly language programming for real-time embedded systems.

Prerequisite(s):

Comp Eng 2210 and Comp Sci 1500 (or instructor approved programming course) each with grade of "C" or better.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	2 ~~3~~
Laboratory	1

Total: 3

Required for Majors	Yes
Elective for Majors	No
Communication Intensive	No
Communication Emphasized	No
Grading Basis	Graded
Repeatable	No

Justification	Comp Eng 3150/3151 is being changed to Comp Eng 3150 (2 hrs lecture/1 hr lab) to integrate the introductory microcontroller and embedded system curriculum using a target microcontroller with hands-on laboratory experiments and projects. The change from 4 credit hours (Comp Eng 3150/3151) to 3 credit hours (Comp Eng 3150) requires all students to enroll in the 2 credit hour lecture and 1 credit hour lab. The Computer Engineering faculty approved this course change on May 5, 2025 and the ECE faculty in May 2025. A CC form has been submitted for this course change to be effective Fall 2026.

Jade McCain (jm558v): Approved for CCC Meeting Agenda

7. 11/21/25 11:12 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jun 30, 2014 by R.Joe Stanley (stanleyj)
2. Feb 9, 2015 by R.Joe Stanley (stanleyj)
3. Nov 27, 2023 by R.Joe Stanley (stanleyj)

Please note that Comp Eng 3150 has been viewed as Comp Eng 3550 on CourseLeaf. Comp Eng 3150 is the correct course number.

Semesters Previously Offered

Term(s) Offered as experimental	
Is this a MOTR Course?	
Reviewer Comments	**Jonathan Kimball (kimballjw) (10/14/25 12:25 pm):** Rollback: Wrong course. **Jade McCain (jm558v) (10/16/25 1:41 pm):** Selected "no" for communication intensive and communication emphasized.

Key: 1627

Preview Bridge

Course Change Request

A deleted record cannot be edited

Course Inactivation Proposal

Date Submitted: 10/14/25 12:04 pm

Viewing: **COMP ENG 3151 : Digital Engineering Lab II**

Formerly known as: **COMP ENG 3551**

Last approved: 07/31/24 6:05 am

Last edit: 10/14/25 12:04 pm

Changes proposed by: R.Joe Stanley (stanleyj)

Other Courses referencing this course	In The Catalog Prerequisites: **COMP ENG 3151:** COMP ENG 4096 : Computer Engineering Senior Project I COMP ENG 5120 : Digital Computer Design

Justification for this inactivation request

Comp Eng 3150 is being changed to a 2 credit hour lecture/1 credit hour laboratory format as a 3 credit hour course. Comp Eng 3151 is no longer needed as a separate laboratory course. Students will be required to sign up for separate lecture and laboratory sections within Comp Eng 3150.

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Computer Engineering (COMP ENG)
Course Number	3151
Title	Digital Engineering Lab II
Abbreviated Course Title	Digital Eng Lab II
Co-Listed Course	

Catalog Description

Advanced digital design techniques, Microcontroller based design, hardware and software codesign.

Prerequisite(s):

Comp Eng 2210, Comp Eng 2211, and Comp Sci 1570 (or programming equivalent) each with grade of "C" or better. Preceded or accompanied by Comp Eng 3150.

In Workflow

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

Approval Path

1. 10/14/25 12:25 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/16/25 1:43 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:54 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:34 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:08 am Jade McCain (jm558v): Approved for CCC Meeting

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Laboratory	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

Agenda

6. 11/21/25 11:12 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jun 30, 2014 by R.Joe Stanley (stanleyj)
2. Oct 20, 2014 by Lahne Black (lahne)
3. May 24, 2016 by R.Joe Stanley (stanleyj)
4. Jul 31, 2024 by Julie Parker (juliep)

Course?

Reviewer
Comments

Key: 2329

Preview Bridge

Course Change Request

Date Submitted: 10/10/25 10:21 pm

Viewing: COMP ENG 4096 : Computer Engineering Senior Project I

Last approved: 05/07/21 6:00 am

Last edit: 10/14/25 4:07 pm

Changes proposed by: R.Joe Stanley (stanleyj)

Programs referencing this course	CP ENG-BS: Computer Engineering BS EL ENG-BS: Electrical Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: COMP ENG 4097 : Computer Engineering Senior Project II In The Catalog Description: COMP ENG 4097 : Computer Engineering Senior Project II

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Computer Engineering (COMP ENG)
Course Number	4096
Title	Computer Engineering Senior Project I
Abbreviated Course Title	Cp Eng Senior Project I
Co-Listed Course	

Catalog Description

A complete design cycle. Working in small teams, students will design, document, analyze, implement, and test a product. Topics include: Iteration in design, prototyping, group dynamics, design reviews, making effective presentations, concurrent design, designing for test, ethics and standards, testing and evaluation.

Prerequisite(s):

Comp Eng 3150, Comp Eng ~~3151, Comp Eng~~ 3110. Preceded or accompanied by either English 3560 or English 1160, Elec Eng 2200, and Comp Sci 1575.

Corequisite(s):

In Workflow

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

Approval Path

1. 10/12/25 9:54 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/16/25 1:43 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:54 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:34 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:08 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

Credit Hours

Credit Hours

6. 11/21/25 11:12 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Apr 28, 2014 by Lahne Black (lahne)
2. Apr 1, 2015 by kleb6b
3. May 24, 2016 by R.Joe Stanley (stanleyj)
4. May 7, 2021 by R.Joe Stanley (stanleyj)

Credit Type	Credit Hours
Laboratory	0.5
Recitation/Seminar/Discussion	0.5

Total: 1

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: Yes

Grading Basis: Graded

Repeatable: No

Justification: Removed Comp Eng 3151 as a prerequisite since Comp Eng 3150 now contains the lecture (2 cr hrs) and the lab (1 cr hr). A separate CC form has been submitted for Comp Eng 3150, effective Fall 2026.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR

Course?

Reviewer
Comments

Key: 1392

Preview Bridge

Course Change Request

Date Submitted: 10/10/25 10:23 pm

Viewing: COMP ENG 4097 : Computer Engineering Senior Project II

Last approved: 05/25/16 4:03 am

Last edit: 10/14/25 12:14 pm

Changes proposed by: R.Joe Stanley (stanleyj)

Programs referencing this course	CP ENG-BS: Computer Engineering BS EL ENG-BS: Electrical Engineering BS

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Computer Engineering (COMP ENG)
Course Number	4097
Title	Computer Engineering Senior Project II
Abbreviated Course Title	Cp Eng Senior Project II
Co-Listed Course	

Catalog Description

A continuation of Comp Eng 4096.

Prerequisite(s):

Comp Eng 4096 with a grade of "C" or better, Stat 3117 or Stat ~~3115 or Stat~~ 5643, and Sp&M S 1185.

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

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

Approval Path

1. 10/12/25 9:54 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/16/25 10:46 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:54 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:34 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:08 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:12 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Apr 28, 2014 by Lahne Black (lahne)
2. May 25, 2016 by R.Joe Stanley (stanleyj)

Credit Type	Credit Hours
Laboratory	3

Total: 3

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: Yes

Grading Basis: Graded

Repeatable: No

Justification: Stat 3115 has been removed from the Stat course options since this class will no longer be offered.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 2582

Preview Bridge

Course Change Request

Date Submitted: 10/15/25 6:35 pm

Viewing: COMP ENG 5120 : Digital Computer Design

Formerly known as: COMP ENG 5520

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

Last edit: 10/16/25 1:39 pm

Changes proposed by: R.Joe Stanley (stanleyj)

Other Courses referencing this course	In The Catalog Prerequisites: **COMP ENG 5120:** COMP ENG 6110 : Advanced Computer Architecture I

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Computer Engineering (COMP ENG)
Course Number	5120
Title	Digital Computer Design
Abbreviated Course Title	Digital Computer Design
Co-Listed Course	

Catalog Description

Organization of modern digital computers; design of processors, memory systems and I/O units, hardware-software tradeoffs in different levels of computer system design.

Prerequisite(s):

Comp Eng 3150. ~~COMP ENG 3150 and COMP ENG 3151.~~

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

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

Approval Path

1. 10/16/25 12:30 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/16/25 1:44 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:54 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:34 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:08 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:12 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jul 7, 2014 by Lahne Black (lahne)

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors: No

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Comp Eng 3150 has been changed to 2 credit hours lecture/1 credit hour lab (3 credit hours total) to be effective FS26. A CC form for this Comp Eng 3150 course change. As a result, Comp Eng 3151 is no longer necessary and is being deactivated, effective FS26. The prerequisite for Comp Eng 5120 has been updated to Comp Eng 3150 (only).

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments: **Jade McCain (jm558v) (10/16/25 1:39 pm):** Selected "no" for communication intensive and communication emphasized.

Key: 1081

Preview Bridge

Course Change Request

Date Submitted: 10/15/25 10:24 am

Viewing: COMP SCI 3402 : Introduction to Data Science

Last approved: 10/31/22 6:01 am

Last edit: 10/15/25 10:24 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	3402
Title	Introduction to Data Science
Abbreviated Course Title	Intro Data Science
Co-Listed Course	

Catalog Description

This course provides an entry into data science. It covers concepts involved in obtaining and processing data, and deriving insight from data. The course includes standard tools and techniques (UNIX, Python and MySQL), data analytics (predictive), problem solving with data (collection, analysis, evaluation), machine learning, and applications.

Prerequisite(s):

A grade of "C" or better in Comp Sci 1500, Comp Sci 2300, and one of Stat 3113, Stat ~~3115, Stat~~ 3117, or Stat 5643.

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

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

Approval Path

1. 10/15/25 10:25 am Seung-Jong Park (spxzb): Approved for RCOMPSCI Chair
2. 10/15/25 3:11 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:54 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:34 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:08 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:12 am

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Oct 31, 2022 by Patrick Taylor (taylor)

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: Updating the prerequisites by omitting STAT 3115, as it is being discontinued from Fall 2026.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 4892

Preview Bridge

Course Change Request

New Course Proposal

Date Submitted: 09/19/25 2:15 am

Viewing: COMP SCI 5111 : Bridge to Advanced Computing

Last edit: 10/09/25 10:11 am

Changes proposed by: Venkata Sriram Siddhardh Nadendla (nadendla)

Programs referencing this course	PROPOSED: Applied Artificial Intelligence MS

Requested Effective Date	Fall 2026
Department	Computer Science (RCOMPSCI)
Discipline	Computer Science (COMP SCI)
Course Number	5111
Title	Bridge to Advanced Computing
Abbreviated Course Title	Bridge to Adv Comp
Co-Listed Course	

Catalog Description

This course prepares science and engineering students, or those with insufficient computing background, for a pathway to a Master of Science in Applied Artificial Intelligence at Missouri S&T. Topics covered include Problem Solving with Computing, Discrete Mathematics, Data Structures, Programming Tools, and involves hands on practice in multiple programming languages. This course is not intended for undergraduate or Grad Track Pathway students.

Prerequisite(s):

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

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

Approval Path

1. 10/31/24 6:34 am Seung-Jong Park (spxzb): Approved for RCOMPSCI Chair
2. 11/14/24 1:34 pm Jade McCain (jm558v): Rollback to RCOMPSCI Chair for CCC Secretary
3. 11/14/24 1:37 pm Seung-Jong Park (spxzb): Rollback to Initiator
4. 09/19/25 6:51 am Seung-Jong Park (spxzb): Approved for RCOMPSCI Chair
5. 10/17/25 1:45 pm Jade McCain (jm558v): Approved for CCC Secretary
6. 10/28/25 2:54 pm Theresa Swift (thswift): Approved

for Engineering DSCC Chair
7. 11/03/25 3:34 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
8. 11/21/25 11:08 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
9. 11/21/25 11:12 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Sid Nadendla [9/19/2025]: This CC form for Comp Sci 5111 is an attachment to the DC form submitted for the recently approved "MS in Applied AI" degree program. Note that this course is listed in the core requirements of the "MS in Applied AI" degree program.

Semesters Previously Offered

Term(s) Offered as experimental

Previous Course Code

Is this a MOTR

Course?

Reviewer Comments

Jade McCain (jm558v) (11/14/24 1:34 pm): Rollback: Rollback per needing Applied AI DC form.

Seung-Jong Park (spxzb) (11/14/24 1:37 pm): Rollback: They asked applied AI DC form
Jade McCain (jm558v) (10/09/25 10:11 am): Added grading basis, changed requested effective date to Fall 2026 per CCC deadlines, and selected "no" for communication intensive and communication emphasized.

Key: 10199

Preview Bridge

Course Change Request

Date Submitted: 10/15/25 10:39 am

Viewing: COMP SCI 5204 : Regression Analysis

Also listed as: STAT 5346

Last edit: 10/16/25 3:02 pm

Changes proposed by: Venkata Sriram Siddhardh Nadendla (nadendla)

Programs referencing this course	**COMP SCI 5204:** GEO ENG-MS: GEOLOGICAL ENGINEERING MS ACTUSCI-CT: Actuarial Science CT ANA&DTA-CT: Bus Analytics & Data Sci CT **STAT 5346:** AP MATH-BS: Applied Mathematics BS BIOINFO-MI: Bioinformatics Minor CP ENG-BS: Computer Engineering BS GEO ENG-MS: GEOLOGICAL ENGINEERING MS ACTUSCI-CT: Actuarial Science CT STATS-CT: Statistics GFINMTH-CT: Financial Mathematics CT BIOENG-PHD: Bioengineering PhD AP MATH-MS: Applied Mathematics MS MT ENG-BS: Metallurgical Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: **STAT 5346:** STAT 5260 : Statistical Data Analysis Using SAS STAT 5290 : Computational Bayesian Methods using Python STAT 6342 : Categorical Data Analysis

Requested Effective Date	Fall 2026		
Department	Computer Science (RCOMPSCI)		
Discipline	Computer Science (COMP SCI)		
Course Number	5204		
Title	Regression Analysis		
Abbreviated Course Title	Regression Analysis		
Co-Listed Course	STAT 5346	Department	Mathematics &

In Workflow

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

Approval Path

1. 10/15/25 10:39 am Seung-Jong Park (spxzb): Approved for RCOMPSCI Chair
2. 10/15/25 2:02 pm Crystal Wilson (wilsoncry): Approved for CCC Secretary
3. 10/16/25 2:58 pm John Singler (singlerj): Approved for RMATHEMA Chair
4. 10/16/25 3:02 pm Jade McCain (jm558v): Approved for CCC Secretary
5. 10/28/25 2:55 pm Theresa Swift (thswift): Approved for Engineering

Statistics
(RMATHEMA)

Catalog Description

Simple linear regression, multiple regression, regression diagnostics, multicollinearity, measures of influence and leverage, model selection techniques, polynomial models, regression with autocorrelated errors, introduction to non-linear regression.

Prerequisite(s):

Math 2222 and one of Stat ~~3111,~~ 3113, Stat ~~3115,~~ 3117, or Stat 5643.

Corequisite(s):

DSCC Chair

6. 11/03/25 3:34 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
7. 11/21/25 11:09 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
8. 11/21/25 11:12 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

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: Updated prerequisites by removing Stat 3111 and Stat 3115 as they are being discontinued from Fall 2026.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments: **Jade McCain (jm558v) (10/16/25 3:02 pm):** Corrected prerequisite formatting.

Key: 6047

Preview Bridge

Course Change Request

Date Submitted: 10/15/25 10:27 am

Viewing: COMP SCI 5402 : Introduction to Data Mining

Last approved: 10/23/17 3:28 am

Last edit: 11/18/25 1:19 pm

Changes proposed by: Venkata Sriram Siddhardh Nadendla (nadendla)

Programs referencing this course	AP MATH-BS: Applied Mathematics BS ANA&DTA-CT: Bus Analytics & Data Sci CT DATMGTA-CT: Big Data Mgmt and Analytics CT DATMGTS-CT: Big Data Mgmt and Security CT GEINTEL-CT: Geoanalytics and Geointelligence Certificate PROPOSED: Applied Artificial Intelligence MS
Other Courses referencing this course	In The Catalog Prerequisites: COMP SCI 6304 : Cloud Computing and Big Data Management COMP SCI 6406 : Machine Learning in Computer Vision

Requested Effective Date	Fall 2026
Department	Computer Science (RCOMPSCI)
Discipline	Computer Science (COMP SCI)
Course Number	5402
Title	Introduction to Data Mining
Abbreviated Course Title	Intro to Data Mining
Co-Listed Course	

Catalog Description

The key objectives of this course are two-fold: (1) to teach the fundamental concepts of data mining and (2) to provide extensive hands-on experience in applying the concepts to real-world applications. The core topics to be covered in this course include classification, clustering, association analysis, data preprocessing, and outlier/novelty detection.

Prerequisite(s):

A grade of "C" or better in ~~all of~~ Comp Sci 2300, ~~Comp Sci 2500,~~ and in one of Stat 3113, Stat ~~3115, Stat~~ 3117 or Stat 5643.

Corequisite(s):

In Workflow

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

Approval Path

1. 10/15/25 10:28 am Seung-Jong Park (spxzb): Approved for RCOMPSCI Chair
2. 10/15/25 3:14 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:55 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:34 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:09 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:12 am

Credit Hours

Credit Hours

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Nov 3, 2014 by tauritzd
2. Oct 23, 2017 by tauritzd

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: Past Update: The instructors of this course have determined that mastery of Comp Sci 2300 and statistics is sufficient to be successful in this course, the additional material covered in Comp Sci 2500 is not needed in this course.

Current Update: Also, the prerequisites are updated by omitting STAT 3115, as it is being discontinued from Fall 2026.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments: **Crystal Wilson (wilsoncry) (10/15/25 3:09 pm):** Changed effective term to fall 2026.
Jade McCain (jm558v) (11/18/25 1:19 pm): Removed Comp Sci 2500 per department request via email on 11/18/2025.

Key: 4097

Preview Bridge

Course Change Request

Date Submitted: 10/15/25 10:36 am

Viewing: COMP SCI 5408 ~~ENG 5320~~ : Game Theory for Computing

Also listed as: COMP ENG 5320

Last approved: 08/06/24 6:04 am

Last edit: 10/15/25 10:36 am

Changes proposed by: Venkata Sriram Siddhardh Nadendla (nadendla)

Programs referencing this course	**COMP SCI 5408:** PROPOSED: Applied Artificial Intelligence MS

Requested Effective Date	Fall 2026
Department	Computer Science (RCOMPSCI) ~~Electrical & Computer Engr (RELECENG)~~
Discipline	Computer Science ~~Engineering~~ (COMP SCI) ~~ENG)~~
Course Number	5408 ~~5320~~
Title	Game Theory for Computing
Abbreviated Course Title	Game Theory for Comput
Co-Listed Course	~~COMP SCI 5408~~ Department: ~~Computer Science (RCOMPSCI)~~
	COMP ENG 5320 Department: Electrical & Computer Engr (RELECENG)

Catalog Description

This course introduces the mathematical and computational foundations of game theory, and its applications to computer science (e.g., cybersecurity, robotics and networking). Topics include decision rationality, game representations, equilibrium concepts (e.g., Nash equilibrium), Bayesian games, dynamic games, cooperative game theory, and mechanism

In Workflow

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

Approval Path

1. 10/15/25 12:46 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 12:47 pm Seung-Jong Park (spxzb): Approved for RCOMPSCI Chair
3. 10/15/25 3:16 pm Jade McCain (jm558v): Approved for CCC Secretary
4. 10/28/25 2:55 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
5. 11/03/25 3:34 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post

design.

Prerequisite(s):

A grade of "C" or better in both Comp Sci 2500 and Math 3108, and in one of Stat 3113, Stat ~~3115, Stat~~ 3117, or Stat 5643.

Corequisite(s):

6. 11/21/25 11:09 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
7. 11/21/25 11:12 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Dec 5, 2022 by R.Joe Stanley (stanleyj)
2. Aug 6, 2024 by Crystal Wilson (wilsoncry)

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: Two changes:

(i) Comp Sci 5408 is made the primary offering as it has always been offering by Sid Nadendla, a faculty in Comp Sci department since the beginning (even as an experimental course). Also, it is now listed as one of the electives for MS (Applied AI) program, which is offered by the Comp Sci department.

(ii) Updated the prerequisites by omitting Stat 3115 as it is being discontinued from Fall 2026.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 4900

Preview Bridge

Course Change Request

New Course Proposal

Date Submitted: 09/19/25 2:22 am

Viewing: COMP SCI 5411 : Natural Language Processing

Last edit: 10/09/25 10:13 am

Changes proposed by: Venkata Sriram Siddhardh Nadendla (nadendla)

Programs referencing this course	PROPOSED: Applied Artificial Intelligence MS

Requested Effective Date	Fall 2026
Department	Computer Science (RCOMPSCI)
Discipline	Computer Science (COMP SCI)
Course Number	5411
Title	Natural Language Processing
Abbreviated Course Title	NLP
Co-Listed Course	

Catalog Description

Natural Language Processing (NLP) is a dynamic field that focuses on the interaction between computers and human language. This course provides a deep exploration of NLP concepts, tools, and methodologies from foundational concepts such as part-of-speech tagging, syntactic structure and dependency parsing, language modeling to state-of-the-art advancements in machine translation and language generation, transformers and pre-trained large language models.

Prerequisite(s):

A grade of "C" or better in Comp Sci 2500, Math 3108, and in one of Stat 3113, Stat 3117, or Stat 5643.

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

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

Approval Path

1. 10/31/24 1:26 pm Seung-Jong Park (spxzb): Approved for RCOMPSCI Chair
2. 10/31/24 4:10 pm Jade McCain (jm558v): Rollback to Initiator
3. 09/19/25 6:51 am Seung-Jong Park (spxzb): Approved for RCOMPSCI Chair
4. 10/17/25 1:45 pm Jade McCain (jm558v): Approved for CCC Secretary
5. 10/28/25 2:55 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
6. 11/03/25 3:34 pm Jade McCain (jm558v): Approved

for Pending CCC Agenda post
7. 11/21/25 11:09 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
8. 11/21/25 11:13 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

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: Sid Nadendla [9/19/2025]: This CC form for Comp Sci 5411 is an attachment to the DC form submitted for the recently approved "MS in Applied AI" degree program. Note that this course is listed in the program electives of the "MS in Applied AI" degree program.

Semesters Previously Offered

Term(s) Offered as experimental:

Previous Course Code:

Is this a MOTR Course?:

Reviewer Comments: **Jade McCain (jm558v) (10/31/24 4:10 pm):** Rollback: The course was only taught once during Spring 2024 and is scheduled to be taught again in Spring 2025. Once the Spring semester is completed and the course is successfully taught, the CC form can be resubmitted.

Crystal Wilson (wilsoncry) (09/25/25 2:56 pm): Removed Stat 3115 from per-requisites as it will no longer be taught per math/stat department. Added graded for grading basis.
Jade McCain (jm558v) (10/09/25 10:13 am): Changed requested effective date to Fall 2026 per CCC deadlines and selected "no" for communication intensive and communication emphasized.

Key: 10201

Preview Bridge

Course Change Request

New Course Proposal

Date Submitted: 09/19/25 2:20 am

Viewing: COMP SCI 5421 : Reinforcement Learning

Last edit: 10/17/25 1:39 pm

Changes proposed by: Venkata Sriram Siddhardh Nadendla (nadendla)

Programs referencing this course	PROPOSED: Applied Artificial Intelligence MS

Requested Effective Date	Fall 2026
Department	Computer Science (RCOMPSCI)
Discipline	Computer Science (COMP SCI)
Course Number	5421
Title	Reinforcement Learning
Abbreviated Course Title	Reinforcement Learning
Co-Listed Course	

Catalog Description

This course introduces the fundamentals of reinforcement learning (RL) and its applications in robotics, games and biology. Topics covered include markov decision processes, planning (value iteration, policy iteration, and their analyses), monte-carlo methods, temporal difference learning (e.g. Q-learning), policy gradient methods, and partial observability.

Prerequisite(s):

A grade of "C" or better in both Comp Sci 1575 and Math 3108, and in one of Stat 3113, Stat 3117, or Stat 5643.

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

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

Approval Path

1. 10/31/24 6:34 am Seung-Jong Park (spxzb): Approved for RCOMPSCI Chair
2. 11/14/24 1:34 pm Jade McCain (jm558v): Rollback to RCOMPSCI Chair for CCC Secretary
3. 11/14/24 1:38 pm Seung-Jong Park (spxzb): Rollback to Initiator
4. 09/19/25 6:51 am Seung-Jong Park (spxzb): Approved for RCOMPSCI Chair
5. 10/17/25 1:46 pm Jade McCain (jm558v): Approved for CCC Secretary
6. 10/28/25 2:55 pm Theresa Swift (thswift): Approved

for Engineering DSCC Chair
7. 11/03/25 3:34 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
8. 11/21/25 11:09 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
9. 11/21/25 11:13 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

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: Sid Nadendla [9/19/2025]: This CC form for Comp Sci 5410 is an attachment to the DC form submitted for the recently approved "MS in Applied AI" degree program. Note that this course is listed in the program electives of the "MS in Applied AI" degree program.

Semesters Previously Offered

Term(s) Offered as experimental

Previous Course Code

Is this a MOTR

Course?

Reviewer Comments

Jade McCain (jm558v) (11/05/24 3:49 pm): Course was only taught successfully once in Fall 2022 with 7 students enrolled.
Jade McCain (jm558v) (11/14/24 1:34 pm): Rollback: Rollback per needing Applied AI DC form.

Seung-Jong Park (spxzb) (11/14/24 1:38 pm): Rollback: same issue on Applied AI DC form
Crystal Wilson (wilsoncry) (09/25/25 2:55 pm): Removed Stat 3115 from per-requisites as it will no longer be taught per math/stat department. Added graded for grading basis.
Jade McCain (jm558v) (10/09/25 10:12 am): Changed requested effective date to Fall 2026 per CCC deadlines and selected "no" for communication intensive and communication emphasized.

Jade McCain (jm558v) (10/17/25 1:39 pm): Changed course number to Comp Sci 5421 for consistency with the approved degree proposal per department request via email on 10.17.2025.

Key: 10200

Preview Bridge

Course Change Request

New Course Proposal

Date Submitted: 09/19/25 2:25 am

Viewing: COMP SCI 6411 : Large Language Models

Last edit: 10/09/25 10:14 am

Changes proposed by: Venkata Sriram Siddhardh Nadendla (nadendla)

Programs referencing this course	PROPOSED: Applied Artificial Intelligence MS
Justification for this	
Requested Effective Date	Fall 2026
Department	Computer Science (RCOMPSCI)
Discipline	Computer Science (COMP SCI)
Course Number	6411
Title	Large Language Models
Abbreviated Course Title	LLMs
Co-Listed Course	

Catalog Description

This course focuses on the cutting-edge research topics surrounding pre-trained large language models (LLMs). Key topics include the technical foundations of LLMs (BERT, GPT, T5 models, mixture-of-expert models, retrieval-based models etc.), emerging capabilities (knowledge, reasoning, few-shot learning, in-context learning), post-training: instruction fine-tuning, alignment, reinforcement learning with human feedback (RLHF) and constitutional AI. The course will also cover metacognitive capabilities of LLMs alongside critical discussions on security and ethical considerations.

Prerequisite(s):

A grade of "C" or better in Comp Sci 5411 and/or Comp Sci 5480.

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

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

Approval Path

1. 09/19/25 6:51 am Seung-Jong Park (spxzb): Approved for RCOMPSCI Chair
2. 10/17/25 1:48 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:55 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:34 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:09 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:13 am

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

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: Sid Nadendla [9/19/2025]: This CC form for Comp Sci 6411 is an attachment to the DC form submitted for the recently approved "MS in Applied AI" degree program. Note that this course is listed in the program electives of the "MS in Applied AI" degree program.

Semesters Previously Offered

Term(s) Offered as experimental:

Previous Course Code:

Is this a MOTR Course?:

Reviewer Comments: **Jade McCain (jm558v) (10/09/25 10:14 am):** Added grading basis, corrected prerequisite formatting, changed requested effective date to Fall 2026 per CCC deadlines, and selected "no" for communication intensive and communication emphasized.

Key: 10202

Preview Bridge

Course Change Request

Date Submitted: 10/06/25 11:29 am

Viewing: ECON 3300 : Introduction to Econometrics

Last approved: 04/29/25 6:04 am

Last edit: 10/06/25 11:29 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	ECON-BA: Economics BA ECON-BS: Economics BS DDA-CTU: Decision Data Analytics - CTU Q ECON-MI: Quantitative Economics Minor
Other Courses referencing this course	In The Catalog Prerequisites: ECON 4538 : Advanced Econometrics

Requested Effective Date	Fall 2026
Department	Economics (RECONOMI)
Discipline	Economics (ECON)
Course Number	3300
Title	Introduction to Econometrics
Abbreviated Course Title	Intro Econometrics
Co-Listed Course	

Catalog Description

This course covers applied perspectives on basic concepts of econometrics using regression methods, including simple regression, multiple regression, and generalized least squares. In addition, the course introduces students to the practice of econometric analysis on real-world applications using the programming languages R and STATA.

Prerequisite(s):

Econ 1100 and Econ 1200, and one of the following: Stat ~~3111, Stat~~ 3113, Stat ~~3115, Stat~~ 3117, or Stat 5346.

Corequisite(s):

Credit Hours

In Workflow

1. **RECONOMI 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. 10/09/25 8:36 am Melody Lo (mlc2d): Approved for RECONOMI Chair
2. 10/09/25 9:25 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/09/25 9:29 am Cecil Eng Huang Chua (cchua): Approved for Social Sciences DSCC Chair
4. 11/03/25 3:34 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:09 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:13 am

Credit Hours

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. May 10, 2023 by Michael Davis (davismc)
2. Apr 29, 2025 by Melody Lo (mlc2d)

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: Yes

Grading Basis: Graded

Repeatable: No

Justification: Removed stat courses the math department says are being inactivated per their email sent to departments on September 15.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 4942

Preview Bridge

Course Change Request

Date Submitted: 10/06/25 11:31 am

Viewing: ECON 3333 : Computational Economics

Last approved: 06/28/25 6:04 am

Last edit: 10/06/25 11:31 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	ECON-BA: Economics BA ECON-BS: Economics BS FETECH-CTU: Financial Economics and Technology - CTU DDA-CTU: Decision Data Analytics - CTU Q ECON-MI: Quantitative Economics Minor

Requested Effective Date	Fall 2026
Department	Economics (RECONOMI)
Discipline	Economics (ECON)
Course Number	3333
Title	Computational Economics
Abbreviated Course Title	Computational Economics
Co-Listed Course	

Catalog Description

This course introduces concepts of computational economics using machine learning and artificial intelligence and the practice of analysis using applications related to microeconomics, macroeconomics, and econometrics. The course teaches data and text mining, deep learning, and causal machine learning using Python programming to extract economic insights.

Prerequisite(s):

Econ 1100 and Econ 1200, and one of the following: Stat ~~3111, Stat~~ 3113, Stat ~~3115, Stat~~ 3117, or Stat 5346, or instructor approval.

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

1. **RECONOMI 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. 10/09/25 8:37 am Melody Lo (mlc2d): Approved for RECONOMI Chair
2. 10/09/25 9:25 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/09/25 9:29 am Cecil Eng Huang Chua (cchua): Approved for Social Sciences DSCC Chair
4. 11/03/25 3:34 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:09 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:13 am

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. May 10, 2023 by Michael Davis (davismc)
2. Jun 28, 2025 by Melody Lo (mlc2d)

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors	Yes
Elective for Majors	No
Communication Intensive	No
Communication Emphasized	Yes
Grading Basis	Graded
Repeatable	No

Justification	Removed stat courses the math department says are being inactivated per their email sent to departments on September 15.

Semesters Previously Offered

Term(s) Offered as experimental	
Is this a MOTR Course?	
Reviewer Comments	

Key: 4937

Preview Bridge

Course Change Request

Date Submitted: 10/06/25 11:33 am

Viewing: ECON 4300 : Research Methods and Applications in Economics and Business

Formerly known as: **ECON 2300**

Last approved: 07/09/18 8:46 am

Last edit: 10/06/25 11:33 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	**ECON 4300:** E/T ECN-MI: E/T Economics Minor ECON-BA: Economics BA

Requested Effective Date	Fall 2026
Department	Economics (RECONOMI)
Discipline	Economics (ECON)
Course Number	4300
Title	Research Methods and Applications in Economics and Business
Abbreviated Course Title	Res Mth and Ecn Bus App
Co-Listed Course	

Catalog Description

Introduction of basic econometric and statistical techniques with empirical illustrations that reference real economic and business issues. Students will be introduced to modern statistical software packages (STATA, R), but also work with productivity software (Excel, PowerPoint) to perform quantitative analysis and present their results.

Prerequisite(s):

Econ 1100 or Econ 1200; Math 1140 or higher; Stat 1115 or Stat ~~3111 or Stat~~ 3113 or Stat ~~3115 or Stat~~ 3117 or Stat 5643.

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

1. **RECONOMI 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. 10/09/25 8:37 am Melody Lo (mlc2d): Approved for RECONOMI Chair
2. 10/09/25 9:27 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/09/25 9:29 am Cecil Eng Huang Chua (cchua): Approved for Social Sciences DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:09 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:13 am

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jul 9, 2018 by ershenb

Credit Type	Credit Hours
Lecture	2
Laboratory	1

Total: 3

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed stat courses the math department says are being inactivated per their email sent to departments on September 15.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 912

Preview Bridge

Course Change Request

Date Submitted: 10/09/25 9:21 am

Viewing: ECON 4310 : Mathematical Economics

Last edit: 10/09/25 9:21 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	ACTUSCI-CT: Actuarial Science CT
Other Courses referencing this course	In The Catalog Description: ECON 5310 : Advanced Mathematical Economics

Requested Effective Date	Fall 2026
Department	Economics (RECONOMI)
Discipline	Economics (ECON)
Course Number	4310
Title	Mathematical Economics
Abbreviated Course Title	Mathematical Economics
Co-Listed Course	

Catalog Description

Marginal analysis, calculus, and linear algebraic systems are applied in selected advanced topics in economics such as price theory, general equilibrium theory, input-output analysis, activity analysis, and game theory.

Prerequisite(s):

Econ 2100 ~~2100, 2200,~~ and 2200. ~~Math 1208.~~

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

1. **RECONOMI 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. 10/09/25 3:27 pm Melody Lo (mlc2d): Approved for RECONOMI Chair
2. 10/09/25 3:29 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/09/25 3:35 pm Cecil Eng Huang Chua (cchua): Approved for Social Sciences DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:09 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:13 am

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

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: Removed Math 1208 per department chair approval. Course has been removed from catalog as it has not been taught since fall 2016.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 6111

Preview Bridge

Course Change Request

Date Submitted: 10/09/25 9:17 am

Viewing: ECON 4538 : Advanced Econometrics

Last approved: 05/10/23 6:01 am

Last edit: 10/09/25 9:17 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	ECON-BS: Economics BS Q ECON-MI: Quantitative Economics Minor

Requested Effective Date	Fall 2026
Department	Economics (RECONOMI)
Discipline	Economics (ECON)
Course Number	4538
Title	Advanced Econometrics
Abbreviated Course Title	Advanced Econometrics
Co-Listed Course	

Catalog Description

This course covers advanced topics in econometrics, including causal inference (such as instrument variable estimation, two-stage least squares, difference-in-difference, and regression discontinuity design), discrete choice models, and time series models. The statistical programming language of R is used, while STATA is introduced as a complementary tool.

Prerequisite(s):

Econ 1100 and Econ 1200 and Econ 3300 and Stat 3113 or Stat 3117. ~~3111.~~

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

1. **RECONOMI 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. 10/09/25 3:29 pm Melody Lo (mlc2d): Approved for RECONOMI Chair
2. 10/09/25 3:33 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/09/25 3:35 pm Cecil Eng Huang Chua (cchua): Approved for Social Sciences DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:10 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:13 am

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. May 10, 2023 by Michael Davis (davismc)

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors: Yes

Elective for Majors: No ~~Yes~~

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed Stat 3111 and added 'Stat 3113 or Stat 3117' per Econ Department Chair request.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 4940

Preview Bridge

Course Change Request

Date Submitted: 10/09/25 9:22 am

Viewing: ECON 5310 : Advanced Mathematical Economics

Last edit: 10/09/25 9:22 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	GFINMTH-CT: Financial Mathematics CT

Requested Effective Date	Fall 2026
Department	Economics (RECONOMI)
Discipline	Economics (ECON)
Course Number	5310
Title	Advanced Mathematical Economics
Abbreviated Course Title	Adv Mathematical Econ
Co-Listed Course	

Catalog Description

Marginal analysis, calculus, and linear algebraic systems are applied in selected advanced topics in economics such as price theory, general equilibrium theory, input-output analysis, activity analysis, and game theory. This course is an advanced version of Econ 4310, and will include additional research and project assignments. Credit cannot be obtained for both Econ 4310 and Econ 5310.

Prerequisite(s):

Econ 2100, 2200 and Math ~~1208, Math~~ 3103.

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

1. **RECONOMI 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. 10/09/25 3:29 pm Melody Lo (mlc2d): Approved for RECONOMI Chair
2. 10/09/25 3:34 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/09/25 3:35 pm Cecil Eng Huang Chua (cchua): Approved for Social Sciences DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:10 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:13 am

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

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: Removed Math 1208 per department chair approval. Course has been removed from catalog as it has not been taught since fall 2016.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 908

Preview Bridge

Course Change Request

Date Submitted: 10/06/25 11:38 am

Viewing: ECON 5380 : Data Intelligence using Case Studies

Formerly known as: ECON 5350

Last approved: 06/29/25 6:04 am

Last edit: 10/06/25 11:38 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	**ECON 5350:** ECON-BA: Economics BA **ECON 5380:** ECON-BS: Economics BS DDA-CTU: Decision Data Analytics - CTU Q ECON-MI: Quantitative Economics Minor

Requested Effective Date	Fall 2026
Department	Economics (RECONOMI)
Discipline	Economics (ECON)
Course Number	5380
Title	Data Intelligence using Case Studies
Abbreviated Course Title	Data Case Studies
Co-Listed Course	

Catalog Description

This course designates a corporate executive to teach students the processes of data collecting, analyzing, visualization, and statistical tests with case studies from various industries. Students will have the opportunity to do group projects showcasing their ability to apply data intelligence in real-world scenarios using Python programming.

Prerequisite(s):

Econ 1100 and Econ 1200, and one of the following: Stat ~~3111, Stat~~ 3113, Stat ~~3115, Stat~~ 3117, or Stat 5346, with programming knowledge, or instructor approval.

Corequisite(s):

Credit Hours

In Workflow

1. **RECONOMI 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. 10/09/25 8:37 am Melody Lo (mlc2d): Approved for RECONOMI Chair
2. 10/09/25 9:28 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/09/25 9:29 am Cecil Eng Huang Chua (cchua): Approved for Social Sciences DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:10 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:13 am

Credit Hours

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jun 6, 2023 by Michael Davis (davismc)
2. Jul 23, 2024 by Michael Davis (davismc)
3. Jun 29, 2025 by Melody Lo (mlc2d)

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors: No

Elective for Majors: Yes

Communication Intensive: No

Communication Emphasized: Yes

Grading Basis: Graded

Repeatable: No

Justification: Removed stat courses the math department says are being inactivated per their email sent to departments on September 15.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 4943

Course Change Request

New Course Proposal

Date Submitted: 10/10/25 4:19 pm

Viewing: ELEC ENG 1001 : Special Topics

Last edit: 10/13/25 10:46 am

Changes proposed by: Kelvin Erickson (kte)

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	1001
Title	Special Topics
Abbreviated Course Title	Special Topics
Co-Listed Course	

Catalog Description

This course is designed to give the department an opportunity to test a new course. Variable title.

Prerequisite(s):

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

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

Approval Path

1. 10/12/25 9:54 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/13/25 10:48 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:56 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:10 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:13 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Credit Type	Credit Hours
Lecture	0.0-6.0

Total: 0.0-6.0

Required for Majors	No
Elective for Majors	Yes
Communication Intensive	No
Communication Emphasized	No
Grading Basis	Graded
Repeatable	No

Justification	Since Freshman are admitted to the degree program, this course allows us to try courses at this level as the need arises.

Semesters Previously Offered

Term(s) Offered as experimental	
Previous Course Code	
Is this a MOTR Course?	
Reviewer Comments	**Jade McCain (jm558v) (10/13/25 10:46 am):** Added grading basis.

Key: 10341

Preview Bridge

Course Change Request

New Course Proposal

Date Submitted: 10/14/25 2:39 pm

Viewing: ELEC ENG 2010 : Sophomore Seminar

Last edit: 10/15/25 9:30 am

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	CP ENG-BS: Computer Engineering BS EL ENG-BS: Electrical Engineering BS

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	2010
Title	Sophomore Seminar
Abbreviated Course Title	Soph Seminar
Co-Listed Course	

Catalog Description

Discussion of current topics.

Prerequisite(s):

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

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

Approval Path

1. 10/14/25 5:39 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 9:32 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:56 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:10 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:13 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Credit Type	Credit Hours
Recitation/Seminar/Discussion	1

Total: 1

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Moving the seminar content out of Elec Eng 2120 into this course.
Approved by ECE Faculty Oct. 14, 2025

Semesters Previously Offered

Term(s) Offered as experimental

Previous Course Code

Is this a MOTR Course?

Reviewer Comments: **Jade McCain (jm558v) (10/15/25 9:30 am):** Added grading basis and punctuation.

Key: 10342

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 2:41 pm

Viewing: ELEC ENG 2120 : Circuits II

Last approved: 02/26/24 6:01 am

Last edit: 10/15/25 9:34 am

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	CP ENG-BS: Computer Engineering BS EL ENG-BS: Electrical Engineering BS EL ENG-MI: Minor in Electrical Engineering SEMI EN-BS: Semiconductor Engineering BS MC ENG-BS: Mechanical Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: ELEC ENG 3100 : Electronics I ELEC ENG 3101 : Electronics I Laboratory ELEC ENG 3250 : Electronic And Photonic Devices ELEC ENG 3320 : Control Systems ELEC ENG 3321 : Control Systems Laboratory ELEC ENG 3340 : Basic Programmable Logic Controllers ELEC ENG 3410 : Digital Signal Processing ELEC ENG 3411 : Discrete Linear Systems Laboratory ELEC ENG 3430 : Digital Communications I ELEC ENG 3431 : Digital Communication Laboratory ELEC ENG 3500 : Electromechanics ELEC ENG 3501 : Electromechanics Laboratory ELEC ENG 3540 : Power System Design And Analysis ELEC ENG 3541 : Power System Design And Analysis Laboratory ELEC ENG 3600 : Electromagnetics ELEC ENG 5440 : Stochastic Signal Analysis I

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	2120
Title	Circuits II
Abbreviated Course Title	Circuits II
Co-Listed Course	

In Workflow

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

Approval Path

1. 10/14/25 5:40 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 9:35 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:56 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:10 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

Catalog Description

Analysis of steady state AC circuits, phasor notation, polyphase circuits, complex frequency and frequency response, magnetically coupled circuits.

Prerequisite(s):

Elec Eng 2100 and Math 3304 each with grade of "C" or better. ~~better; passing the Elec Eng Advancement Exam I.~~

Corequisite(s):

6. 11/21/25 11:13 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jul 3, 2018 by Mehdi Ferdowsi (ferdowsi)
2. Nov 18, 2023 by Jennifer Pohlsander (jpnfd)
3. Feb 26, 2024 by Kelvin Erickson (kte)

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3.0 ~~2.5~~
~~Recitation/Seminar/Discussion~~	~~0.5~~

Total: 3

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Justification: Seminar moved to Elec Eng 2010 and Comp Eng 2010 courses, approved by ECE faculty May/Oct 2025. Deletion of the “passing advancement exam” requirement approved by ECE faculty Aug 22, 2025.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments	**Jade McCain (jm558v) (10/15/25 9:34 am):** Selected "no" communication intensive and communication emphasized.

Key: 856

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 3:37 pm

Viewing: ELEC ENG 2200 : Introduction to Electronic Devices

Last edit: 10/14/25 3:37 pm

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	CP ENG-BS: Computer Engineering BS BIOMED-BS: Biomedical Engineering BS SEMI EN-BS: Semiconductor Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: COMP ENG 4096 : Computer Engineering Senior Project I COMP ENG 5210 : Introduction To VLSI Design ELEC ENG 2201 : Electronic Devices Laboratory

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	2200
Title	Introduction to Electronic Devices
Abbreviated Course Title	Intro Electronic Devices
Co-Listed Course	

Catalog Description

Materials and device structures for applications in analog and digital electronics. Topics include characteristics and basic circuits for diodes, field-effect transistors, bipolar junction transistors, and operational amplifiers.

Prerequisite(s):

Elec Eng 2100, Elec Eng 2101, and Physics 2135 each with grade of "C" or better. ~~better; passing the Elec Eng Advancement Exam I.~~ Students should enroll in Elec Eng 2200 and Elec Eng 2201 simultaneously.

Corequisite(s):

Credit Hours

In Workflow

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

Approval Path

1. 10/14/25 5:40 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 9:35 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:56 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:10 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

Credit Hours

6. 11/21/25 11:13 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

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: Deletion of the advancement exam prerequisite approved by ECE faculty Aug 22, 2025.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 6143

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 3:37 pm

Viewing: ELEC ENG 2201 : Electronic Devices Laboratory

Last edit: 10/14/25 3:37 pm

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	CP ENG-BS: Computer Engineering BS BIOMED-BS: Biomedical Engineering BS SEMI EN-BS: Semiconductor Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: ELEC ENG 2200 : Introduction to Electronic Devices

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	2201
Title	Electronic Devices Laboratory
Abbreviated Course Title	Electronic Devices Lab
Co-Listed Course	

Catalog Description

Laboratory tools and measurement techniques for basic electronic circuits using diodes, field-effect transistors, bipolar junction transistors, and operational amplifiers. Topics include DC biasing and applications in analog and digital electronics.

Prerequisite(s):

Elec Eng 2100, Elec Eng 2101, and Physics 2135 each with grade of "C" or better. ~~better; passing the Elec Eng Advancement Exam I.~~ Preceded or accompanied by Elec Eng 2200.

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

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

Approval Path

1. 10/14/25 5:40 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 9:36 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:56 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:10 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:14 am
Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Credit Type	Credit Hours
Laboratory	1

Total: 1

Required for Majors: No

Elective for Majors: Yes

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Deletion of the advancement exam prerequisite approved by ECE faculty Aug 22, 2025.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 6145

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 3:37 pm

Viewing: ELEC ENG 2410 : Continuous Linear Systems

Last approved: 05/22/24 6:01 am

Last edit: 10/14/25 3:37 pm

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	EL ENG-BS: Electrical Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: ELEC ENG 2411 : Continuous Linear Systems Laboratory ELEC ENG 3320 : Control Systems ELEC ENG 3321 : Control Systems Laboratory ELEC ENG 3430 : Digital Communications I ELEC ENG 3431 : Digital Communication Laboratory

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	2410
Title	Continuous Linear Systems
Abbreviated Course Title	Cont Linear Sys
Co-Listed Course	

Catalog Description

Analysis methods for continuous-time signals and systems in the time and frequency domains including signal models, Fourier transforms, and Laplace transforms. Examples of control and communication systems are included.

Prerequisite(s):

Elec Eng 2100 with a grade of "C" or better. ~~better; passing the ELEC ENG Advancement Exam I.~~ Students should enroll in Elec Eng 2410 and Elec Eng 2411 simultaneously.

Corequisite(s):

Credit Hours

In Workflow

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

Approval Path

1. 10/14/25 5:40 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 2:28 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:56 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:10 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

Credit Hours

6. 11/21/25 11:14 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. May 22, 2024 by Kelvin Erickson (kte)

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Deletion of the advancement exam prerequisite approved by ECE faculty Aug 22, 2025.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 5057

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 3:37 pm

Viewing: ELEC ENG 2411 : Continuous Linear Systems Laboratory

Last approved: 05/22/24 6:01 am

Last edit: 10/14/25 3:37 pm

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	EL ENG-BS: Electrical Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: ELEC ENG 2410 : Continuous Linear Systems ELEC ENG 3321 : Control Systems Laboratory ELEC ENG 3431 : Digital Communication Laboratory

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	2411
Title	Continuous Linear Systems Laboratory
Abbreviated Course Title	Cont Linear Sys Lab
Co-Listed Course	

Catalog Description

Laboratory and software tools for the analysis of linear systems. Topics include Matlab programming, spectral analysis, and applications.

Prerequisite(s):

Elec Eng 2100 with a grade of "C" or better. ~~better; passing the ELEC ENG Advancement Exam I.~~ Preceded or accompanied by Elec Eng 2410.

Corequisite(s):

Credit Hours

In Workflow

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

Approval Path

1. 10/14/25 5:40 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 2:28 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:56 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:10 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

Credit Hours

6. 11/21/25 11:14 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. May 22, 2024 by Kelvin Erickson (kte)

Credit Type	Credit Hours
Laboratory	1

Total: 1

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Deletion of the advancement exam prerequisite approved by ECE faculty Aug 22, 2025.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 5058

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 3:38 pm

Viewing: ELEC ENG 3100 : Electronics I

Last approved: 05/17/24 6:01 am

Last edit: 10/14/25 3:38 pm

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	EL ENG-BS: Electrical Engineering BS SEMI EN-BS: Semiconductor Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: ELEC ENG 3101 : Electronics I Laboratory ELEC ENG 3120 : Electronics II ELEC ENG 3121 : Electronics II Laboratory ELEC ENG 4096 : Electrical Engineering Senior Project I ELEC ENG 5160 : Computer-Aided Network Design ELEC ENG 5520 : Power Electronics In The Catalog Description: ELEC ENG 3120 : Electronics II

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	3100
Title	Electronics I
Abbreviated Course Title	Electronics I
Co-Listed Course	

Catalog Description

Diode and transistor circuits, small signal analysis, amplifier design, differential and operational amplifiers, flipflop circuits and waveshaping.

Prerequisite(s):

Elec Eng 2120 and Comp Eng 2210 each with a grade of "C" or better. ~~Passing grade on Elec Eng Advancement ExamII.~~Elec Eng 3101 is a corequisite.

Corequisite(s):

In Workflow

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

Approval Path

1. 10/14/25 5:41 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 2:28 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:56 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:10 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:14 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. May 17, 2024 by Kelvin Erickson (kte)

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Deletion of the advancement exam prerequisite approved by ECE faculty Aug 22, 2025.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 526

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 3:38 pm

Viewing: ELEC ENG 3101 : Electronics I Laboratory

Last approved: 05/17/24 6:01 am

Last edit: 10/14/25 3:38 pm

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	EL ENG-BS: Electrical Engineering BS SEMI EN-BS: Semiconductor Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: ELEC ENG 3100 : Electronics I ELEC ENG 3120 : Electronics II ELEC ENG 3121 : Electronics II Laboratory

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	3101
Title	Electronics I Laboratory
Abbreviated Course Title	Electronics I Lab
Co-Listed Course	

Catalog Description

Experiments in design with diodes, transistors, differential and operational amplifiers, and logic components.

Prerequisite(s):

Elec Eng 2120 and Comp Eng 2210 each with a grade of "C" or better. ~~Passing grade on Elec Eng Advancement ExamII.~~Elec Eng 3100 is a corequisite.

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

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

Approval Path

1. 10/14/25 5:41 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 2:29 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:56 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:10 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:14 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. May 17, 2024 by Kelvin Erickson (kte)

Credit Type	Credit Hours
Laboratory	1

Total: 1

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: Yes

Grading Basis: Graded

Repeatable: No

Justification: Deletion of the advancement exam prerequisite approved by ECE faculty Aug 22, 2025.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 528

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 3:38 pm

Viewing: ELEC ENG 3250 : Electronic And Photonic Devices

Last approved: 05/17/24 6:01 am

Last edit: 10/14/25 3:38 pm

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	EL ENG-BS: Electrical Engineering BS SEMI EN-BS: Semiconductor Engineering BS

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	3250
Title	Electronic And Photonic Devices
Abbreviated Course Title	Elec/Photonic Devices
Co-Listed Course	

Catalog Description

Semiconductor materials and devices for electronic and photonic applications. Topics include crystal physics, electron and photon behavior, pn junctions, heterojunctions, junction diodes, optoelectronic devices, and ohmic and rectifying contacts.

Prerequisite(s):

Elec Eng 2120 with grade of "C" or better. ~~better; passing the Elec Eng Advancement Exam II.~~

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

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

Approval Path

1. 10/14/25 5:41 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 2:30 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:56 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:10 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:14 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. May 17, 2024 by Kelvin Erickson (kte)

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: Deletion of the advancement exam prerequisite approved by ECE faculty Aug 22, 2025.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 525

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 3:39 pm

Viewing: ELEC ENG 3320 : Control Systems

Formerly known as: ELEC ENG 231

Last approved: 02/01/25 6:03 am

Last edit: 10/15/25 3:09 pm

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	**ELEC ENG 3320:** EL ENG-BS: Electrical Engineering BS AUTOENG-MI: Minor in Automation Engineering AUTOEN-CTU: Undergraduate Certificate in Automation Engineering
Other Courses referencing this course	In The Catalog Prerequisites: **ELEC ENG 3320:** CHEM ENG 5190 : Plantwide Process Control CHEM ENG 5355 : Process Control System Safety, Security and Alarms ELEC ENG 3321 : Control Systems Laboratory ELEC ENG 4096 : Electrical Engineering Senior Project I ELEC ENG 5300 : Digital Control ELEC ENG 5320 : Neural Networks Control and Applications ELEC ENG 5325 : Applied Nonlinear Control ELEC ENG 5350 : Plantwide Process Control ELEC ENG 5355 : Process Control System Safety, Security and Alarms ELEC ENG 5360 : System Simulation And Identification ELEC ENG 5380 : Autonomous Mobile Robots ELEC ENG 5500 : Electric Drive Systems ELEC ENG 6300 : Linear Control Systems

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	3320
Title	Control Systems
Abbreviated Course Title	Control Systems
Co-Listed Course	

In Workflow

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

Approval Path

1. 10/14/25 5:41 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 3:09 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:56 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:10 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

Catalog Description

Laplace transforms, formulation of the control problem, system equations and models, time and frequency domain analysis, stability, and design of linear control systems.

Prerequisite(s):

Elec Eng 2120, Elec Eng 2410, Elec Eng 2411 ~~2120~~ and Math 3304 each with a grade of "C" or better; ~~passing the ELEC ENG Advancement Exam II;~~ accompanied by Elec Eng ~~Elec Eng~~ 3321.

Corequisite(s):

6. 11/21/25 11:14 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jul 7, 2014 by watkins
2. May 17, 2024 by Kelvin Erickson (kte)
3. Feb 1, 2025 by Kelvin Erickson (kte)

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: EE 2410 and 2411 are required courses in the FS2024 EE curriculum and will first be offered with the SP2026 semester. Deletion of the advancement exam prerequisite approved by ECE faculty Aug 22, 2025.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments: **Jade McCain (jm558v) (10/15/25 3:09 pm):** Selected "no" for communication intensive and communication emphasized.

Course Change Request

Date Submitted: 10/14/25 3:39 pm

Viewing: ELEC ENG 3321 : Control Systems Laboratory

Last approved: 02/01/25 6:03 am

Last edit: 10/14/25 3:39 pm

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	EL ENG-BS: Electrical Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: ELEC ENG 3320 : Control Systems

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	3321
Title	Control Systems Laboratory
Abbreviated Course Title	Control Systems Lab
Co-Listed Course	

Catalog Description

Software tools for control systems analysis.

Prerequisite(s):

Elec Eng 2120, Elec Eng 2410, Elec Eng 2411 ~~2120~~ and Math 3304 with a grade of "C" or better; ~~passing the ELEC ENG Advancement Exam II;~~ preceded or accompanied by Elec Eng ~~Elec Eng~~ 3320.

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

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

Approval Path

1. 10/14/25 5:41 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 2:31 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:56 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:10 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:14 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Sep 29, 2014 by watkins
2. May 20, 2024 by Kelvin Erickson (kte)
3. Feb 1, 2025 by Kelvin Erickson (kte)

Credit Type	Credit Hours
Laboratory	1

Total: 1

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: Yes

Grading Basis: Graded

Repeatable: No

Justification: EE 2410 and 2411 are required courses in the FS2024 EE curriculum and will first be offered with the SP2026 semester. Deletion of the advancement exam prerequisite approved by ECE faculty Aug 22, 2025.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 4049

Course Change Request

Date Submitted: 10/14/25 3:39 pm

Viewing: ELEC ENG 3410 : Digital Signal Processing

Formerly known as: ELEC ENG 215

Last approved: 09/29/14 4:09 am

Last edit: 10/14/25 3:39 pm

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	**ELEC ENG 3410:** CP ENG-BS: Computer Engineering BS EL ENG-BS: Electrical Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: **ELEC ENG 3410:** COMP ENG 5610 : Real-Time Digital Signal Processing ELEC ENG 3411 : Discrete Linear Systems Laboratory ELEC ENG 5400 : Digital Signal Processing II

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	3410
Title	Digital Signal Processing
Abbreviated Course Title	DSP
Co-Listed Course	

Catalog Description

Analysis methods for discrete-time signals and systems in the time and frequency-domains including signal models and Fourier techniques. Continuous-time concepts are included as introductory material.

Prerequisite(s):

ELEC ENG 2120 with a grade of "C" or better. ~~better; passing the ELEC ENG Advancement Exam II.~~

Corequisite(s):

In Workflow

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

Approval Path

1. 10/14/25 5:41 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 2:34 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:57 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:10 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

Credit Hours

Credit Hours

6. 11/21/25 11:14 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Sep 29, 2014 by watkins

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors: No

Elective for Majors: Yes ~~No~~

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Deletion of the advancement exam prerequisite approved by ECE faculty Aug 22, 2025.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 2074

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 3:40 pm

Viewing: ELEC ENG 3411 : Discrete Linear Systems Laboratory

Last edit: 10/14/25 3:40 pm

Changes proposed by: Kelvin Erickson (kte)

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	3411
Title	Discrete Linear Systems Laboratory
Abbreviated Course Title	Discrete Linear Systs Lab
Co-Listed Course	

Catalog Description

Software tools for signal and system representation and for time and frequency-domain systems analysis.

Prerequisite(s):

Elec Eng 2120 with a grade of "C" or better. ~~better; passing the Elec Eng Advancement Exam II.~~ Preceded or accompanied by Elec Eng 3410.

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

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

Approval Path

1. 10/14/25 5:42 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 2:35 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:57 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:10 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:14 am
Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Credit Type	Credit Hours
Laboratory	1

Total: 1

Required for Majors: No

Elective for Majors: Yes

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Deletion of the advancement exam prerequisite approved by ECE faculty Aug 22, 2025.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 6163

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 3:45 pm

Viewing: ELEC ENG 3430 : Digital Communications I

Last approved: 02/01/25 6:03 am

Last edit: 10/14/25 3:45 pm

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	EL ENG-BS: Electrical Engineering BS
Other Courses referencing this course	**In The Catalog Prerequisites:** COMP ENG 5450 : Digital Image Processing COMP ENG 5460 : Machine Vision ELEC ENG 3431 : Digital Communication Laboratory ELEC ENG 3440 : Digital Communications II ELEC ENG 4096 : Electrical Engineering Senior Project I ELEC ENG 5170 : Introduction To Circuit Synthesis ELEC ENG 5210 : Fourier Optics ELEC ENG 5420 : Communications Systems II ELEC ENG 5450 : Digital Image Processing ELEC ENG 5460 : Machine Vision ELEC ENG 5600 : Interference Control in Electronic Systems PHYSICS 5503 : Fourier Optics **In The Catalog Description:** ELEC ENG 3440 : Digital Communications II

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	3430
Title	Digital Communications I
Abbreviated Course Title	Digital Communications I
Co-Listed Course	

Catalog Description

Signals and systems for digital communications. Topics include signals and their spectra, source

In Workflow

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

Approval Path

1. 10/14/25 5:42 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 2:35 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:57 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:11 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

formatting and source coding, digital baseband data communication, and digital pass-band modulation and demodulation.

Prerequisite(s):

Elec Eng 2120, Elec Eng 2410 and Elec Eng 2411 ~~2120~~ with a grade of "C" or better; ~~passing the ELEC ENG Advancement Exam II;~~ accompanied by Elec Eng ~~Elec Eng~~ 3431.

Corequisite(s):

6. 11/21/25 11:14 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jul 7, 2014 by watkins
2. May 17, 2024 by Kelvin Erickson (kte)
3. Feb 1, 2025 by Kelvin Erickson (kte)

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: EE 2410 and 2411 are required courses in the FS2024 EE curriculum and will first be offered with the SP2026 semester. Deletion of the advancement exam prerequisite approved by ECE faculty Aug 22, 2025.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 4051

Course Change Request

Date Submitted: 10/14/25 3:45 pm

Viewing: ELEC ENG 3431 : Digital Communication Laboratory

Last approved: 02/01/25 6:03 am

Last edit: 10/14/25 3:45 pm

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	EL ENG-BS: Electrical Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: ELEC ENG 3430 : Digital Communications I

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	3431
Title	Digital Communication Laboratory
Abbreviated Course Title	Digital Commun Lab
Co-Listed Course	

Catalog Description

Laboratory and software tools for the analysis of communications and for linear and non-linear signals and systems. Topics include spectral analysis, transforms, and applications.

Prerequisite(s):

Elec Eng 2120, Elec Eng 2101, Elec Eng 2410, and Elec Eng 2411 ~~2101~~ with a grade of "C" or better; ~~passing the ELEC ENG Advancement Exam II;~~ preceded or accompanied by Elec Eng ~~Elec Eng~~ 3430.

Corequisite(s):

Credit Hours

In Workflow

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

Approval Path

1. 10/14/25 5:42 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 2:36 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:57 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:11 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

Credit Hours

6. 11/21/25 11:14 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Sep 29, 2014 by watkins
2. May 17, 2024 by Kelvin Erickson (kte)
3. Feb 1, 2025 by Kelvin Erickson (kte)

Credit Type	Credit Hours
Laboratory	1

Total: 1

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: Yes

Grading Basis: Graded

Repeatable: No

Justification: EE 2410 and 2411 are required courses in the FS2024 EE curriculum and will first be offered with the SP2026 semester. Deletion of the advancement exam prerequisite approved by ECE faculty Aug 22, 2025.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 4052

Course Change Request

Date Submitted: 10/14/25 3:41 pm

Viewing: ELEC ENG 3500 : Electromechanics

Last edit: 10/14/25 3:41 pm

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	EL ENG-BS: Electrical Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: ELEC ENG 3501 : Electromechanics Laboratory ELEC ENG 4096 : Electrical Engineering Senior Project I ELEC ENG 5550 : Electric Power Quality ELEC ENG 6500 : AC Drives: Dynamic and Control

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	3500
Title	Electromechanics
Abbreviated Course Title	Electromechanics
Co-Listed Course	

Catalog Description

Magnetics and magnetically coupled circuits, electromechanical energy conversion, rotating magnetic fields, stepper motors, DC machines, induction machines, synchronous machines, and brushless DC machines.

Prerequisite(s):

Physics 2135 with a grade of "C" or better; Elec Eng 2120 with a grade of "C" or better. ~~better; passing grade on the Elec Eng Advancement Exam II.~~

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

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

Approval Path

1. 10/14/25 5:42 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 3:00 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:57 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:36 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:11 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:14 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

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: Deletion of the advancement exam prerequisite approved by ECE faculty Aug 22, 2025.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 6165

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 3:41 pm

Viewing: ELEC ENG 3501 : Electromechanics Laboratory

Last edit: 10/14/25 3:41 pm

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	EL ENG-BS: Electrical Engineering BS
Other Courses referencing this course	In The Catalog Description: ELEC ENG 3541 : Power System Design And Analysis Laboratory

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	3501
Title	Electromechanics Laboratory
Abbreviated Course Title	Electromechanics Lab
Co-Listed Course	

Catalog Description

Experiments with power measurement, transformers, magnetically coupled circuits, rotating magnetic fields, stepper motors, DC machines, induction machines, synchronous machines, and brushless DC machines. Credit will only be given for one of Elec Eng 3501 or Elec Eng 3541.

Prerequisite(s):

Elec Eng 2120 with a grade of "C" or better. ~~better; passing grade on the Elec Eng Advancement Exam II.~~ Preceded or accompanied by Elec Eng 3500.

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

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

Approval Path

1. 10/14/25 5:42 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 3:00 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:57 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:36 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:11 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:14 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Credit Type	Credit Hours
Laboratory	1

Total: 1

Required for Majors: No

Elective for Majors: Yes

Communication Intensive: No

Communication Emphasized: Yes

Grading Basis: Graded

Repeatable: No

Justification: Deletion of the advancement exam prerequisite approved by ECE faculty Aug 22, 2025.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 6167

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 3:41 pm

Viewing: ELEC ENG 3540 : Power System Design And Analysis

Last edit: 10/14/25 3:41 pm

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	EL ENG-BS: Electrical Engineering BS E ECON-CTU: Energy Economics - CTU
Other Courses referencing this course	In The Catalog Prerequisites: ELEC ENG 3541 : Power System Design And Analysis Laboratory ELEC ENG 4096 : Electrical Engineering Senior Project I ELEC ENG 5540 : Power Systems Engineering ELEC ENG 5550 : Electric Power Quality ELEC ENG 6540 : Computer Methods In Power System Analysis ELEC ENG 6550 : Power System Stability

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	3540
Title	Power System Design And Analysis
Abbreviated Course Title	Pwr Syst Dsgn & Analysis
Co-Listed Course	

Catalog Description

Power system components and transmission lines, three phase balanced power system theory, analysis and design including economic and reliability considerations, and fault analysis. A power system design project using a graphical power flow program is included.

Prerequisite(s):

Elec Eng 2120 with a grade of "C" or better. ~~better; passing grade on the Elec Eng Advancement Exam II.~~

Corequisite(s):

In Workflow

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

Approval Path

1. 10/14/25 5:42 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 3:05 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:57 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:36 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:11 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:14 am
Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

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: Deletion of the advancement exam prerequisite approved by ECE faculty Aug 22, 2025.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 6169

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 3:41 pm

Viewing: ELEC ENG 3541 : Power System Design And Analysis Laboratory

Last edit: 10/14/25 3:41 pm

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	EL ENG-BS: Electrical Engineering BS
Other Courses referencing this course	In The Catalog Description: ELEC ENG 3501 : Electromechanics Laboratory

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	3541
Title	Power System Design And Analysis Laboratory
Abbreviated Course Title	Pwr Sys Dsgn & Analy Lab
Co-Listed Course	

Catalog Description

Computer-aided analysis of voltage regulation, power flow, compensation, and economic analysis. Individual projects are required. Credit will only be given for one of Elec Eng 3501 or Elec Eng 3541.

Prerequisite(s):

Elec Eng 2120 with a grade of "C" or better. ~~better; passing grade on the Elec Eng Advancement Exam II.~~ Preceded or accompanied by Elec Eng 3540.

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

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

Approval Path

1. 10/14/25 5:42 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 3:05 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:57 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:36 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:11 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:14 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Credit Type	Credit Hours
Laboratory	1

Total: 1

Required for Majors: No

Elective for Majors: Yes

Communication Intensive: No

Communication Emphasized: Yes

Grading Basis: Graded

Repeatable: No

Justification: Deletion of the advancement exam prerequisite approved by ECE faculty Aug 22, 2025.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 6171

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 2:40 pm

Viewing: ELEC ENG 3600 : Electromagnetics

Last approved: 02/26/24 6:01 am

Last edit: 10/16/25 10:41 am

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	EL ENG-BS: Electrical Engineering BS SEMI EN-BS: Semiconductor Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: AERO ENG 5570 : Plasma Physics I COMP ENG 5620 : Signal Integrity in High-Speed Digital & Mixed Signal Design ELEC ENG 4096 : Electrical Engineering Senior Project I ELEC ENG 5210 : Fourier Optics ELEC ENG 5220 : Fiber And Integrated Optics ELEC ENG 5620 : Signal Integrity in High-Speed Digital & Mixed Signal Design ELEC ENG 5630 : Wave Propagation and Transmission Lines ELEC ENG 5640 : Antennas and Propagation ELEC ENG 5650 : Microwave and Millimeter Wave Engineering and Design ELEC ENG 5660 : Microwave Principles For Mixed-Signal Design ELEC ENG 5680 : Introduction to Radar Systems ELEC ENG 6150 : Signal Integrity, High Speed Digital and RF Design Laboratory ELEC ENG 6200 : Electromagnetic Optics ELEC ENG 6600 : Advanced Electromagnetics I ELEC ENG 6630 : Computational Electromagnetics MECH ENG 5570 : Plasma Physics I NUC ENG 4370 : Plasma Physics I NUC ENG 5370 : Plasma Physics I PHYSICS 4543 : Plasma Physics I PHYSICS 5503 : Fourier Optics PHYSICS 5513 : Fiber And Integrated Optics

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)

In Workflow

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

Approval Path

1. 01/29/25 3:25 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 01/29/25 3:59 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 02/10/25 10:48 am Kelly Liu (liukh): Approved for Engineering DSCC Chair
4. 02/10/25 11:21 am Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 02/10/25 1:48 pm Jade McCain (jm558v): Rollback to Engineering DSCC Chair for CCC

Discipline	Electrical Engineering (ELEC ENG)
Course Number	3600
Title	Electromagnetics
Abbreviated Course Title	Electromagnetics
Co-Listed Course	

Catalog Description

Static electric and magnetic fields using vector analysis and time-varying electromagnetic fields using Maxwell's equations. Topics include Coulomb's law, Gauss's law, Ampere's law, dielectric and magnetic materials, plane waves, and transmission lines.

Prerequisite(s):

Elec Eng 2120, Elec Eng 2101, Physics 2135, and Math 2222 each with a grade of "C" or better. ~~Passing grade on Elec Eng Advancement Exam II.~~

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3 4

Total: 3 4

Required for Majors Yes

Meeting Agenda

6. 03/19/25 10:43 am Jade McCain (jm558v): Rollback to Initiator
7. 10/14/25 5:43 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
8. 10/15/25 3:10 pm Jade McCain (jm558v): Approved for CCC Secretary
9. 10/28/25 2:57 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
10. 11/03/25 3:36 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
11. 11/21/25 11:11 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
12. 11/21/25 11:14 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Feb 26, 2024 by Kelvin Erickson (kte)

Elective for Majors	No
Communication Intensive	No
Communication Emphasized	No
Grading Basis	Graded
Repeatable	No

Justification	Requested date changed to Fall 2026. Decrease the number of hours to reflect the actual number of contact hours. The course has 3 contact hours weekly. Originally, the 4th hour was for online content, but the instructors have not been posting or using any online content for the past few years. An extra hour of free electives will be added to the BS Elec Eng degree to maintain the degree credit-hours total. Approved at the Nov. 21, 2024 ECE Faculty meeting.

Semesters Previously Offered

Term(s) Offered as experimental	
Is this a MOTR Course?	

Reviewer Comments	**Jade McCain (jm558v) (02/10/25 1:48 pm):** Rollback: Rollback per needing to be submitted with the ELEC ENG BS DC form because credit hours are being changed. **Jade McCain (jm558v) (03/19/25 9:35 am):** Changed the Requested Effective date to Spring 2026 due to this being an affecting change. **Jade McCain (jm558v) (03/19/25 10:43 am):** Rollback: Rollback per department request. **Jade McCain (jm558v) (10/15/25 3:10 pm):** Selected "no" for communication intensive and communication emphasized. **Jade McCain (jm558v) (10/16/25 10:41 am):** Removed Elec Eng Advancement Exam requirement per department request via email on 10/15/2025.

Key: 531

Preview Bridge

Course Change Request

Date Submitted: 10/17/25 10:19 am

Viewing: ELEC ENG 4097 : Electrical Engineering Senior Project II

Last approved: 07/31/24 6:04 am

Last edit: 10/17/25 10:19 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	CP ENG-BS: Computer Engineering BS EL ENG-BS: Electrical Engineering BS EL ENG-MI: Minor in Electrical Engineering

Requested Effective Date	Fall 2026
Department	Electrical & Computer Engr (RELECENG)
Discipline	Electrical Engineering (ELEC ENG)
Course Number	4097
Title	Electrical Engineering Senior Project II
Abbreviated Course Title	EE Senior Project II
Co-Listed Course	

Catalog Description

A continuation of El Eng 4096.

Prerequisite(s):

Elec Eng 4096 with a grade of "C" or better; Stat 3117 or Stat ~~3115 or Stat~~ 5643; Sp&M S 1185.

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

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

Approval Path

1. 10/17/25 1:41 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/17/25 1:52 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:57 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:36 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:11 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:15 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Apr 28, 2014 by Lahne Black (lahne)
2. Feb 25, 2019 by Mehdi Ferdowsi (ferdowsi)
3. Jul 31, 2024 by Evie Sherlock (esdk3)

Credit Type	Credit Hours
Laboratory	3

Total: 3

Required for Majors	Yes
Elective for Majors	No
Communication Intensive	No
Communication Emphasized	Yes
Grading Basis	Graded
Repeatable	Yes

Justification	Stat 3115 has been removed from the Stat course options since this class will no longer be offered.

Semesters Previously Offered

Term(s) Offered as experimental	
Is this a MOTR Course?	
Reviewer Comments	

Key: 1388

Course Change Request

Date Submitted: 10/06/25 8:49 am

Viewing: ENG MGT 2310 : Introduction to System Engineering

Last approved: 01/24/22 6:01 am

Last edit: 10/06/25 8:49 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	CP ENG-BS: Computer Engineering BS EL ENG-BS: Electrical Engineering BS ENG MG-BS: Engineering Management BS

Requested Effective Date	Fall 2026
Department	Engineering Mgt & Sys Engr (RENGMNGT)
Discipline	Engineering Management (ENG MGT)
Course Number	2310
Title	Introduction to System Engineering
Abbreviated Course Title	Intro System Eng
Co-Listed Course	

Catalog Description

Provide an understanding of systems engineering and tools to manage system design, construction, and operation. Topics include systems thinking, modeling and simulation of systems, uncertainty in engineering, risk, and decision making in certain and uncertain environments.

Prerequisite(s):

Math 1214 ~~1208, Math 1214,~~ or Math 1211.

Corequisite(s):

Credit Hours

Credit Hours

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. 10/09/25 9:12 am Amaury Lendasse (altmg): Approved for RENGMNGT Chair
2. 10/09/25 10:15 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/17/25 2:15 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:36 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:11 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:15 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Feb 9, 2015 by Stephen Raper (sraper)
2. Jan 24, 2022 by Stephen Raper (sraper)

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed Math 1208. This course has been removed from the catalog as it has not been taught since fall 2016.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 1393

Preview Bridge

Course Change Request

Date Submitted: 10/28/25 9:58 am

Viewing: ENG MGT 4710 : Quality

Last edit: 10/28/25 9:58 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	ENG MG-BS: Engineering Management BS MC ENG-BS: Mechanical Engineering BS

Requested Effective Date	Fall 2026
Department	Engineering Mgt & Sys Engr (RENGMNGT)
Discipline	Engineering Management (ENG MGT)
Course Number	4710
Title	Quality
Abbreviated Course Title	Quality
Co-Listed Course	

Catalog Description

This course will provide an overview of quality tools and methodologies and how they apply to engineering management. Quality management methodologies will be explored as well as current and relevant tools and techniques used in the successful application of quality into various environments.

Prerequisite(s):

Stat ~~3115 or Stat~~ 3117.

Corequisite(s):

Credit Hours

Credit Hours

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. 10/28/25 12:54 pm Amaury Lendasse (altmg): Approved for RENGMNGT Chair
2. 10/28/25 1:18 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/30/25 11:01 am Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:36 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:11 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:15 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors Yes ~~No~~

Elective for Majors No

Communication Intensive No

Communication Emphasized No

Grading Basis Graded

Repeatable No

Justification Removed Stat 3115 from pre-req as this course will no longer be offered.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 6266

Preview Bridge

Course Change Request

Date Submitted: 10/28/25 9:59 am

Viewing: ENG MGT 5410 : Industrial System Simulation

Last edit: 10/28/25 9:59 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	ENG MG-BS: Engineering Management BS

Requested Effective Date	Fall 2026
Department	Engineering Mgt & Sys Engr (RENGMNGT)
Discipline	Engineering Management (ENG MGT)
Course Number	5410
Title	Industrial System Simulation
Abbreviated Course Title	Industrl Syst Simulation
Co-Listed Course	

Catalog Description

Simulation modeling of manufacturing and service operations through the use of computer software for operational analysis and decision making.

Prerequisite(s):

Stat ~~3115 or Stat~~ 3117.

Corequisite(s):

Credit Hours

Credit Hours

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. 10/28/25 12:55 pm Amaury Lendasse (altmg): Approved for RENGMNGT Chair
2. 10/28/25 1:18 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/30/25 11:01 am Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:36 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:11 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:15 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

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: Removed Stat 3115 from pre-req as this course will no longer be offered.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 6282

Preview Bridge

Course Change Request

Date Submitted: 10/28/25 10:00 am

Viewing: ENG MGT 5414 : Introduction To Operations Research

Last approved: 07/23/24 6:37 am

Last edit: 10/28/25 10:00 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	ENG MG-BS: Engineering Management BS
Other Courses referencing this course	In The Catalog Prerequisites: ENG MGT 6413 : Advanced Engineering Management Science

Requested Effective Date	Fall 2026
Department	Engineering Mgt & Sys Engr (RENGMNGT)
Discipline	Engineering Management (ENG MGT)
Course Number	5414
Title	Introduction To Operations Research
Abbreviated Course Title	Intro To Operations Res
Co-Listed Course	

Catalog Description

Mathematical methods for modeling and analyzing industrial systems, topics including linear programming, transportation models, and network models.

Prerequisite(s):

Stat ~~3115 or Stat~~ 3117. Senior or graduate standing.

Corequisite(s):

Credit Hours

Credit Hours

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. 10/28/25 12:55 pm Amaury Lendasse (altmg): Approved for RENGMNGT Chair
2. 10/28/25 1:18 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/30/25 11:01 am Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:36 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:11 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:15 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jul 23, 2024 by David Enke (enke)

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: Removed Stat 3115 from pre-req as this course will no longer be offered.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 594

Preview Bridge

Course Change Request

Date Submitted: 10/28/25 10:01 am

Viewing: ENG MGT 5614 : Supply Chain Management Systems

Last edit: 10/28/25 10:01 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	DSCMGMT-CT: Digital Supply Chain Mgmt CT DSCMGMT-MI: Digital Supply Chain Mgt Minor SPLYCHN-CT: Foundations of Supply Chain Integration Systems CT ENG MG-BS: Engineering Management BS

Requested Effective Date	Fall 2026
Department	Engineering Mgt & Sys Engr (RENGMNGT)
Discipline	Engineering Management (ENG MGT)
Course Number	5614
Title	Supply Chain Management Systems
Abbreviated Course Title	Supply Chain Mgt Systems
Co-Listed Course	

Catalog Description

This course focuses on the development of logistics management skills related to global supply chains. Particular attention will be given to supply chain systems management as part of the firm's strategic positioning, cultural interactions and transportation sourcing decisions.

Prerequisite(s):

Stat ~~3115 or Stat~~ 3117.

Corequisite(s):

Credit Hours

Credit Hours

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. 10/28/25 12:55 pm Amaury Lendasse (altmg): Approved for RENGMNGT Chair
2. 10/28/25 1:19 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/30/25 11:01 am Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:36 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:11 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:15 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

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: Removed Stat 3115 from pre-req as this course will no longer be offered.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 6291

Preview Bridge

Course Change Request

Date Submitted: 10/28/25 10:02 am

Viewing: ENG MGT 6412 : Mathematical Programming

Also listed as: MATH 6665 / SYS ENG 6412

Last approved: 08/06/24 6:04 am

Last edit: 10/28/25 10:02 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	**MATH 6665:** GFINMTH-CT: Financial Mathematics CT **SYS ENG 6412:** MDLBASE-CT: Model Based Systems Eng CT

Requested Effective Date	Fall 2026	
Department	Engineering Mgt & Sys Engr (RENGMNGT)	
Discipline	Engineering Management (ENG MGT)	
Course Number	6412	
Title	Mathematical Programming	
Abbreviated Course Title	Mathematical Programming	
Co-Listed Course	MATH 6665	Department Mathematics & Statistics (RMATHEMA)
	SYS ENG 6412	Department Engineering Mgt & Sys Engr (RENGMNGT)

Catalog Description

Linear optimization and its engineering applications; problem modeling, search-based optimization, the simplex method for solving linear problems, multi-objective optimization, discrete dynamic programming. Applications of optimization in the fields such as transportation, project management, manufacturing and facility location will be discussed.

Prerequisite(s):

~~One of thefollowing:~~Stat 3113 ~~3113, Stat 3115,~~ or Stat 3117; Math 3108.

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. 10/28/25 12:55 pm Amaury Lendasse (altmg): Approved for RENGMNGT Chair
2. 10/28/25 1:20 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/30/25 11:01 am Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:36 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:11 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

Corequisite(s):

6. 11/21/25 11:15 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Credit Hours

Credit Hours

History

1. Oct 29, 2018 by Steven Corns (cornss)
2. Aug 6, 2024 by Jade McCain (jm558v)

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors: No

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed Stat 3115 from pre-req as this course will no longer be offered.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 1986

Preview Bridge

Course Change Request

Date Submitted: 10/02/25 11:55 am

Viewing: GEO ENG 5315 : Advanced Statistical Methods in Geology and Engineering

Last approved: 10/20/14 3:35 am

Last edit: 10/02/25 11:55 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	GEO ENG-MS: GEOLOGICAL ENGINEERING MS GEINTEL-CT: Geoanalytics and Geointelligence Certificate

Requested Effective Date	Fall 2026
Department	Earth Sciences and Engineering (RGEOSENG)
Discipline	Geological Engineering (GEO ENG)
Course Number	5315
Title	Advanced Statistical Methods in Geology and Engineering
Abbreviated Course Title	Adv Geo&Eng Statistics
Co-Listed Course	

Catalog Description

Application of statistical methods to study of geologic materials and practices, with emphasis on reliable interpretation of laboratory and field data for water, hydrocarbon, and mineral exploration, research, and engineering as well as other aspects of geological engineering.

Prerequisite(s):

Geo Eng 4115 or Stat ~~3111 or Stat~~ 3113 or Stat ~~3115 or Stat~~ 3117.

Corequisite(s):

Credit Hours

Credit Hours

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. 10/02/25 12:59 pm Stephen Gao (sgao): Approved for RGEOSENG Chair
2. 10/02/25 3:37 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/09/25 7:47 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:36 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:11 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:15 am

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Oct 20, 2014 by Leslie Gertsch (gertschl)

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: Removed stat courses the math department says is being inactivated per their email sent to departments on September 15.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 1928

Preview Bridge

Course Change Request

Date Submitted: 10/03/25 9:17 am

Viewing: GEO ENG 5331 : Subsurface Hydrology

Last approved: 10/25/21 3:25 pm

Last edit: 10/03/25 9:17 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	GE ENG-BS: Geological Engineering BS GEO ENG-MS: GEOLOGICAL ENGINEERING MS WATERSC-MS: Water Science and Engineering MS GEO SCI-CT: Geoenvironmental Science and Engineering CT SUB WAT-CT: Subsurface Water Resources Certificate MINEREC-CT: Mine Reclamation CT ENV SCI-BS: Environmental Science BS EV ENG-BS: Environmental Engineering BS GE ENG-MI: Geological Engineering Minor GL&GPH-BS: Geology and Geophysics BS
Other Courses referencing this course	In The Catalog Prerequisites: GEO ENG 5239 : Groundwater Remediation GEO ENG 5320 : Groundwater Modeling GEO ENG 5381 : Intermediate Subsurface Hydrology And Contaminant Transport Mechs GEO ENG 6331 : Advanced Subsurface Hydrology GEO ENG 6332 : Numerical Methods In Subsurface Flow

Requested Effective Date	Fall 2026
Department	Earth Sciences and Engineering (RGEOSENG)
Discipline	Geological Engineering (GEO ENG)
Course Number	5331
Title	Subsurface Hydrology
Abbreviated Course Title	Subsurface Hydrology
Co-Listed Course	

Catalog Description

Introduction to the theory and engineering concepts of the movement of subsurface fluids. Hydraulic characteristics of earth materials, aquifer characterization, and flow prediction. Engineering problems related to subsurface fluids.

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. 10/03/25 9:36 am Stephen Gao (sgao): Approved for RGEOSENG Chair
2. 10/03/25 10:04 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/09/25 7:46 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:36 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:12 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:15 am

Prerequisite(s):

Geo Eng 1150; Math 1215. ~~1215 or Math 1221.~~

Corequisite(s):

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Credit Hours

Credit Hours

History

1. Jun 20, 2018 by Katherine Grote (grotekr)
2. Apr 30, 2020 by Katherine Grote (grotekr)
3. Oct 25, 2021 by David Borrok (borrokd)

Credit Type	Credit Hours
Lecture	2
Laboratory	1

Total: 3

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed Math 1221 from the CC form. This course is not printed in the catalog and has not been taught since fall 2016.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer

Comments

Key: 1250

Preview Bridge

Course Change Request

A deleted record cannot be edited

Course Inactivation Proposal

Date Submitted: 10/14/25 12:42 pm

Viewing: **GEOLOGY 1111 : Introduction to Physical Geology**

Last approved: 09/11/24 6:03 am

Last edit: 10/14/25 3:53 pm

Changes proposed by: Kelly Liu (liukh)

Other Courses referencing this course	In The Catalog Prerequisites: GEOLOGY 2096 : Field Geology

Justification for this inactivation request

Geology 1111 has not been offered for several years, and its content significantly overlaps with Geology 1110.

Requested Effective Date	Fall 2026
Department	Earth Sciences and Engineering (RGEOSENG)
Discipline	Geology (GEOLOGY)
Course Number	1111
Title	Introduction to Physical Geology
Abbreviated Course Title	Intro Physical Geol
Co-Listed Course	

Catalog Description

A study of Earth materials, surface features, internal structures and processes. Particular attention is paid to Earth resources, geological hazards, engineering and environmental problems.

Prerequisite(s):

Entrance requirements.

Corequisite(s):

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. 10/14/25 1:10 pm Stephen Gao (sgao): Approved for RGEOSENG Chair
2. 10/14/25 3:54 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:58 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:36 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:12 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:16 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jun 29, 2015 by kleb6b
2. Sep 11, 2024 by Evie Sherlock (esdk3)

Credit Hours

Credit Hours

Credit Type	Credit Hours
Laboratory	1
Lecture	2

Total: 3

Required for Majors: No

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?

attribute
Geology with Lab (GEOL 100L)

Reviewer Comments: **Jade McCain (jm558v) (10/14/25 3:53 pm):** Changed effective requested date to Fall 2026 per CCC deadlines.

Key: 1109

Course Change Request

A deleted record cannot be edited

Course Inactivation Proposal

Date Submitted: 10/14/25 12:43 pm

Viewing: GEOLOGY 1111L : Tc - Geol 50L

Last edit: 10/14/25 3:54 pm

Changes proposed by: Kelly Liu (liukh)

Justification for this inactivation request

Geology 1111 has not been offered for several years, and its content significantly overlaps with Geology 1110L.

Requested Effective Date	Fall 2026
Department	Earth Sciences and Engineering (RGEOSENG)
Discipline	Geology (GEOLOGY)
Course Number	1111L
Title	Tc - Geol 50L
Abbreviated Course Title	Tc - Geol 50L
Co-Listed Course	

Catalog Description

Prerequisite(s):

Corequisite(s):

Credit Hours

Credit Hours

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. 10/14/25 1:10 pm Stephen Gao (sgao): Approved for RGEOSENG Chair
2. 10/14/25 3:54 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:58 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:36 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:12 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:16 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Credit Type	Credit Hours
Lecture	0

Total: 0

Required for Majors: No

Elective for Majors:

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: **Jade McCain (jm558v) (10/14/25 3:54 pm):** Changed requested effective date to Fall 2026 per CCC deadlines.

Key: 6642

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 2:55 pm

Viewing: GEOLOGY 2096 : Field Geology

Formerly known as: GEOLOGY 373

Last approved: 07/31/24 6:04 am

Last edit: 10/14/25 3:59 pm

Changes proposed by: Kelly Liu (liukh)

Programs referencing this course	**GEOLOGY 2096:** GE ENG-BS: Geological Engineering BS ENV SCI-BS: Environmental Science BS GL&GPH-BS: Geology and Geophysics BS
Other Courses referencing this course	In The Catalog Prerequisites: **GEOLOGY 2096:** GEOLOGY 5679 : Field and Laboratory Studies in Earth Science

Requested Effective Date	Fall 2026
Department	Earth Sciences and Engineering (RGEOSENG)
Discipline	Geology (GEOLOGY)
Course Number	2096
Title	Field Geology
Abbreviated Course Title	Field Geology
Co-Listed Course	

Catalog Description

Theory and practice in the qualitative and quantitative description of spatial relationships of major rock types, contacts, and structures through construction of geologic maps. Emphasis on developing fundamental field skills, including logistical planning, navigation, data collection and documentation, and professional protocol during site visits. Students will be charged a fee to cover the cost of field trip expenses.

Prerequisite(s):

Geology ~~GEOLOGY 1111,~~ 1110, Geology 1120, and Geology ~~1119, &~~ 1129.

Corequisite(s):

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. 10/14/25 2:59 pm Stephen Gao (sgao): Approved for RGEOSENG Chair
2. 10/14/25 3:59 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:58 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:36 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:12 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:16 am

Credit Hours

Credit Hours

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jul 7, 2014 by John Hogan (jhogan)
2. Jul 31, 2024 by Evie Sherlock (esdk3)

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed GEOL 1111 and GEOL 1119 from the prerequisites, as both courses are no longer active. Added GEOL 1120, which serves as the lecture component of GEOL 1129.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments: **Jade McCain (jm558v) (10/14/25 3:59 pm):** Changed requested effective date to Fall 2026 per CCC deadlines, corrected prerequiste formatting, and selected "no" for communication intensive and communication emphasized.

Key: 830

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 2:58 pm

Viewing: GEOLOGY 3310 : Structural Geology

Formerly known as: GEOLOGY 220

Last approved: 07/31/24 6:04 am

Last edit: 10/14/25 4:02 pm

Changes proposed by: Kelly Liu (liukh)

Programs referencing this course	**GEOLOGY 3310:** PE ENG-BS: Petroleum Engineering BS GE ENG-BS: Geological Engineering BS CES-MI: Computational Earth Sciences Minor GL&GPH-BS: Geology and Geophysics BS MI ENG-BS: Mining Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: **GEOLOGY 3310:** GEOLOGY 3319 : Structural Geology Lab GEOLOGY 5311 : Depositional Systems GEOLOGY 5513 : Petroleum Geology GEOLOGY 5661 : Advanced Stratigraphy and Basin Evolution GEOLOGY 6211 : Geodynamics GEOLOGY 6311 : Advanced Structural Geology GEOLOGY 6321 : Analytical Structural Geology GEOLOGY 6331 : Geotectonics GEOLOGY 6511 : Advanced Petroleum Geology GEOLOGY 6811 : Sedimentary Basin Analysis GEOPHYS 5096 : Global Tectonics GEOPHYS 5211 : Seismic Stratigraphy MIN ENG 5823 : Rock Mechanics PET ENG 4710 : Finite Element Analysis with Applications in Petroleum Engineering PET ENG 4720 : Reservoir Geomechanics PET ENG 6711 : Geodynamics

Requested Effective Date	Fall 2026
Department	Earth Sciences and Engineering (RGEOSENG)
Discipline	Geology (GEOLOGY)
Course Number	3310

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. 10/14/25 2:58 pm Stephen Gao (sgao): Approved for RGEOSENG Chair
2. 10/14/25 4:02 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:58 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:37 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:12 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:16 am

Title	Structural Geology
Abbreviated Course Title	Structural Geology
Co-Listed Course	

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Catalog Description

Students will develop of an appreciation for the geometrical beauty of geologic structures through an understanding of crustal deformation at scales from mineral lattices to tectonic plates. Field trip fee required.

Prerequisite(s):

Geology ~~GEOLOGY~~ 1110 or Geo Eng 1150. ~~GEO ENG 1111.~~

Corequisite(s):

History

1. Jul 7, 2014 by John Hogan (jhogan)
2. Jul 31, 2024 by Evie Sherlock (esdk3)

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors	Yes
Elective for Majors	No
Communication Intensive	No
Communication Emphasized	Yes
Grading Basis	Graded
Repeatable	No

Justification	Removed GEO ENG 1111 and added GEO ENG 1150 as a prerequisite, as GEO ENG 1111 is no longer an active course. GEO ENG 1150 is co-listed with GEOL 1110.

Semesters Previously Offered

Term(s) Offered as experimental	
Is this a MOTR Course?	
Reviewer Comments	**Jade McCain (jm558v) (10/14/25 4:02 pm):** Corrected prerequisite formatting, and selected "no" for communication intensive and "yes" for communication emphasized.

Key: 809

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 1:13 pm

Viewing: GEOLOGY 3511 : Introduction to Mineral Deposits

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

Last edit: 10/14/25 4:04 pm

Changes proposed by: Kelly Liu (liukh)

Programs referencing this course	GL&GPH-BS: Geology and Geophysics BS
Other Courses referencing this course	In The Catalog Prerequisites: GEOLOGY 4521 : Ore Microscopy GEOLOGY 6551 : Global Tectonics and Metallogeny MIN ENG 6522 : Mining Property Feasibility Studies And Evaluation Procedure

Requested Effective Date	Fall 2026
Department	Earth Sciences and Engineering (RGEOSENG)
Discipline	Geology (GEOLOGY)
Course Number	3511
Title	Introduction to Mineral Deposits
Abbreviated Course Title	Intro Mineral Deposits
Co-Listed Course	

Catalog Description

Basic processes involved in the formation of metallic and industrial mineral deposits illustrated by typical examples of deposits from throughout the world. Exploration and economic factors in mineral exploration and development are reviewed.

Prerequisite(s):

Geology 1110 and Geology 2611. ~~2610.~~

Corequisite(s):

Credit Hours

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. 10/14/25 1:16 pm Stephen Gao (sgao): Approved for RGEOSENG Chair
2. 10/14/25 4:04 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:58 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:37 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:12 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:16 am

Credit Hours

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Mar 6, 2017 by Kelly Liu (liukh)

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: Removed GEOL 2610 from the prerequisite, as this course is no longer offered regularly. Added GEOL 2611, which is a required course for the major.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments: **Jade McCain (jm558v) (10/14/25 4:04 pm):** Selected "no" for communication intensive and communication emphasized.

Key: 1030

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 2:58 pm

Viewing: GEOLOGY 4097 : Advanced Field Geology

Formerly known as: GEOLOGY 374

Last approved: 07/31/24 6:04 am

Last edit: 10/14/25 4:07 pm

Changes proposed by: Kelly Liu (liukh)

Programs referencing this course	**GEOLOGY 4097:** GE ENG-BS: Geological Engineering BS GL&GPH-BS: Geology and Geophysics BS

Requested Effective Date	Fall 2026
Department	Earth Sciences and Engineering (RGEOSENG)
Discipline	Geology (GEOLOGY)
Course Number	4097
Title	Advanced Field Geology
Abbreviated Course Title	Advanced Field Geology
Co-Listed Course	

Catalog Description

Advanced instruction in theory and practice of qualitative and quantitative description of spatial relationships of rock types in areas exhibiting complex deformation. Emphasis on experiential learning where students plan, implement, and reflect on outcomes for several scientific field campaigns in a manner consistent with professional scientific practices. Students will be charged a fee to cover the cost of field trip expenses.

Prerequisite(s):

Geology 2611, Geology ~~GEOLOGY 2610, 2620,~~ 3310, Geology 3620, Geology 3629, and Geology 2096.

Corequisite(s):

Credit Hours

Credit Hours

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. 10/14/25 2:59 pm Stephen Gao (sgao): Approved for RGEOSENG Chair
2. 10/14/25 4:07 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:58 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:37 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:12 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:16 am

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jul 7, 2014 by John Hogan (jhogan)
2. Jul 31, 2024 by Evie Sherlock (esdk3)

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: Yes

Grading Basis: Graded

Repeatable: No

Justification: Removed GEOL 2610 and 2620 from prerequisites, as both courses are no longer offered regularly. Added GEOL 2611, which is a required course for the major.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments: **Jade McCain (jm558v) (10/14/25 4:07 pm):** Changed requested effective date to Fall 2026 per CCC deadlines, corrected prerequisite formatting, and selected "no" for communication intensive and "yes" communication emphasized.

Key: 831

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 1:15 pm

Viewing: GEOLOGY 4441 : Applied Geochemistry

Last edit: 10/14/25 4:09 pm

Changes proposed by: Kelly Liu (liukh)

Requested Effective Date	Fall 2026
Department	Earth Sciences and Engineering (RGEOSENG)
Discipline	Geology (GEOLOGY)
Course Number	4441
Title	Applied Geochemistry
Abbreviated Course Title	Applied Geochemistry
Co-Listed Course	

Catalog Description

Application of the principles of geochemistry and techniques of geochemical analysis in a student research project investigating geochemical processes (mineral deposits, environmental geochemistry, trace element migration, or water-rock interaction). Field trip fee required.

Prerequisite(s):

Geology 2611 ~~2610~~ and Geology 3410.

Corequisite(s):

Credit Hours

Credit Hours

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. 10/14/25 1:16 pm Stephen Gao (sgao): Approved for RGEOSENG Chair
2. 10/14/25 4:10 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:58 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:37 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:12 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:16 am

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Credit Type	Credit Hours
Laboratory	1
Lecture	2

Total: 3

Required for Majors: No

Elective for Majors: Yes

Communication Intensive: No

Communication Emphasized: Yes

Grading Basis: Graded

Repeatable: No

Justification: Removed GEOL 2610 from the prerequisite, as this course is no longer offered regularly. Added GEOL 2611, which is a required course for the major.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments: **Jade McCain (jm558v) (10/14/25 4:09 pm):** Selected "yes" for elective for majors and selected "no" for communication intensive and "yes" for communication emphasized.

Key: 6668

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 1:29 pm

Viewing: GEOLOGY 4461 : Isotope Geochemistry

Last edit: 10/14/25 4:12 pm

Changes proposed by: Kelly Liu (liukh)

Programs referencing this course	GL&GPH-BS: Geology and Geophysics BS

Requested Effective Date	Fall 2026
Department	Earth Sciences and Engineering (RGEOSENG)
Discipline	Geology (GEOLOGY)
Course Number	4461
Title	Isotope Geochemistry
Abbreviated Course Title	Isotope Geochemistry
Co-Listed Course	

Catalog Description

Introduction to the fundamentals of radiogenic and stable isotopes as used to understand geologic processes. The use of selected isotopic systems in petrology, ore petrogenesis, paleontology, and the global climate systems will be discussed.

Prerequisite(s):

Geology 2611, Geology ~~2620,~~ 3620, and Geology 3410.

Corequisite(s):

Credit Hours

Credit Hours

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. 10/14/25 1:36 pm Stephen Gao (sgao): Approved for RGEOSENG Chair
2. 10/14/25 4:12 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:58 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:37 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:12 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:16 am

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Credit Type	Credit Hours
Lecture	2
Laboratory	1

Total: 3

Required for Majors: No

Elective for Majors: Yes

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed GEOL 2620 from the prerequisite, as this course is no longer offered regularly. Added GEOL 2611, which is a required course for the major.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments: **Jade McCain (jm558v) (10/14/25 4:12 pm):** Corrected prerequisite formatting, selected "yes" for elective majors, and selected "no" for communication intensive and communication emphasized.

Key: 6670

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 1:16 pm

Viewing: GEOLOGY 4521 : Ore Microscopy

Last approved: 10/28/19 6:01 am

Last edit: 10/14/25 4:14 pm

Changes proposed by: Kelly Liu (liukh)

Other Courses referencing this course	In The Catalog Prerequisites: GEOLOGY 6521 : Advanced Ore Microscopy GEOLOGY 6531 : Applied Ore Microscopy GEOLOGY 6551 : Global Tectonics and Metallogeny

Requested Effective Date	Fall 2026
Department	Earth Sciences and Engineering (RGEOSENG)
Discipline	Geology (GEOLOGY)
Course Number	4521
Title	Ore Microscopy
Abbreviated Course Title	Ore Microscopy
Co-Listed Course	

Catalog Description

A study of polished sections of minerals and ores under reflected light. Includes the preparation of polished sections, the identification of ore minerals, and the study of the textures, associations, and alterations of ore minerals.

Prerequisite(s):

Geology 2611 ~~2610~~ and Geology 3511.

Corequisite(s):

Credit Hours

Credit Hours

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. 10/14/25 1:17 pm Stephen Gao (sgao): Approved for RGEOSENG Chair
2. 10/14/25 4:14 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:59 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:37 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:12 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:16 am

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Oct 28, 2019 by Marek Locmelis (locmelism)

Credit Type	Credit Hours
Lecture	1
Laboratory	2

Total: 3

Required for Majors: No

Elective for Majors: Yes

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed GEOL 2610 from the prerequisite, as this course is no longer offered regularly. Added GEOL 2611, which is a required course for the major.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments: **Jade McCain (jm558v) (10/14/25 4:14 pm):** Selected "no" for communication intensive and communication emphasized.

Key: 789

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 1:30 pm

Viewing: GEOLOGY 4631 : Advanced Igneous and Metamorphic Petrology

Last edit: 10/14/25 4:15 pm

Changes proposed by: Kelly Liu (liukh)

Programs referencing this course	GL&GPH-BS: Geology and Geophysics BS
Other Courses referencing this course	In The Catalog Prerequisites: GEOLOGY 5641 : Advanced Igneous Petrology

Requested Effective Date	Fall 2026
Department	Earth Sciences and Engineering (RGEOSENG)
Discipline	Geology (GEOLOGY)
Course Number	4631
Title	Advanced Igneous and Metamorphic Petrology
Abbreviated Course Title	Adv Igneous & Metamorphic Petr
Co-Listed Course	

Catalog Description

Processes governing the formation of igneous and metamorphic rocks as constrained by geochemical, isotopic, and thermodynamic data, with particular reference to the relationship between rock suites and tectonic setting. The laboratory will emphasize the description of rock suites in hand sample and thin section. A field trip at the student's expense is required.

Prerequisite(s):

Geology 2611. ~~2620.~~

Corequisite(s):

Credit Hours

Credit Hours

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. 10/14/25 1:36 pm Stephen Gao (sgao): Approved for RGEOSENG Chair
2. 10/14/25 4:18 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:59 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:37 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:12 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:16 am

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Credit Type	Credit Hours
Laboratory	1
Lecture	3

Total: 4

Required for Majors: No

Elective for Majors: Yes

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed GEOL 2620 from the prerequisite, as this course is no longer offered regularly. Added GEOL 2611, which is a required course for the major.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments: **Jade McCain (jm558v) (10/14/25 4:15 pm):** Selected "yes" elective for majors and selected "no" for communication intensive and communication emphasized.

Key: 6671

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 1:31 pm

Viewing: GEOLOGY 5631 : Carbonate Petrology

Formerly known as: GEOLOGY 432

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

Last edit: 10/14/25 4:21 pm

Changes proposed by: Kelly Liu (liukh)

Programs referencing this course	**GEOLOGY 5631:** PET SYS-CT: Petroleum Systems CT

Requested Effective Date	Fall 2026
Department	Earth Sciences and Engineering (RGEOSENG)
Discipline	Geology (GEOLOGY)
Course Number	5631
Title	Carbonate Petrology
Abbreviated Course Title	Carbonate Petrology
Co-Listed Course	

Catalog Description

Petrology, chemistry and sedimentology of carbonates and other associated chemical sedimentary rocks.

Prerequisite(s):

Geology 2611, Geology ~~GEOLOGY 2620,~~ 3620 and Chem ~~CHEM~~ 1320 or equivalent; Geology ~~GEOLOGY~~ 3410 recommended.

Corequisite(s):

Credit Hours

Credit Hours

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. 10/14/25 1:36 pm Stephen Gao (sgao): Approved for RGEOSENG Chair
2. 10/14/25 4:22 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:59 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:37 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:12 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:16 am

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jul 7, 2014 by Francisca Oboh-Ikuenobe (ikuenobe)

Credit Type	Credit Hours
Lecture	2
Laboratory	1

Total: 3

Required for Majors: No

Elective for Majors: Yes ~~No~~

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed GEOL 2620 from the prerequisite, as this course is no longer offered regularly. Added GEOL 2611, which is a required course for the major.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments: **Jade McCain (jm558v) (10/14/25 4:21 pm):** Corrected prerequisite formatting, selected "yes" for elective for majors, and selected "no" for communication intensive and communication emphasized.

Key: 1793

Preview Bridge

Course Change Request

Date Submitted: 10/14/25 1:35 pm

Viewing: GEOLOGY 5671 : Clay Mineralogy

Last edit: 10/14/25 4:31 pm

Changes proposed by: Kelly Liu (liukh)

Programs referencing this course	PET SYS-CT: Petroleum Systems CT GL&GPH-BS: Geology and Geophysics BS

Requested Effective Date	Fall 2026
Department	Earth Sciences and Engineering (RGEOSENG)
Discipline	Geology (GEOLOGY)
Course Number	5671
Title	Clay Mineralogy
Abbreviated Course Title	Clay Mineralogy
Co-Listed Course	

Catalog Description

Mineral structure, geochemical properties, occurrence, environment, and uses of clays. Determination of physical properties, optics, x-ray diffraction, and thermal features of clays. Field trip fee required.

Prerequisite(s):

Geology 2611 ~~2610~~ and Geology 3410, or Chem 2310, or Civ Eng 5715, or Geo Eng 5172.

Corequisite(s):

Credit Hours

Credit Hours

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. 10/14/25 1:36 pm Stephen Gao (sgao): Approved for RGEOSENG Chair
2. 10/14/25 4:32 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:59 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:37 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:12 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:16 am

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Credit Type	Credit Hours
Laboratory	1
Lecture	2

Total: 3

Required for Majors: No

Elective for Majors: Yes

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed GEOL 2610 from the prerequisite, as this course is no longer offered regularly. Added GEOL 2611, which is a required course for the major.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments: **Jade McCain (jm558v) (10/14/25 4:26 pm):** Selected "yes" for elective for majors and selected "no" for communication intensive and communication emphasized.
Jade McCain (jm558v) (10/14/25 4:31 pm): Corrected prerequisite formatting, selected "yes" for elective for majors, and selected "no" for communication intensive and communication emphasized.

Key: 6683

Preview Bridge

Course Change Request

Date Submitted: 10/03/25 9:12 am

Viewing: GEOPHYS 4231 : Seismic Interpretation

Last approved: 11/01/21 6:01 am

Last edit: 10/03/25 9:12 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	GEOPHY-CT: Geophysics Graduate CT PET SYS-CT: Petroleum Systems CT CM ENG-CT: Carbon Management Engineering CT GL&GPH-BS: Geology and Geophysics BS

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. 10/03/25 9:37 am Stephen Gao (sgao): Approved for RGEOSENG Chair
2. 10/03/25 10:06 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/09/25 7:46 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:37 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:12 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:16 am

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. May 24, 2016 by Kelly Liu (liukh)
2. Nov 1, 2021 by David Borrok (borrokd)

Justification for this inactivation request

Requested Effective Date	Fall 2026
Department	Earth Sciences and Engineering (RGEOSENG)
Discipline	Geophysics (GEOPHYS)
Course Number	4231
Title	Seismic Interpretation
Abbreviated Course Title	Seismic Interpretation
Co-Listed Course	

Catalog Description: An introduction to 2-D/3-D seismic structural interpretation, stratigraphic interpretation, reservoir identification and evaluation, and horizon and formation attributes. The students are expected to master interactive 2-D/3-D seismic interpretation software packages that are routinely used in the petroleum industry.

Prerequisite(s): Math 1211 ~~1208, Math 1211,~~ or Math 1214; Geology 1110 or Geo Eng 1150.

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 Intensive	No
Communication Emphasized	No
Grading Basis	Graded
Repeatable	No

Justification	Removed Math 1208 from the CC form. This course is not printed in the catalog and has not been taught since fall 2016.

Semesters Previously Offered

Term(s) Offered as experimental	
Previous Course Code	
Is this a MOTR Course?	
Reviewer Comments	

Key: 2569

Preview Bridge

Course Change Request

Date Submitted: 10/03/25 9:13 am

Viewing: GEOPHYS 5202 : Exploration and Development Seismology

Formerly known as: GEOPHYS 4251 / PGEOPHYS 5202

Last approved: 07/31/24 6:04 am

Last edit: 10/03/25 10:09 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	**GEOPHYS 5202:** GEOPHY-CT: Geophysics Graduate CT PET SYS-CT: Petroleum Systems CT CM ENG-CT: Carbon Management Engineering CT GL&GPH-BS: Geology and Geophysics BS
Other Courses referencing this course	In The Catalog Prerequisites: **GEOPHYS 5202:** GEOPHYS 5231 : Seismic Data Processing GEOPHYS 6211 : Advanced Seismic Interpretation GEOPHYS 6231 : Advanced Seismic Data Processing

Requested Effective Date	Fall 2026
Department	Earth Sciences and Engineering (RGEOSENG)
Discipline	Geophysics (GEOPHYS)
Course Number	5202
Title	Exploration and Development Seismology
Abbreviated Course Title	Expl & Devlp Seismology
Co-Listed Course	

Catalog Description

Principles of reflection seismology as applied to the delineation of geologic structures and the determination of stratigraphy and lithology. Emphasis on both the capabilities and limitations of the seismic method. The laboratory utilizes both modeled and actual seismic data.

Prerequisite(s):

Math 1211 ~~1208, Math 1211,~~ or Math 1214; Geology 1110 or Geo Eng 1150.

Corequisite(s):

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. 10/03/25 9:37 am Stephen Gao (sgao): Approved for RGEOSENG Chair
2. 10/03/25 10:09 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/09/25 7:46 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:37 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:12 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:16 am

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Feb 9, 2015 by Kelly Liu (liukh)
2. Feb 23, 2015 by kleb6b
3. Oct 19, 2015 by Kelly Liu (liukh)
4. Oct 26, 2021 by David Borrok (borrokd)
5. Jul 31, 2024 by Evie Sherlock (esdk3)

Credit Hours

Credit Hours

Credit Type	Credit Hours
Laboratory	1
Lecture	2

Total: 3

Required for Majors: No

Elective for Majors: Yes

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed Math 1208 from the CC form. This course is not printed in the catalog and has not been taught since fall 2016.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments	**Jade McCain (jm558v) (10/03/25 10:09 am):** Selected "no" for communication intensive and communication emphasized.

Key: 768

Preview Bridge

Course Change Request

Date Submitted: 10/06/25 5:37 pm

Viewing: GEOPHYS 6231 : Advanced Seismic Data Processing

Last edit: 10/07/25 9:45 am

Changes proposed by: Kelly Liu (liukh)

Programs referencing this course	GEOPHY-CT: Geophysics Graduate CT

Requested Effective Date	Fall 2026
Department	Earth Sciences and Engineering (RGEOSENG)
Discipline	Geophysics (GEOPHYS)
Course Number	6231
Title	Advanced Seismic Data Processing
Abbreviated Course Title	Adv Seismic Data Proc
Co-Listed Course	

Catalog Description

Theory and application of seismic data processing. Topics to be covered include convolution, correlation, deconvolution, 2-D filtering, migration and inversion.

Prerequisite(s):

Geophys 3210 or Geophys 4231. ~~5202, 5231, Stat 3115.~~

Corequisite(s):

Credit Hours

Credit Hours

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. 10/02/25 2:52 pm Stephen Gao (sgao): Approved for RGEOSENG Chair
2. 10/02/25 3:37 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/06/25 4:03 pm Theresa Swift (thswift): Rollback to RGEOSENG Chair for Engineering DSCC Chair
4. 10/06/25 4:51 pm Stephen Gao (sgao): Rollback to Initiator
5. 10/06/25 5:40 pm Stephen Gao (sgao): Approved for RGEOSENG Chair
6. 10/07/25 9:57 am Jade McCain (jm558v): Approved

for CCC Secretary
7. 10/17/25 2:15 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
8. 11/03/25 3:37 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
9. 11/21/25 11:12 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
10. 11/21/25 11:16 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Credit Type	Credit Hours
Lecture	2
Laboratory	1

Total: 3

Required for Majors: No

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Revised the pre-requisites to Geophys 3210 or 4231, which provide the essential background for this class, making it more accessible to students without compromising preparedness.

Semesters Previously Offered

Term(s) Offered as

experimental

Is this a MOTR Course?

Reviewer Comments

Theresa Swift (thswift) (10/06/25 4:03 pm): Rollback: Department requested to update prerequisites.
Stephen Gao (sgao) (10/06/25 4:51 pm): Rollback: Change pre-req.
Jade McCain (jm558v) (10/07/25 9:45 am): Added punctuation.

Key: 6726

Preview Bridge

Course Change Request

Date Submitted: 10/03/25 1:16 pm

Viewing: IS&T 5520 : Data Science and Machine Learning with Python

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

Last edit: 10/03/25 1:16 pm

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	ANA&DTA-MI: Business Analytics and Data Science Minor AI-MI: Minor in Artificial Intelligence and Machine Learning in Business FIN TCH-MI: Minor in Financial Technology, Analytics and Transformation FIN TCH-CT: Financial Technology, Analytics and Transformation CT AI-CT: AI, Mach Lrn & Auto for Bus CT ANA&DTA-CT: Bus Analytics & Data Sci CT IS&T-MS: Info Science & Tech MS IST-BS: Information Science and Tch BS

Requested Effective Date	Fall 2026
Department	Business and Information Tech (RBUS&IT)
Discipline	Info Science & Technology (IS&T)
Course Number	5520
Title	Data Science and Machine Learning with Python
Abbreviated Course Title	Data Sci ML in Python
Co-Listed Course	

Catalog Description

Examines data science methodologies for scraping, manipulating, transforming, cleaning, visualizing, summarizing, and modeling large-scale data as well as supervised and unsupervised machine learning algorithms applied in various business analytics and data science scenarios. Python libraries such as Pandas, NumPy, Matplotlib, and Scikit-learn are utilized.

Prerequisite(s):

One of Stat 1115, ~~3111,~~ Stat 3113 ~~3113, Stat 3115,~~ or Stat 3117; one of IS&T 1552, IS&T 1562, Comp Sci 1575; for Graduate Students: knowledge of calculus, statistics, and programming.

Corequisite(s):

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. 10/02/25 3:37 pm Cassie Elrod (cassa): Rollback to Initiator
2. 10/03/25 1:26 pm Cassie Elrod (cassa): Approved for RBUS&IT Chair
3. 10/06/25 3:34 pm Jade McCain (jm558v): Approved for CCC Secretary
4. 10/06/25 5:42 pm Cecil Eng Huang Chua (cchua): Approved for Social Sciences DSCC Chair
5. 11/03/25 3:37 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
6. 11/21/25 11:13 am Jade McCain (jm558v): Approved

for CCC Meeting Agenda
7. 11/21/25 11:16 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Sep 29, 2017 by barryf
2. Nov 20, 2017 by barryf
3. Jun 20, 2018 by barryf
4. Oct 29, 2018 by barryf
5. Feb 4, 2019 by barryf
6. Jul 31, 2024 by Jade McCain (jm558v)

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	Removed stat courses the math department says is being inactivated per their email sent to departments on September 15. Also, added Stat 1115 to the pre-req per BUS/IST department request.

Semesters Previously Offered

Term(s) Offered as

experimental

Is this a MOTR Course?

Reviewer Comments **Cassie Elrod (cassa) (10/02/25 3:37 pm):** Rollback: Please add STAT 1115 as a prereq

Key: 4407

Preview Bridge

Course Change Request

Date Submitted: 10/03/25 1:17 pm

Viewing: IS&T 5535 : Machine Learning Algorithms and Applications

Last approved: 10/29/18 5:56 am

Last edit: 10/03/25 1:17 pm

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	AI-MI: Minor in Artificial Intelligence and Machine Learning in Business AI-CT: AI, Mach Lrn & Auto for Bus CT ANA&DTA-CT: Bus Analytics & Data Sci CT GEINTEL-CT: Geoanalytics and Geointelligence Certificate IS&T-MS: Info Science & Tech MS

Requested Effective Date	Fall 2026
Department	Business and Information ~~Science &~~ Tech (RBUS&IT) ~~(RINFSCTE)~~
Discipline	Info Science & Technology (IS&T)
Course Number	5535
Title	Machine Learning Algorithms and Applications
Abbreviated Course Title	ML Algs and Apps
Co-Listed Course	

Catalog Description

Introduces techniques of modern machine learning methods with applications in marketing, finance, and other business disciplines. Topics include regression, classification, resampling methods, model selection, regularization, decision trees, support vector machines, principal component analysis, and clustering. R programming is required.

Prerequisite(s):

One of Stat 1115, ~~3111,~~ Stat 3113 or ~~3113,~~ Stat ~~3115, Stat~~ 3117; one of IS&T 1552, IS&T 1562, Comp Sci 1575; or ~~or~~ Graduate Standing with knowledge of calculus, statistics, and programming.

Corequisite(s):

Credit Hours

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. 10/02/25 3:37 pm Cassie Elrod (cassa): Rollback to Initiator
2. 10/03/25 1:26 pm Cassie Elrod (cassa): Approved for RBUS&IT Chair
3. 10/06/25 3:36 pm Jade McCain (jm558v): Approved for CCC Secretary
4. 10/06/25 5:42 pm Cecil Eng Huang Chua (cchua): Approved for Social Sciences DSCC Chair
5. 11/03/25 3:37 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
6. 11/21/25 11:13 am Jade McCain (jm558v): Approved

Credit Hours

for CCC Meeting Agenda

7. 11/21/25 11:16 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Nov 20, 2017 by barryf
2. Jun 20, 2018 by barryf
3. Oct 29, 2018 by barryf

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: Removed stat courses the math department says is being inactivated per their email sent to departments on September 15. Also, added Stat 1115 to the pre-req per BUS/IST department request.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer: **Cassie Elrod (cassa) (10/02/25 3:37 pm):** Rollback: Please add STAT 1115 as a prereq

Comments

Key: 4471

Preview Bridge

Course Change Request

Date Submitted: 10/17/25 3:56 pm

Viewing: MATH 1212 : Survey of Calculus

Last approved: 02/08/21 6:01 am

Last edit: 10/17/25 3:56 pm

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	PRE-MED-MI: Pre-Medicine Minor BIO SC-BS: Biological Sciences BS EDUC-BS: Education BS ECON-BA: Economics BA ENV SCI-BS: Environmental Science BS ECON-BS: Economics BS
Other Courses referencing this course	In The Catalog Prerequisites: ENV ENG 2601 : Fundamentals of Environmental Engineering and Science MATH 5762 : Marketing Revolution with Machine Learning MKT 5762 : Marketing Revolution with Machine Learning STAT 3425 : Introduction to Biostatistics

Requested Effective Date	Fall 2026
Department	Mathematics & Statistics (RMATHEMA)
Discipline	Mathematics (MATH)
Course Number	1212
Title	Survey of Calculus
Abbreviated Course Title	Survey of Calculus
Co-Listed Course	

Catalog Description

A survey of derivatives, optimization, exponential and logarithmic functions, integration, multivariate functions, partial derivatives, and Lagrange multipliers with applications in business, economics, and biology. This course is not appropriate for engineering or physical science majors. May not be used as a prerequisite for ~~either~~ Math 1215. ~~1215 or Math 1221.~~

Prerequisite(s):

A grade of "C" or better in either Math 1120, Math 1140, or Math 1210; or by placement exam.

Corequisite(s):

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. 10/17/25 5:03 pm John Singler (singlerj): Approved for RMATHEMA Chair
2. 10/23/25 11:31 am Crystal Wilson (wilsoncry): Approved for CCC Secretary
3. 10/31/25 1:26 pm Katie Shannon (shannonk): Approved for Sciences DSCC Chair
4. 11/03/25 3:37 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:13 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:17 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Apr 25, 2014 by Lahne Black (lahne)
2. Feb 8, 2021 by Paul Runnion (prunnion)

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3
Laboratory	1

Total: 4

Required for Majors: No

Elective for Majors: Yes

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed math 1221 from the catalog description as this course is not being offered and has been removed from the listing in the catalog.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 2178

Preview Bridge

Course Change Request

Date Submitted: 10/24/25 12:30 pm

Viewing: MATH 5762 : Marketing Revolution with Machine Learning

Also listed as: MKT 5762

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

Last edit: 10/27/25 9:36 am

Changes proposed by: Cecil Eng Huang Chua (cecq8z)

Programs referencing this course	**MATH 5762:** AP MATH-BS: Applied Mathematics BS PROPOSED: Applied Artificial Intelligence MS **MKT 5762:** IS&T-MS: Info Science & Tech MS

Requested Effective Date	Fall 2026	
Department	Mathematics & Statistics (RMATHEMA)	
Discipline	Mathematics (MATH)	
Course Number	5762	
Title	Marketing Revolution with Machine Learning	
Abbreviated Course Title	ML in Marketing	
Co-Listed Course	MKT 5762	Department Business and Information Tech (RBUS&IT)

Catalog Description

This course introduces machine learning and artificial intelligence applications in marketing innovation contexts through case studies and industry collaborations, explores the underlying mathematics and implements algorithms using Python programming language.

Prerequisite(s):

Graduate standing or one of the following: Math 1210, ~~1212 or~~ Math 1211, Math 1212 or Math 1214.

Corequisite(s):

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. 10/22/25 12:35 pm John Singler (singlerj): Rollback to Initiator
2. 10/24/25 12:48 pm John Singler (singlerj): Approved for RMATHEMA Chair
3. 10/27/25 9:36 am Jade McCain (jm558v): Approved for CCC Secretary
4. 10/31/25 1:27 pm Katie Shannon (shannonk): Approved for Sciences DSCC Chair
5. 11/03/25 3:37 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
6. 11/21/25 11:13 am Jade McCain

Credit Hours

Credit Hours

(jm558v): Approved for CCC Meeting Agenda

7. 11/21/25 11:17 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jan 31, 2024 by John Singler (singlerj)
2. Jul 31, 2024 by Crystal Wilson (wilsoncry)

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	Updated to reflect changes in the math department course offerings.

Semesters Previously Offered

Term(s) Offered as experimental	
Is this a MOTR Course?	

Reviewer Comments	**John Singler (singlerj) (10/22/25 12:35 pm):** Rollback: Math 1212 is still an active course **Jade McCain (jm558v) (10/27/25 9:36 am):** Selected "no" for communication emphasized and

communication intensive.

Key: 5004

Preview Bridge

Course Change Request

Date Submitted: 10/18/25 12:49 pm

Viewing: MET ENG 2110 : Metallurgy For Engineers

Last edit: 10/27/25 9:28 am

Changes proposed by: David Lipke (lipked)

Programs referencing this course	NU ENG-BS: Nuclear Engineering BS AE ENG-BS: Aerospace Engineering BS MAT S E-MI: Materials Science and Engineering Minor MC ENG-BS: Mechanical Engineering BS MT ENG-BS: Metallurgical Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: CER ENG 3410 : Characterization Of Inorganic Solids CER ENG 4410 : Introduction to Integrated Computational Materials Engineering MECH ENG 3708 : Machine Design I MET ENG 3120 : Fundamentals Of Materials Behavior MET ENG 3125 : Mechanical Testing of Materials MET ENG 3130 : Metals Microstructural Development MET ENG 3420 : Principles Of Materials Processing MET ENG 4325 : Ferrous Microstructures MET ENG 5150 : Introduction to Metal Additive Manufacturing MET ENG 5170 : Nuclear Materials I MET ENG 5430 : Metals Joining MET ENG 5620 : Materials Behavior NUC ENG 4241 : Nuclear Materials I NUC ENG 5241 : Nuclear Materials I

Requested Effective Date	Fall 2026
Department	Materials Science & Engineering (RMATSENG)
Discipline	Metallurgical Engineering (MET ENG)
Course Number	2110
Title	Metallurgy For Engineers
Abbreviated Course Title	Metallurgy For Engineers
Co-Listed Course	

Catalog Description

In Workflow

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

Approval Path

1. 10/20/25 9:38 am Michael Moats (moatsm): Approved for RMATSENG Chair
2. 10/27/25 9:28 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:59 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:37 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:13 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

Introduction to the structure and properties of metals and alloys and to processes used to modify the structure and properties of metallic materials, including alloying, deformation and heat treating.

Prerequisite(s):

Chem 1305 ~~Preceded~~ or Chem 1310. ~~accompanied by Chem 1310, prior or concurrent.~~

Corequisite(s):

6. 11/21/25 11:17 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

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: Majors requiring this course now allow Chem 1305 as alternative to Chem 1310. Additionally, instructing faculty have determined that concepts from General Chemistry 1 or equivalent are necessary pre-requisites and students co-enrolled are at disadvantage. Given that this course in affected majors is recommended multiple semesters after General Chemistry 1, we feel making this a hard pre-requisite and disallowing co-requisite will improve student learning outcomes without negatively affecting progress towards degrees.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments: **Jade McCain (jm558v) (10/27/25 9:28 am):** Selected "yes" for elective for majors and selected "no" for communication emphasized and communication intensive.

Key: 8932

Preview Bridge

Course Change Request

Date Submitted: 09/30/25 2:25 pm

Viewing: MIN ENG 5522 : Ore Reserve Analysis and Geostatistics

Last approved: 01/29/24 6:01 am

Last edit: 09/30/25 2:25 pm

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	MINEPRO-CT: Mining Project Evaluation CT GEOL-MI: Geology Minor MI ENG-BS: Mining Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: MIN ENG 4096 : Computer Aided Mine Design

Requested Effective Date	Fall 2026
Department	Mining and Explosives Engineering (RMINENG)
Discipline	Mining Engineering (MIN ENG)
Course Number	5522
Title	Ore Reserve Analysis and Geostatistics
Abbreviated Course Title	Ore Rsr Anly & Geostat
Co-Listed Course	

Catalog Description

Principles of geostatistics, theory of spatially correlated random variables, variance and co-variances and their application on the evaluation of mineral resources, ore reserve estimation, strategic exploration, and production planning. Real case studies from mining industry will be presented.

Prerequisite(s):

Stat 3113. ~~3113 or Stat 3115.~~

Corequisite(s):

Credit Hours

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
10. CAT entry
11. Peoplesoft

Approval Path

1. 10/09/25 8:33 am Kwame Awuah-Offei (kabp3): Approved for RMINENG Chair
2. 10/09/25 9:30 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/17/25 2:14 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:38 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:13 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:17 am

Credit Hours

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Mar 5, 2018 by Tina Alobaidan (cifarellit)
2. Oct 5, 2023 by Jennifer Pohlsander (jpnfd)
3. Jan 29, 2024 by Stephen Casey (caseysc)

Credit Type	Credit Hours
Lecture	2
Laboratory	1

Total: 3

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed Stat 3115 from the pre-req. Per email received from the math/stat department, “Stat 3115: will no longer be offered. The statistics faculty group believes the redesigned Stat 3113 provides stronger, broader preparation for students in majors that previously required 3115.”

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer

Comments

Key: 1344

Preview Bridge

Course Change Request

Date Submitted: 10/08/25 10:16 am

Viewing: NUC ENG 2105 : Introduction To Nuclear Engineering

Last edit: 10/08/25 10:16 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	NU ENG-BS: Nuclear Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: NUC ENG 4456 : Reactor Operation II NUC ENG 4577 : Nuclear Forensics and Radiochemistry NUC ENG 5456 : Reactor Operation II

Justification for this inactivation request

Requested Effective Date	Fall 2026
Department	Nuclear Eng & Radiation Sci (RNUCLENG)
Discipline	Nuclear Engineering (NUC ENG)
Course Number	2105
Title	Introduction To Nuclear Engineering
Abbreviated Course Title	Intro Nuclear Eng
Co-Listed Course	

Catalog Description

Atoms and nuclei; nuclear reactions; radioactivity; interactions of radiation with matter; fission and fusion reactors; nuclear fuels; radiation effects on materials and man; radioactive waste disposal; reactor safety; radiation protection.

Prerequisite(s):

Math 1215. ~~1215 or Math 1221.~~

Corequisite(s):

Credit Hours

In Workflow

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

Approval Path

1. 10/08/25 10:37 am Joseph Newkirk (jnewkirk): Approved for NUC ENG Chair
2. 10/08/25 1:25 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/17/25 2:14 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:38 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:13 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

Credit Hours

6. 11/21/25 11:17 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Credit Type	Credit Hours
Lecture	2

Total: 2

Required for Majors Yes ~~No~~

Elective for Majors No

Communication Intensive No

Communication Emphasized No

Grading Basis Graded

Repeatable No

Justification With department approval, removing Math 1221 from the pre-req as this course has been removed from the catalog as it has not been taught since fall 2016.

Semesters Previously Offered

Term(s) Offered as experimental

Previous Course

Is this a MOTR Course?

Reviewer Comments

Key: 9116

Preview Bridge

Course Change Request

Date Submitted: 10/08/25 10:14 am

Viewing: NUC ENG 2406 : Reactor Operations I

Last approved: 07/31/24 6:05 am

Last edit: 10/08/25 10:14 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	NU ENG-BS: Nuclear Engineering BS

Requested Effective Date	Fall 2026
Department	Nuclear Eng & Radiation Sci (RNUCLENG)
Discipline	Nuclear Engineering (NUC ENG)
Course Number	2406
Title	Reactor Operations I
Abbreviated Course Title	Reactor Operations I
Co-Listed Course	

Catalog Description

A first course in reactor operations training and practical approach to nuclear reactor concepts. Students will receive hands-on training and are encouraged to take the NRC Reactor Operator's Exam.

Prerequisite(s):

Math 1214 or Math ~~1208 or Math~~ 1211.

Corequisite(s):

Credit Hours

Credit Hours

In Workflow

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

Approval Path

1. 10/08/25 10:37 am Joseph Newkirk (jnewkirk): Approved for NUC ENG Chair
2. 10/08/25 1:26 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/17/25 2:14 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:38 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:13 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:17 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Mar 3, 2021 by Joseph Graham (grahamjose)
2. Nov 15, 2021 by Joshua Schlegel (schlegelj)
3. Jul 31, 2024 by Evie Sherlock (esdk3)

Credit Type	Credit Hours
Laboratory	1

Total: 1

Required for Majors: No

Elective for Majors: Yes

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: With department approval, removing Math 1208 from the pre-req as this course has been removed from the catalog as it has not been taught since fall 2016.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 1630

Preview Bridge

Course Change Request

Date Submitted: 10/16/25 11:24 am

Viewing: PHYSICS 1111 : General Physics I

Last edit: 10/16/25 11:24 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	PHYSIC-MI: Physics Minor CP ENG-BS: Computer Engineering BS EL ENG-BS: Electrical Engineering BS GL&GPH-BS: Geology and Geophysics BS
Other Courses referencing this course	**In The Catalog Prerequisites:** AERO ENG 2861 : Aerospace Vehicle Performance AERO ENG 3131 : Aerodynamics I AERO ENG 3251 : Aerospace Structures I AERO ENG 3613 : Aerospace Mechanics I CHEM 2410 : Physical Chemistry I CHEM 3410 : Chemical Thermodynamics I CHEM 4710 : Principles Of Environmental Monitoring CIV ENG 2200 : Statics MECH ENG 2340 : Statics and Dynamics MECH ENG 2519 : Thermodynamics MECH ENG 2527 : Thermal Analysis MECH ENG 2653 : Introduction To Manufacturing Processes MECH ENG 2761 : Introduction To Mechanical Design MECH ENG 3313 : Machine Dynamics MECH ENG 3411 : Modeling and Analysis of Dynamic Systems PHYSICS 1119 : General Physics Laboratory PHYSICS 2111 : General Physics II PHYSICS 2135 : Engineering Physics II **In The Catalog Description:** PHYSICS 1119 : General Physics Laboratory

Requested Effective Date	Fall 2026
Department	Physics (RPHYSICS)
Discipline	Physics (PHYSICS)
Course Number	1111
Title	General Physics I
Abbreviated Course	General Physics I

In Workflow

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

Approval Path

1. 10/16/25 2:12 pm Thomas Vojta (vojtat): Approved for RPHYSICS Chair
2. 10/16/25 2:45 pm Crystal Wilson (wilsoncry): Approved for CCC Secretary
3. 10/31/25 1:30 pm Katie Shannon (shannonk): Approved for Sciences DSCC Chair
4. 11/03/25 3:38 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:13 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:17 am

Title

Co-Listed Course

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Catalog Description

An introduction to the fundamental ideas of physics, including mechanics, heat, and sound.

Prerequisite(s): Preceded by Math ~~1208 or Math~~ 1214.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	4

Total: 4

Required for Majors: No

Elective for Majors: Yes

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed Math 1208 from the CC form. This course is not printed in the catalog and has not been taught since fall 2016.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 9279

Preview Bridge

Course Change Request

Date Submitted: 10/16/25 11:25 am

Viewing: PHYSICS 1135 : Engineering Physics I

Last approved: 09/11/24 6:03 am

Last edit: 10/16/25 11:25 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	NU ENG-BS: Nuclear Engineering BS PE ENG-BS: Petroleum Engineering BS PHYSIC-BS: Physics BS PHYSIC-MI: Physics Minor PRE-MED-MI: Pre-Medicine Minor AE ENG-BS: Aerospace Engineering BS AP MATH-BS: Applied Mathematics BS ARC ENG-BS: Architectural Engineering BS BIO SC-BA: Biological Sciences BA BIO SC-BS: Biological Sciences BS CR ENG-BS: Ceramic Engineering BS CH ENG-BS: Chemical Engineering BS CHEM-BA: Chemistry BA CV ENG-BS: Civil Engineering BS CP ENG-BS: Computer Engineering BS EL ENG-BS: Electrical Engineering BS GE ENG-BS: Geological Engineering BS CHEM-BS: Chemistry BS FR ENG-UN: Foundational Engineering and Computing CMP SC-BS: Computer Science BS MED LAB: Biological Sciences BS with Emphasis area in Medical Laboratory Scientist ENV SCI-BS: Environmental Science BS BIOMED-BS: Biomedical Engineering BS SEMI EN-BS: Semiconductor Engineering BS ENG MG-BS: Engineering Management BS EV ENG-BS: Environmental Engineering BS GL&GPH-BS: Geology and Geophysics BS MC ENG-BS: Mechanical Engineering BS MT ENG-BS: Metallurgical Engineering BS MI ENG-BS: Mining Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: AERO ENG 2861 : Aerospace Vehicle Performance AERO ENG 3131 : Aerodynamics I AERO ENG 3251 : Aerospace Structures I AERO ENG 3613 : Aerospace Mechanics I

In Workflow

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

Approval Path

1. 10/16/25 2:12 pm Thomas Vojta (vojtat): Approved for RPHYSICS Chair
2. 10/16/25 2:45 pm Crystal Wilson (wilsoncry): Approved for CCC Secretary
3. 10/31/25 1:30 pm Katie Shannon (shannonk): Approved for Sciences DSCC Chair
4. 11/03/25 3:38 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:13 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:17 am

ARCH ENG 4448 : Fundamentals Of Construction Engineering & Management
CHEM 2410 : Physical Chemistry I
CHEM 3410 : Chemical Thermodynamics I
CHEM 4710 : Principles Of Environmental Monitoring
CHEM ENG 2100 : Chemical Engineering Material & Energy Balances
CHEM ENG 4301 : Chemical Process Materials
CIV ENG 2200 : Statics
CIV ENG 3116 : Construction Materials, Properties And Testing
CIV ENG 3715 : Fundamentals of Geotechnical Engineering
CIV ENG 4448 : Fundamentals Of Construction Engineering & Management
ENV ENG 3603 : Chemical Fundamentals Of Environmental Engineering
EXP ENG 6212 : Theory Of High Explosives
GEO ENG 2536 : Basic Weather
MECH ENG 2340 : Statics and Dynamics
MECH ENG 2519 : Thermodynamics
MECH ENG 2527 : Thermal Analysis
MECH ENG 2653 : Introduction To Manufacturing Processes
MECH ENG 2761 : Introduction To Mechanical Design
MECH ENG 3313 : Machine Dynamics
MECH ENG 3411 : Modeling and Analysis of Dynamic Systems
PET ENG 3320 : Petrophysics
PHYSICS 2111 : General Physics II
PHYSICS 2135 : Engineering Physics II

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Oct 4, 2021 by Thomas Vojta (vojtat)
2. Sep 11, 2024 by Evie Sherlock (esdk3)

Requested Effective Date	Fall 2026
Department	Physics (RPHYSICS)
Discipline	Physics (PHYSICS)
Course Number	1135
Title	Engineering Physics I
Abbreviated Course Title	Engineering Physics I
Co-Listed Course	

Catalog Description	An introduction to mechanics, with an emphasis on topics needed by engineering students, including kinematics, dynamics, statics, and energetics.
Prerequisite(s):	A grade of "C" or better in Math ~~1208 or Math~~ 1211 or Math 1214.
Corequisite(s):	

Credit Hours

Credit Hours

Credit Type	Credit Hours
Recitation/Seminar/Discussion	1.5
Laboratory	1
Lecture	1.5

Total: 4

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed Math 1208 from the CC form. This course is not printed in the catalog and has not been taught since fall 2016.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

attribute
Advanced Physics I with Lab (PHYS 200L)

Reviewer Comments

Key: 1283

Preview Bridge

Course Change Request

Date Submitted: 10/16/25 11:26 am

Viewing: PHYSICS 2111 : General Physics II

Last approved: 06/27/16 3:11 am

Last edit: 10/16/25 11:26 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	PHYSIC-MI: Physics Minor CP ENG-BS: Computer Engineering BS EL ENG-BS: Electrical Engineering BS CMP SC-BS: Computer Science BS
Other Courses referencing this course	**In The Catalog Prerequisites:** CHEM 2420 : Physical Chemistry II CHEM 3420 : Introduction To Quantum Chemistry CHEM 5420 : Elemental Quantum Chemistry CHEM 5710 : Environmental Monitoring MECH ENG 3411 : Modeling and Analysis of Dynamic Systems MECH ENG 4840 : Mechanical Instrumentation PHYSICS 2119 : General Physics Laboratory PHYSICS 5413 : Chaos, Fractals, and Nonlinear Dynamics **In The Catalog Description:** PHYSICS 2119 : General Physics Laboratory

Requested Effective Date	Fall 2026
Department	Physics (RPHYSICS)
Discipline	Physics (PHYSICS)
Course Number	2111
Title	General Physics II
Abbreviated Course Title	General Physics II
Co-Listed Course	

Catalog Description

An introduction to the fundamental ideas of physics including electricity, magnetism, and light.

Prerequisite(s):

Preceded by Physics 1111 or Physics 1135 and preceded or accompanied by Math ~~1221 or Math~~ 1215.

In Workflow

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

Approval Path

1. 10/16/25 2:13 pm Thomas Vojta (vojtat): Approved for RPHYSICS Chair
2. 10/16/25 2:46 pm Crystal Wilson (wilsoncry): Approved for CCC Secretary
3. 10/31/25 1:30 pm Katie Shannon (shannonk): Approved for Sciences DSCC Chair
4. 11/03/25 3:38 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:13 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:17 am

Corequisite(s):

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Credit Hours

Credit Hours

History

1. Jun 27, 2016 by waddill

Credit Type	Credit Hours
Lecture	4

Total: 4

Required for Majors: No

Elective for Majors: Yes ~~No~~

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed Math 1221 from the CC form. This course is not printed in the catalog and has not been taught since fall 2016.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 1920

Preview Bridge

Course Change Request

Date Submitted: 10/16/25 11:28 am

Viewing: PHYSICS 2135 : Engineering Physics II

Last approved: 06/27/16 3:11 am

Last edit: 10/16/25 11:28 am

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	NU ENG-BS: Nuclear Engineering BS PE ENG-BS: Petroleum Engineering BS PHYSIC-BS: Physics BS PHYSIC-MI: Physics Minor PRE-MED-MI: Pre-Medicine Minor AE ENG-BS: Aerospace Engineering BS ARC ENG-BS: Architectural Engineering BS BIO SC-BA: Biological Sciences BA BIO SC-BS: Biological Sciences BS CR ENG-BS: Ceramic Engineering BS CH ENG-BS: Chemical Engineering BS CHEM-BA: Chemistry BA CV ENG-BS: Civil Engineering BS CP ENG-BS: Computer Engineering BS EL ENG-BS: Electrical Engineering BS GE ENG-BS: Geological Engineering BS CHEM-BS: Chemistry BS CMP SC-BS: Computer Science BS MED LAB: Biological Sciences BS with Emphasis area in Medical Laboratory Scientist BIOMED-BS: Biomedical Engineering BS SEMI EN-BS: Semiconductor Engineering BS ENG MG-BS: Engineering Management BS EV ENG-BS: Environmental Engineering BS MC ENG-BS: Mechanical Engineering BS MT ENG-BS: Metallurgical Engineering BS MI ENG-BS: Mining Engineering BS
Other Courses referencing this course	In The Catalog Corequisites: PHYSICS 2401 : Introduction To Theoretical Physics In The Catalog Prerequisites: ARCH ENG 4850 : Building Electrical Systems ARCH ENG 5820 : Building Lighting Systems CER ENG 6220 : Optical Properties Of Materials CHEM 2420 : Physical Chemistry II CHEM 3420 : Introduction To Quantum Chemistry CHEM 5420 : Elemental Quantum Chemistry

In Workflow

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

Approval Path

1. 10/16/25 2:13 pm Thomas Vojta (vojtat): Approved for RPHYSICS Chair
2. 10/16/25 2:46 pm Crystal Wilson (wilsoncry): Approved for CCC Secretary
3. 10/31/25 1:31 pm Katie Shannon (shannonk): Approved for Sciences DSCC Chair
4. 11/03/25 3:38 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:13 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:17 am

CIV ENG 3842 : Fundamentals of Building Systems
ELEC ENG 2200 : Introduction to Electronic Devices
ELEC ENG 2201 : Electronic Devices Laboratory
ELEC ENG 2800 : Electrical Circuits
ELEC ENG 3500 : Electromechanics
ELEC ENG 3600 : Electromagnetics
ELEC ENG 5200 : Classical Optics
ELEC ENG 5510 : Electric-Drive Vehicles
ELEC ENG 5670 : Nondestructive Testing
GEO ENG 5556 : Renewable Energy Systems
GEOPHYS 2211 : Geophysical Imaging
MECH ENG 3411 : Modeling and Analysis of Dynamic Systems
MECH ENG 4840 : Mechanical Instrumentation
MECH ENG 5543 : Energy Efficiency of Vehicles
MET ENG 5510 : Nondestructive Testing
MIN ENG 5912 : Mine Power and Drainage
NUC ENG 3103 : Interactions Of Radiation With Matter
PET ENG 3330 : Formation Evaluation
PHYSICS 2305 : Introduction To Modern Physics
PHYSICS 2311 : Modern Physics I
PHYSICS 4503 : Classical Optics
PHYSICS 5413 : Chaos, Fractals, and Nonlinear Dynamics

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jun 27, 2016 by waddill

Requested Effective Date	Fall 2026
Department	Physics (RPHYSICS)
Discipline	Physics (PHYSICS)
Course Number	2135
Title	Engineering Physics II
Abbreviated Course Title	Engineering Physics II
Co-Listed Course	

Catalog Description	An introduction to electricity, magnetism, and light, with emphasis on topics needed by engineering students.
Prerequisite(s):	Physics 1135 or Physics 1111, Math ~~1221 or Math~~ 1215.
Corequisite(s):	

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	1.5
Laboratory	1
Recitation/Seminar/Discussion	1.5

Total: 4

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed Math 1221 from the CC form. This course is not printed in the catalog and has not been taught since fall 2016.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 1919

Preview Bridge

Course Change Request

Date Submitted: 10/10/25 4:16 pm

Viewing: SEMI ENG 3100 : Semiconductor Materials Processing

Also listed as: COMP ENG 3210 / ELEC ENG 3210

Last approved: 06/28/25 6:04 am

Last edit: 10/10/25 4:16 pm

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	**SEMI ENG 3100:** SEMI EN-BS: Semiconductor Engineering BS

Requested Effective Date	Fall 2026	
Department	Materials Science & Engineering (RMATSENG)	
Discipline	Semiconductor Engineering (SEMI ENG)	
Course Number	3100	
Title	Semiconductor Materials Processing	
Abbreviated Course Title	Semi Mater Proc	
Co-Listed Course	COMP ENG 3210	Department Electrical & Computer Engr (RELECENG)
	ELEC ENG 3210	Department Electrical & Computer Engr (RELECENG)

Catalog Description

Examination of semiconductor processing stages, including cleaning, oxidation, ion implantation, diffusion and thermal processing, deposition and epitaxy, etching, metallization, and lithography.

Prerequisite(s):

A grade of "C" or better in Semi Eng 2100 or with instructor permission.

In Workflow

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

Approval Path

1. 10/10/25 7:33 pm Michael Moats (moatsm): Approved for RMATSENG Chair
2. 10/15/25 2:59 pm Crystal Wilson (wilsoncry): Approved for CCC Secretary
3. 10/15/25 4:34 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
4. 10/16/25 10:46 am Jade McCain (jm558v): Approved for CCC Secretary
5. 10/28/25 2:59 pm Theresa Swift (thswift): Approved

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Content is appropriate as Comp Eng and Elec Eng electives.

Semesters Previously Offered

Term(s) Offered as experimental

for Engineering DSCC Chair

6. 11/03/25 3:38 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
7. 11/21/25 11:14 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
8. 11/21/25 11:17 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jun 28, 2025 by David Lipke (lipke)

Is this a MOTR Course?

Reviewer Comments

Key: 10282

Preview Bridge

Course Change Request

Date Submitted: 10/10/25 4:17 pm

Viewing: SEMI ENG 3101 : Semiconductor Materials Processing Laboratory

Also listed as: COMP ENG 3211 / ELEC ENG 3211

Last approved: 06/28/25 6:04 am

Last edit: 10/10/25 4:17 pm

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	**SEMI ENG 3101:** SEMI EN-BS: Semiconductor Engineering BS

Requested Effective Date	Fall 2026	
Department	Materials Science & Engineering (RMATSENG)	
Discipline	Semiconductor Engineering (SEMI ENG)	
Course Number	3101	
Title	Semiconductor Materials Processing Laboratory	
Abbreviated Course Title	Semi Mater Proc Lab	
Co-Listed Course	COMP ENG 3211	Department Electrical & Computer Engr (RELECENG)
	ELEC ENG 3211	Department Electrical & Computer Engr (RELECENG)

Catalog Description

Front-end unit semiconductor process operations and testing, including cleaning, oxidation, ion implantation, diffusion and thermal processing, deposition and epitaxy, etching, metallization, and lithography.

Prerequisite(s):

A grade of "C" or better in Semi Eng 3019 and Elec Eng 2101; preceded or accompanied by

In Workflow

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

Approval Path

1. 10/10/25 7:34 pm Michael Moats (moatsm): Approved for RMATSENG Chair
2. 10/15/25 2:59 pm Crystal Wilson (wilsoncry): Approved for CCC Secretary
3. 10/15/25 4:34 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
4. 10/16/25 10:47 am Jade McCain (jm558v): Approved for CCC Secretary
5. 10/28/25 2:59 pm Theresa Swift (thswift): Approved

Semi Eng 3100 or with instructor permission.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	1
Laboratory	2

Total: 3

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: Yes

Grading Basis: Graded

Repeatable: No

Justification: Content is appropriate as Comp Eng and Elec Eng electives

Semesters Previously Offered

Term(s) Offered as

for Engineering DSCC Chair

6. 11/03/25 3:38 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
7. 11/21/25 11:14 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
8. 11/21/25 11:17 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jun 28, 2025 by David Lipke (lipke)

experimental

Is this a MOTR Course?

Reviewer Comments

Key: 10283

Preview Bridge

Course Change Request

Date Submitted: 10/10/25 4:17 pm

Viewing: SEMI ENG 4100 : Semiconductor Device Simulation

Also listed as: COMP ENG 4210 / ELEC ENG 4210

Last approved: 06/28/25 6:04 am

Last edit: 10/10/25 4:17 pm

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	**SEMI ENG 4100:** SEMI EN-BS: Semiconductor Engineering BS

Requested Effective Date	Fall 2026	
Department	Materials Science & Engineering (RMATSENG)	
Discipline	Semiconductor Engineering (SEMI ENG)	
Course Number	4100	
Title	Semiconductor Device Simulation	
Abbreviated Course Title	Semi Device Sim	
Co-Listed Course	COMP ENG 4210	Department Electrical & Computer Engr (RELECENG)
	ELEC ENG 4210	Department Electrical & Computer Engr (RELECENG)

Catalog Description

Semiconductor device simulation concepts: conventional and advanced MOS devices, bipolar transistors, heterostructures. Modern simulation tools such as SPICE and TCAD will be employed.

Prerequisite(s):

Preceded or accompanied by Elec Eng 3250 or Semi Eng 4101.

In Workflow

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

Approval Path

1. 10/10/25 7:35 pm Michael Moats (moatsm): Approved for RMATSENG Chair
2. 10/15/25 2:59 pm Crystal Wilson (wilsoncry): Approved for CCC Secretary
3. 10/15/25 4:34 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
4. 10/16/25 10:47 am Jade McCain (jm558v): Approved for CCC Secretary
5. 10/28/25 2:59 pm Theresa Swift (thswift): Approved

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Laboratory	1
Lecture	2

Total: 3

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Content is appropriate as Comp Eng and Elec Eng electives

Semesters Previously Offered

Term(s) Offered as

for Engineering DSCC Chair

6. 11/03/25 3:38 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
7. 11/21/25 11:14 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
8. 11/21/25 11:17 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jun 28, 2025 by David Lipke (lipke)

experimental

Is this a MOTR Course?

Reviewer Comments

Key: 10284

Preview Bridge

Course Change Request

Date Submitted: 10/10/25 4:18 pm

Viewing: SEMI ENG 4101 : Semiconductor Device Fabrication and Testing Laboratory

Also listed as: COMP ENG 4211 / ELEC ENG 4211

Last approved: 06/28/25 6:04 am

Last edit: 10/10/25 4:18 pm

Changes proposed by: Kelvin Erickson (kte)

Programs referencing this course	**SEMI ENG 4101:** SEMI EN-BS: Semiconductor Engineering BS

Requested Effective Date	Fall 2026	
Department	Materials Science & Engineering (RMATSENG)	
Discipline	Semiconductor Engineering (SEMI ENG)	
Course Number	4101	
Title	Semiconductor Device Fabrication and Testing Laboratory	
Abbreviated Course Title	Semi Device Fab Test Lab	
Co-Listed Course	COMP ENG 4211	Department Electrical & Computer Engr (RELECENG)
	ELEC ENG 4211	Department Electrical & Computer Engr (RELECENG)

Catalog Description

Unit process operations, including back-end operations, inspection, and metrology for process control, are integrated into complete manufacturing sequences for fabrication and testing of semiconductor devices.

Prerequisite(s):

A grade of "C" or better in Semi Eng 3101 and preceded by Elec Eng 2200 or Elec Eng 3250.

In Workflow

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

Approval Path

1. 10/10/25 7:35 pm Michael Moats (moatsm): Approved for RMATSENG Chair
2. 10/15/25 2:59 pm Crystal Wilson (wilsoncry): Approved for CCC Secretary
3. 10/15/25 4:34 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
4. 10/16/25 10:47 am Jade McCain (jm558v): Approved for CCC Secretary
5. 10/28/25 2:59 pm Theresa Swift (thswift): Approved

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Laboratory	2
Lecture	1

Total: 3

Required for Majors: Yes

Elective for Majors: No

Communication Intensive: No

Communication Emphasized: Yes

Grading Basis: Graded

Repeatable: No

Justification: Content is appropriate as Comp Eng and Elec Eng electives

Semesters Previously Offered

Term(s) Offered as

for Engineering DSCC Chair

6. 11/03/25 3:38 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
7. 11/21/25 11:14 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
8. 11/21/25 11:17 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jun 28, 2025 by David Lipke (lipke)

experimental

Is this a MOTR Course?

Reviewer Comments

Key: 10285

Preview Bridge

Course Change Request

Date Submitted: 10/17/25 3:54 pm

Viewing: STAT 3425 : Introduction to Biostatistics

Formerly known as: STAT 5425

Last approved: 10/26/24 6:03 am

Last edit: 10/17/25 3:54 pm

Changes proposed by: Crystal Wilson (wilsoncry)

Programs referencing this course	**STAT 3425:** BIOINFO-MI: Bioinformatics Minor BIO SC-BA: Biological Sciences BA BIO SC-BS: Biological Sciences BS CHEM-BS: Chemistry BS BIOMED-MI: Biomedical Engineering Minor MED LAB: Biological Sciences BS with Emphasis area in Medical Laboratory Scientist ENV SCI-BS: Environmental Science BS BIOMED-BS: Biomedical Engineering BS
Other Courses referencing this course	In The Catalog Prerequisites: **STAT 3425:** CHEM ENG 4220 : Biochemical Reactor Laboratory

Requested Effective Date	Fall 2026
Department	Mathematics & Statistics (RMATHEMA)
Discipline	Statistics (STAT)
Course Number	3425
Title	Introduction to Biostatistics
Abbreviated Course Title	Intro to Biostatistics
Co-Listed Course	

Catalog Description

Introduction to common biostatistical methods for designing research studies, collecting and analyzing data, with application to problems originating from the biological, environmental, and health sciences. Topics include randomization, means comparisons, ANOVA, regression, and analysis of count data.

Prerequisite(s):

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. 10/17/25 5:02 pm John Singler (singlerj): Approved for RMATHEMA Chair
2. 10/23/25 11:33 am Crystal Wilson (wilsoncry): Approved for CCC Secretary
3. 10/31/25 1:31 pm Katie Shannon (shannonk): Approved for Sciences DSCC Chair
4. 11/03/25 3:38 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:14 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

A grade of "C" or better in Math 1120, Math 1140, Math ~~1208, Math~~ 1210, Math 1211, Math 1212, or Math 1214; or by placement.

Corequisite(s):

6. 11/21/25 11:17 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Credit Hours

Credit Hours

History

1. Jan 13, 2017 by imorgan
2. Jul 27, 2020 by Paul Runnion (prunnion)
3. Oct 26, 2024 by John Singler (singlerj)

Credit Type	Credit Hours
Lecture	3
Laboratory	1

Total: 4

Required for Majors: No

Elective for Majors: Yes

Communication Intensive: No

Communication Emphasized: No

Grading Basis: Graded

Repeatable: No

Justification: Removed math 1208 from the catalog as it is not being offered and has been removed from the listing in the catalog.

Semesters Previously Offered

Term(s) Offered as experimental

Is this a MOTR Course?

Reviewer Comments

Key: 652

Preview Bridge

Program Change Request

Date Submitted: 10/01/25 11:54 am

Viewing: AE ENG-BS : Aerospace Engineering BS

Last approved: 07/01/25 3:11 pm

Last edit: 10/30/25 10:39 am

Changes proposed by: Nishant Kumar (nkwtb)

Catalog Pages Using this Program

Aerospace Engineering

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Bachelor of Science
Academic Level	Undergraduate
Program Code	AE ENG-BS
Department	Mechanical & Aerospace Engineering
Discipline	Aerospace Engineering
Title	

In Workflow

1. **RMECHENG 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. 10/01/25 11:57 am David Bayless (djbkqf): Approved for RMECHENG Chair
2. 10/02/25 11:25 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/09/25 7:48 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:33 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:07 am

Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:11 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Apr 28, 2014 by J. Keith Nisbett (nisbett)
2. Aug 1, 2014 by pantaleoa
3. Jul 14, 2015 by pantaleoa
4. Mar 27, 2017 by Shauntae Ellis (smetg6)
5. Nov 2, 2018 by Kakkattukuzhy Isaac (isaac)
6. Jun 14, 2019 by ershenb
7. Mar 3, 2020 by ershenb
8. Oct 28, 2021 by J. Keith Nisbett (nisbett)
9. May 2, 2022 by J. Keith Nisbett (nisbett)
10. Apr 30, 2024 by J. Keith Nisbett (nisbett)
11. Jul 1, 2025 by Nishant Kumar

(nkwtb)
12. Jul 1, 2025 by Jade McCain (jm558v)

Aerospace Engineering BS

CIP Code

Program Requirements and Description

Bachelor of Science

Aerospace Engineering

The aerospace engineering program at Missouri S&T is characterized by its focus on the scientific basics of engineering and its innovative application. Indeed, the underlying theme of this educational program is the application of the scientific basics to engineering practice through attention to problems and needs of the public. 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.

Students must comply with the requirements specified in the current online catalog published by the registrar. For the bachelor of science degree in aerospace engineering a minimum of 128 credit hours is required. These requirements are in addition to credit received for algebra, trigonometry, and basic ROTC courses. An average of at least two grade points per credit hour must be attained. At least two grade points per credit hour must also be attained in all courses taken in aerospace engineering.

Freshman Year

First Semester	Credits	Second Semester	Credits
FR ENG 1100	1	MECH ENG 1720	3
CHEM 1305[4]	4	MATH 1215[4]	4
CHEM 1319	1	PHYSICS 1135[4]	4
ENGLISH 1120	3	Gen. Ed. Elective[2]	3
MATH 1214 or 1211[4]	4		
HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3		
	16		14

Sophomore Year

First Semester	Credits	Second Semester	Credits
CIV ENG 2200[4]	3	AERO ENG 2780	2
MATH 2222[4]	4	AERO ENG 2360[4]	3
PHYSICS 2135[4]	4	MECH ENG 2519[4]	3
AERO ENG 2861[4]	3	MATH 3304[4]	3

Programming elective[1]	3	CIV ENG 2210[4]	3
		AERO ENG 2790	2
	17		16

Junior Year

First Semester	Credits	Second Semester	Credits
AERO ENG 3613[4]	3	AERO ENG 3251[4]	3
AERO ENG 3131[4]	3	AERO ENG 3361	3
ELEC ENG 2800	3	AERO ENG 3171	3
MET ENG 2110	3	AERO ENG 4882	2
Electives-Advanced Math/Cmp Sci[5]	3	General Elective - Ethics[3]	3
		ENGLISH 1160, or 3560, or SPM S 1185	3
	15		17

Senior Year

First Semester	Credits	Second Semester	Credits
AERO ENG 4535	3	AERO ENG 4781 or 4791	3
AERO ENG 4253	3	Electives-Technical[6]	3
AERO ENG 4780 or 4790	3	Electives-Technical[6]	3
AERO ENG 4883	2	AERO ENG 4885	1
Electives-Technical[6]	3	Gen. Ed. Elective[2]	3
Gen. Ed. Elective[2]	3	Gen. Ed. Elective[2]	3
	17		16

Total Credits: 128

1

The programming elective consists of a lecture and lab combination, and may be selected from COMP SCI 1972/ COMP SCI 1982 or COMP SCI 1570 / COMP SCI 1580. Note that COMP SCI 1570/ COMP SCI 1580 requires one more credit hour.

2

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

3

Must be a course on engineering ethics, business ethics, bio ethics, social ethics, or any ethics course approved by the student's advisor.

4

A grade of "C" or better in CHEM 1305, MATH 1214 or MATH 1211, MATH 1215, MATH 2222, MATH 3304, PHYSICS 1135, PHYSICS 2135, CIV ENG 2200, CIV ENG 2210, and computer programming elective, AERO ENG 2360, AERO ENG 2861, and MECH ENG 2519, as prerequisite for follow-up courses in the curriculum and for graduation.

5

Must be one of the following: AERO ENG 5830, COMP SCI 3200, MATH 3108, STAT 3113, or any 5000-level math or computer science course approved by the student's advisor.

6

Electives must be approved by the student's advisor. Nine hours of technical electives must be in mechanical and aerospace engineering. Three hours of departmental technical electives must be at the 5000-level. AERO ENG 3877 and the 5000-level Asteroid Mining course co-listed with geological engineering are not to be used for 5000-level technical elective.

Justification for request

The math department has informed us that they are discontinuing the STAT 3115 course and as such, the AE curriculum needs to be updated. One of the math elective course for our AE-B.S. students is Stat 3115, which is deleted in this DC form.

Attach Budget

System Approval Letter

MDHE Approval

Supporting Documents

Reviewer Comments

Jade McCain (jm558v) (10/30/25 10:39 am): Changed start term to Fall 2026 per CCC deadlines.

Key: 141

Program Change Request

Date Submitted: 10/02/25 9:22 am

Viewing: BIO SC-BA : Biological Sciences BA

Last approved: 08/27/25 10:54 am

Last edit: 10/02/25 9:22 am

Changes proposed by: Crystal Wilson (wilsoncry)

Catalog Pages Using this Program	Biological Sciences
Final Catalog	FS2026-SP2027
Rationale for Inactivation	
Supporting Documents	

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Bachelor of Arts
CIM Prospectus	
Academic Level	Undergraduate
Program Code	BIO SC-BA
Department	Biological Sciences
Discipline	Biological Sciences

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

Approval Path

1. 10/02/25 12:26 pm Gina Yosten (gyxmr): Approved for RBIOLSCI Chair
2. 10/02/25 3:31 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/31/25 1:21 pm Katie Shannon (shannonk): Approved for Sciences DSCC Chair
4. 11/03/25 3:33 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:07 am Jade McCain (jm558v): Approved

Offered by

Title

for CCC Meeting Agenda

6. 11/21/25 11:11 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Aug 1, 2014 by Katie Shannon (shannonk)
2. Jul 14, 2015 by pantaleoa
3. Oct 7, 2016 by Katie Shannon (shannonk)
4. Jun 28, 2017 by Katie Shannon (shannonk)
5. Nov 14, 2017 by Katie Shannon (shannonk)
6. Jun 18, 2018 by Katie Shannon (shannonk)
7. Jul 1, 2020 by Katie Shannon (shannonk)
8. Feb 3, 2021 by Katie Shannon (shannonk)
9. Jun 10, 2021 by Katie Shannon (shannonk)
10. Jun 14, 2022 by Katie Shannon (shannonk)
11. Jun 30, 2022 by

Jennifer Pohlsander (jpnfd)
12. Jun 30, 2022 by Evie Sherlock (esdk3)
13. Jun 1, 2023 by Jennifer Pohlsander (jpnfd)
14. Jun 2, 2023 by Jennifer Pohlsander (jpnfd)
15. Jul 5, 2024 by Crystal Wilson (wilsoncry)
16. Oct 25, 2024 by Katie Shannon (shannonk)
17. Jul 1, 2025 by Crystal Wilson (wilsoncry)
18. Aug 27, 2025 by Crystal Wilson (wilsoncry)

Biological Sciences BA

CIP Code	26.0101 - Biology/Biological Sciences, General.

Purpose

Intended Audience

Program-Specific Admission

Program Requirements and Description

Bachelor of Arts
Biological Sciences
Degree Requirements

Specific requirements for the B.A. degree in biological sciences include a minimum of 120 semester hours of credit, including 30 hours of biology core courses. A "C" or better is required for all Biological Science courses. General Requirements for the B.A. must fulfill the Missouri S&T general education requirements applicable to the student's catalog year.

Core Courses		
BIO SCI 1201	Biological Sciences Freshman Seminar	1
BIO SCI 1113	General Biology	3
or BIO SCI 1213	Principles of Biology	
BIO SCI 1219	General Biology Lab	1
BIO SCI 1223	Biodiversity	3
BIO SCI 1229	Biodiversity Lab	1
BIO SCI 2213	Cell Biology	3
BIO SCI 2219	Cell Biology Laboratory	1
BIO SCI 2223	General Genetics	3
BIO SCI 2263	Ecology	3
BIO SCI 3233	Evolution	3
BIO SCI 4010	Seminar	1
Advanced courses, 2000 level or higher (at least one with laboratory and one 3000 or 4000 level)		9
Chemistry		
CHEM 1310	General Chemistry I	4
CHEM 1319	General Chemistry Laboratory	1
CHEM 1320	General Chemistry II	3

CHEM 1100	Introduction To Laboratory Safety & Hazardous Materials	1
CHEM 2210	Organic Chemistry I	3
CHEM 2220	Organic Chemistry II	3
Mathematics & Physical Science		
Various courses in mathematics, physics, and/or geology chosen in consultation with academic advisor. (Note: Proficiency in College Algebra must be demonstrated by a grade of "C" or better in a College Algebra course or by examination)		9
Computer Science/Statistics (Select one of the following:)		
COMP SCI 1570 & COMP SCI 1580	Introduction To C++ Programming and Introduction To Programming Laboratory	4
COMP SCI 1971 & COMP SCI 1981	Introduction To Programming Methodology and Programming Methodology Laboratory	3
~~STAT 3111~~	~~Statistical Tools For Decision Making~~	~~3~~
STAT 3425	Introduction to Biostatistics	4
General Requirements for BA		
English Composition		
ENGLISH 1120	Exposition And Argumentation	3
One additional composition course		3
Western Civilizations		
HISTORY 1100	Early Western Civilization	3
HISTORY 1200	Modern Western Civilization	3
Foreign Language (three semesters of a foreign language)		12
Humanities (including one class in each of literature, philosophy, and fine arts)		12
Social Sciences (including classes in two of the following three subjects: economics, political science, psychology)		12

Elective credits: In consultation with his or her advisor, each student will elect sufficient additional courses to complete a minimum of 120 credit hours.

Bachelor of Arts

Biological Sciences

Pre-Medicine Emphasis Area

Degree Requirements

The student will fulfill the requirements for a bachelor of arts in biological sciences as outlined above. The following classes are also required:

CHEM 2219	Organic Chemistry I Lab	1
CHEM 2229	Organic Chemistry II Lab	1
2 semesters of Physics and labs:		
PHYSICS 1145	College Physics I	4
or PHYSICS 1135	Engineering Physics I	
PHYSICS 2145	College Physics II	4
or PHYSICS 2135	Engineering Physics II	

The following classes are highly recommended:

BIO SCI 3333	Human Anatomy and Physiology I	3
BIO SCI 3343	Human Anatomy and Physiology II	3
BIO SCI 3359	Physiology Lab	1
CHEM 4610	General Biochemistry	3
PREMED 3010	Communication Workshop for the Pre-Health Student	1

Bachelor of Arts

Biological Sciences

Secondary Education Emphasis Area

Degree Requirements

You may earn a B.A. degree in biological sciences from Missouri S&T and certification to teach at the secondary level in the schools of Missouri with this emphasis area. This program can be completed in four academic years, and student teaching is arranged with public schools anywhere in the state.

Students interested in this emphasis area should consult with the advisor for biological sciences education majors in the biological sciences department.

In order to successfully complete this emphasis area, students must have an 3.0 education GPA. Students must also pass the appropriate content assessment. Students must attain at least a 2.5 GPA for all biology courses and professional education courses required by the Missouri Department of Elementary and Secondary Education for teacher certification. This program is approved by the Missouri Department of Elementary and Secondary

Education. License reciprocity determinations outside of Missouri can be found at https://teaching.missouri.edu/student/state-authorization/mst/licensure. Students must also meet all requirements listed under the teacher education website including passing the state-required assessments.

A degree in this emphasis area requires 127 credit hours. The required courses are provided below. A minimum grade of "C" is required by the department in all biological sciences courses counted toward this degree. Humanities and Social Science courses for the B.A. must fulfill the Missouri S&T general education requirements applicable to the student's catalog year.

Humanities: 18 semester hours		
ENGLISH 1120	Exposition And Argumentation	3
ENGLISH 1160	Writing And Research	3
or ENGLISH 3560	Technical Writing	
SP&M S 1185	Principles Of Speech	3
At least one course in each of the following: Literature, Philosophy and Fine Arts		9
Social Sciences: 15 semester hours		
HISTORY 3530	History of Science	3
HISTORY 1100	Early Western Civilization	3
HISTORY 1200	Modern Western Civilization	3
POL SCI 1200	American Government	3
PSYCH 1101	General Psychology	3
Mathematics/Physical Science: 9 semester hours		
MATH 1103	Fundamentals Of Algebra [1]	3
PHYSICS 1145	College Physics I	3
or PHYSICS 1505	Introductory Astronomy	
GEOLOGY 1110	Physical and Environmental Geology	3
Computer Science/Statistics: 3 semester hours		
3 semester hours of Computer Science or Statistics		3
Chemistry: 15 semester hours		
CHEM 1310	General Chemistry I	4
CHEM 1319	General Chemistry Laboratory	1
CHEM 1320	General Chemistry II	3

CHEM 1100	Introduction To Laboratory Safety & Hazardous Materials	1
CHEM 2210	Organic Chemistry I	3
CHEM 2220	Organic Chemistry II	3
Biological Sciences: 26 semester hours		
BIO SCI 1201	Biological Sciences Freshman Seminar	1
BIO SCI 1213	Principles of Biology	3
or BIO SCI 1113	General Biology	
BIO SCI 1219	General Biology Lab	1
BIO SCI 1223	Biodiversity	3
BIO SCI 1229	Biodiversity Lab	1
BIO SCI 1173	Introduction to Environmental Sciences	3
BIO SCI 2213	Cell Biology	3
BIO SCI 2219	Cell Biology Laboratory	1
BIO SCI 2223	General Genetics	3
BIO SCI 2263	Ecology	3
BIO SCI 3233	Evolution	3
BIO SCI 4010	Seminar	1
Education: 41 semester hours		
EDUC 1074	Foundations of Education in a Diverse Society	3
EDUC 1104	Teacher Field Experience I	1
EDUC 1164	Teacher Field Experience II	2
EDUC 2310	Education Of The Exceptional Child	3
EDUC 3170	Teaching Reading and Writing in Middle/High School	3
EDUC 3216	Instructional Literacy in the Content Area	3
EDUC 3280	Instructional Strategies in the Content Area	3
EDUC 3298	Teacher Field Experience III	1
EDUC 3340	Assessment of Student Learning	3
EDUC 4298	Student Teaching Seminar	1

EDUC 4299	Student Teaching	12
PSYCH 2300/ EDUC 2102	Educational Psychology	3
PSYCH 3310	Developmental Psychology	3

1

MATH 1103 does not count towards mathematics Gen. Ed. requirement.

Justification for request

Removed stat courses the math department says is being inactivated per their email sent to departments on September 15.

Attach Budget

System Approval Letter

MDHE Approval

Supporting Documents

Reviewer Comments

Program Change Request

Date Submitted: 10/08/25 4:25 pm

Viewing: BUS&MS-BS : Business and Mgmt Systems BS

Last approved: 07/31/25 1:29 pm

Last edit: 11/04/25 12:18 pm

Changes proposed by: Cecil Eng Huang Chua (cecq8z)

Catalog Pages Using this Program

Business and Management Systems

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

Approval Path

1. 10/08/25 4:20 pm Cassie Elrod (cassa): Rollback to Initiator
2. 10/08/25 4:35 pm Cassie Elrod (cassa): Approved for RBUS&IT Chair
3. 10/09/25 11:08 am Jade McCain (jm558v): Approved for CCC Secretary
4. 10/09/25 11:09 am Cecil Eng Huang Chua (cchua): Approved for Social Sciences DSCC Chair
5. 11/03/25 3:33 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
6. 11/21/25 11:07 am

Jade McCain (jm558v): Approved for CCC Meeting Agenda
7. 11/21/25 11:11 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Aug 5, 2014 by barryf
2. Jan 30, 2015 by barryf
3. Jun 17, 2015 by pantaleoa
4. Jul 14, 2015 by pantaleoa
5. Mar 7, 2016 by barryf
6. Nov 2, 2018 by barryf
7. Jun 10, 2021 by Cecil Eng Huang Chua (cchua)
8. Jun 14, 2024 by Cassie Elrod (cassa)
9. Jul 15, 2024 by Crystal Wilson (wilsoncry)
10. Jul 1, 2025 by Cecil Eng Huang Chua (cchua)
11. Jul 31, 2025 by Crystal Wilson (wilsoncry)

Rationale for Inactivation

Supporting Documents

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Bachelor of Science
CIM Prospectus	
Academic Level	Undergraduate
Program Code	BUS&MS-BS
Department	Business and Information Tech
Discipline	Business
Offered by	
Title	Business and Mgmt Systems BS
CIP Code	52.9999 - Business, Management, Marketing, and Related Support Services, Other.

Purpose

Intended Audience

Program-Specific Admission

Program Requirements and Description

Bachelor of Science

Business and Management Systems

In Business and Management Systems, the Bachelor of Science degree consists of 120 credit hours. All undergraduate students in Business and Management Systems are required to complete a General Education Requirements Core, including courses in Humanities, Social Sciences, Mathematics, Science, and Communication Skills.

A common departmental core of courses in Business and Information Technology helps provide students with skills to succeed in a fast-changing and globalized environment. Business Core courses with Business and Information Technology Electives provide students with comprehensive knowledge in technological business disciplines.

A minimum grade of "C" is required in the courses designated accordingly.

Students have 11 credit hours for free electives.

Freshman Year

First Semester	Credits	Second Semester	Credits
BUS 1110	3	IS&T 1750	3
BUS 1810	1	ENGLISH 2560 or TCH COM 2560[3]	3
PSYCH 1101[3]	3	MATH 1210[3]	5
ENGLISH 1120[3]	3	POL SCI 1200[3]	3
Science Elective[1,3]	3	Science Elective[1,3]	3
Science Lab[3]	1		
	14		17

Sophomore Year

First Semester	Credits	Second Semester	Credits
BUS 1210	3	ERP 2110	3
IS&T 1551	3	FINANCE 2150	3
ECON 1200[3]	3	IS&T 1552	3
SP&M S 1185[3]	3	IS&T 4654	3
Free Elective	3	ECON 1100[3]	3
	15		15

Junior Year

First Semester	Credits	Second Semester	Credits
BUS 3220	3	BUS 2910	3
MKT 3110	3	~~BUS 5580~~	~~3~~
~~STAT 3111 or 1115~~	~~3~~	BUS 5510	3
STAT 1115	3	BUS 5730	3
Business Electives	6	Business Elective	3
		Free Elective	3
	15		15

Senior Year

First Semester	Credits	Second Semester	Credits
BUS 5111	3	BUS 5360	3
FINANCE 5310	3	BUS 5980	3
MKT 5310 or BUS 5150	3	Business Elective	3
Business Elective	3	Fine Art, or Humanities Elective[2,3]	3
Free Elective	3	Free Elective	2
	15		14

Total Credits: 120

A grade of “C” or better is required in the following courses for graduation: IS&T 1551, IS&T 1552, IS&T 1750, IS&T 4654, ERP 2110, FINANCE 2150, FINANCE 5310, MKT 3110, MKT 5310 or BUS 5150, ECON 1100, ECON 1200, BUS 1110, BUS 1210, BUS 2910 , BUS 3220, BUS 5111, BUS 5360, BUS 5510, ~~BUS 5580,~~ BUS 5730, BUS 5980, and all Business Electives (any BUS, ERP, FINANCE, MKT or IST designated course at the 3000-level or above).

1

General education elective courses in two of the following areas: biology, chemistry, geology, or physics must fulfill the Missouri S&T general education requirements applicable to the students catalog year.

2

General education elective courses in two of the following areas: art, history, music, or theater must fulfill the Missouri S&T general education requirements applicable to the students catalog year.

3

General education discipline required course. These fulfill the Missouri S&T general education requirements applicable to the student’s catalog year.

Bachelor of Science

Business and Management Systems

Military Science and Leadership Emphasis Area

Degree Requirements

You may earn a B.S. degree in business and management systems from Missouri S&T with an emphasis in Military Science as a member of the ROTC Program at Missouri S&T. This program can be completed in four academic years. Students interested in this emphasis area should consult with an advisor for business and management systems degree program in the business and information technology department.

In order to successfully complete this emphasis area, students must maintain a cumulative GPA of at least 2.0. Current Missouri S&T or transfer students who wish to pursue this emphasis area must meet this GPA requirement to be eligible for the emphasis area.

A minimum grade of "C" is required by the department in all courses designated BUS, MKT, FINANCE, IS&T, ECON, or ERP that are counted toward this degree and/or emphasis area.

Successful completion of coursework in a minor listed below will count as the corresponding number of credit hours in the Military Science and Leadership Emphasis Area. These courses are in lieu of business/free/humanities electives in the Business and Management Systems Bachelor of Science curriculum.

Military Aerospace Minor (12 credit hours)

Adaptive Leadership Minor (15 credit hours)

Secondary Education Emphasis Area

Degree Requirements

You may earn a B.S. degree in business and management systems from Missouri S&T and certification to teach at the secondary level in the schools of Missouri with this emphasis area. This program is approved by the Missouri Department of Elementary and Secondary Education. License reciprocity determinations outside of Missouri can be

found at https://teaching.missouri.edu/student/state-authorization/mst/licensure.
Students interested in this emphasis area should consult with both an advisor for business and management systems education majors in the business and management systems department and an advisor in the teacher education department.
In order to successfully complete this emphasis area, students must maintain at least a 2.5 GPA average for all business content and professional education courses required by the Missouri Department of Elementary and Secondary Education for teacher certification. To be eligible for student teaching and certification, students must have a 2.5 content GPA and a 3.0 education GPA. Students must also pass the appropriate content assessment. Current Missouri S&T or transfer students who wish to pursue this emphasis area must meet both these GPA requirements to be accepted into the program. Students must also meet all requirements listed under the teacher education program in this catalog. Students who do not meet all the teacher certification requirements will not be eligible for the secondary education emphasis area, even if they have completed all required course work.
The required courses for a secondary education emphasis with the Bachelor of Science in Business and Management Systems degree are listed below. A minimum grade of "C" is required by the department in all courses designated BUS, MKT, FINANCE, IS&T, ECON, or ERP that are counted toward this degree.

Education

EDUC 1074	Foundations of Education in a Diverse Society	3
EDUC 1104	Teacher Field Experience I	1
EDUC 1164	Teacher Field Experience II	2
EDUC 2310	Education Of The Exceptional Child	3
EDUC 3170	Teaching Reading and Writing in Middle/High School	3
EDUC 3216	Instructional Literacy in the Content Area	3
EDUC 3280	Instructional Strategies in the Content Area	3
EDUC 3290	Coordination of Cooperative Education	3
EDUC 3298	Teacher Field Experience III	1
EDUC 3340	Assessment of Student Learning	3
EDUC 4298	Student Teaching Seminar	1
EDUC 4299	Student Teaching	12
PSYCH 2300	Educational Psychology	3
PSYCH 3310	Developmental Psychology	3

Justification for request	Removed stat courses the math department says is being inactivated per their email sent to departments on September 15. BUS 5580 swap to BUS 5510. Updating curriculum to reflect current business topics and also the mission of the Kummer College (entrepreneurship).
Attach Budget	

System Approval Letter MDHE Approval	
Supporting Documents	MDHE Approval Letter_S&T_April 2024.pdf New Emphasis-BIT-Mil Sci and Leadership.pdf
Reviewer Comments	**Cassie Elrod (cassa) (10/08/25 4:20 pm):** Rollback: Update to BUS 5580 requirement **Jade McCain (jm558v) (10/09/25 11:07 am):** Removed BUS 5580 and replaced it with BUS 5510 per department request via email on 10/9/2025. **Jade McCain (jm558v) (11/04/25 8:34 am):** Corrected formatting of TCH COM 2560 on plan of study grid. **Jade McCain (jm558v) (11/04/25 12:18 pm):** Corrected format in plan of study grid.

Key: 148

Program Change Request

Date Submitted: 10/02/25 9:34 am

Viewing: CH ENG-BS : Chemical Engineering BS

Last approved: 07/01/25 11:07 am

Last edit: 10/03/25 8:58 am

Changes proposed by: Crystal Wilson (wilsoncry)

Catalog Pages Using this Program

Chemical & Biochemical Engineering

Final Catalog	FS2026-SP2027
Rationale for Inactivation	
Supporting Documents	

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Bachelor of Science
CIM Prospectus	
Academic Level	Undergraduate
Program Code	CH ENG-BS
Department	Chemical and Biochemical Engineering
Discipline	Chemical Engineering

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

Approval Path

1. 10/02/25 9:35 am Ryan Gilbert (rggnx): Approved for RCHEMENG Chair
2. 10/02/25 11:26 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/09/25 7:48 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:33 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:08 am

Offered by

Title

Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:12 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Mar 18, 2014 by Lahne Black (lahne)
2. May 2, 2014 by Lahne Black (lahne)
3. Jan 30, 2015 by kleb6b
4. Jul 15, 2015 by pantaleoa
5. Jul 15, 2015 by pantaleoa
6. Nov 18, 2015 by marlene
7. Mar 7, 2016 by Daniel Forciniti (forcinit)
8. Mar 27, 2017 by Daniel Forciniti (forcinit)
9. May 3, 2018 by Daniel Forciniti (forcinit)
10. May 7, 2018 by ershenb
11. May 7, 2018 by ershenb
12. May 7, 2018 by ershenb
13. Jul 3, 2018 by

ershenb
14. Nov 2, 2018 by Jee C. Wang (jcwang)
15. Jan 29, 2019 by Jee C. Wang (jcwang)
16. Jan 30, 2019 by ershenb
17. Jan 30, 2019 by ershenb
18. Mar 3, 2020 by ershenb
19. May 5, 2021 by Christi Luks (luksc)
20. Apr 6, 2022 by Christi Luks (luksc)
21. Oct 25, 2024 by Christi Luks (luksc)
22. Dec 13, 2024 by Crystal Wilson (wilsoncry)
23. Dec 13, 2024 by Jade McCain (jm558v)
24. Dec 13, 2024 by Jade McCain (jm558v)
25. Jul 1, 2025 by Christi Luks (luksc)

Chemical Engineering BS

CIP Code

Purpose

Intended Audience

Program-Specific

Admission

Program Requirements and Description

Bachelor of Science
Chemical Engineering

The chemical engineering program at Missouri S&T is characterized by its focus on the scientific basics of engineering and its innovative application through attention to problems and needs of the public. 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.

For the bachelor of science degree in chemical engineering a minimum of 128 credit hours is required. These requirements are in addition to credit received for algebra, trigonometry and basic ROTC courses. An average of at least two grade points per credit hour must be attained. At least two grade points per credit hour must also be attained in all courses taken in chemical engineering.

Chemical engineering majors are encouraged to take the fundamentals of engineering exam prior to graduation. It is the first step toward becoming a registered professional engineer.

Freshman Year

First Semester	Credits	Second Semester	Credits
FR ENG 1100	1	MECH ENG 1720	3
CHEM 1310	4	CHEM 1320	3
CHEM 1319	1	COMP SCI 1500	3
ENGLISH 1120	3	OR	
HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3	COMP SCI 1972 & COMP SCI 1982	
MATH 1214 or 1211[6]	4	MATH 1215	4
CHEM 1100	1	PHYSICS 1135	4
	17		17

Sophomore Year

First Semester	Credits	Second Semester	Credits
CHEM ENG 2100[1]	4	CHEM ENG 2110[1]	3
CHEM 2210	3	Science Elective[4]	4
MATH 2222	4	MATH 3304	3

PHYSICS 2135	4	STAT 3113	3
		Gen.Ed. Elective[2]	3
	15		16

Junior Year

First Semester	Credits	Second Semester	Credits
CHEM ENG 3101	4	CHEM ENG 3131	3
CHEM ENG 3111	3	CHEM ENG 3141	3
CHEM ENG 3120[1]	3	CHEM ENG 3150	3
Gen.Ed. Elective[2]	3	SP&M S 1185[3]	3
Gen.Ed. Elective[2]	3	ENGLISH 3560[3]	3
	16		15

Senior Year[3]

First Semester	Credits	Second Semester	Credits
CHEM ENG 4091	3	CHEM ENG 4097	3
CHEM ENG 4101	3	CHEM ENG 4130	3
CHEM ENG 4110	3	CHEM ENG 4311	1
CHEM ENG 4241	3	CHEM ENG 5XXX-Chem Eng Elective[5]	3
CHEM ENG 5XXX-Chem Eng Elective[5]	3	CHEM ENG 5XXX-Chem Eng Elective[5]	3
CHEM ENG 4301	1	CHEM ENG 5XXX-Chem Eng Elective[5]	3
	16		16

Total Credits: 128

Note: The minimum number of hours required for a degree in chemical engineering is 128.

A cumulative grade point average of 2.50 or better and a "C" or better in CHEM 1310, CHEM 1319, CHEM 1320, MATH 1214, MATH 1215 and PHYSICS 1135 are required to be admitted into the chemical engineering major. ~~MATH 1208 or~~ MATH 1210 and MATH 1211 may be substituted for MATH 1214.

1

A grade of "C" or better is required in CHEM ENG 2100 & CHEM ENG 2110 in order to enroll in CHEM ENG 3120 .

2

Gen.Ed. electives must fulfill the Missouri S&T general education requirements applicable to the student's catalog year.

3

Gen.Ed. discipline-specific required course.

4

CHEM 2510, or CHEM 4610 and CHEM 4619, or BIO SCI 2213 and BIO SCI 2219 or CHEM 2220 and CHEM 2219, or BIO SCI 3313 and BIO SCI 3319, or CHEM 3420 and CHEM 2459.

5

A minimum of 12 cr. hr. from any Chem Eng 5xxx or BME 5xxx and any class from the approved list published on the Chemical Engineering web site but only 3 cr. hr. of CHEM ENG 4000, CHEM ENG 4099 . Students may have no more than three hours from approved out-of-department electives.

6

MATH 1210 and MATH 1211 may be substituted for MATH 1214.

~~MATH 1221 may be substituted forMATH 1215.~~ Chemical Engineering

Biochemical Engineering Emphasis

Freshman Year			
First Semester	Credits	Second Semester	Credits
FR ENG 1100	1	MECH ENG 1720	3
CHEM 1310	4	COMP SCI 1500	3
CHEM 1319	1	OR	
ENGLISH 1120	3	COMP SCI 1972 & COMP SCI 1982	
HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3	CHEM 1320	3
MATH 1214 or 1211[5]	4	MATH 1215[5]	4
CHEM 1100	1	PHYSICS 1135	4
	17		17
Sophomore Year			
First Semester	Credits	Second Semester	Credits
CHEM ENG 2100[1]	4	CHEM ENG 2110[1]	3
CHEM 2210	3	STAT 3113	3
MATH 2222	4	Science Elective[4]	4
PHYSICS 2135	4	MATH 3304	3
		Gen.Ed. Elective[2]	3
	15		16
Junior Year			
First Semester	Credits	Second Semester	Credits
CHEM ENG 3101	4	CHEM ENG 3131	3
CHEM ENG 3111	3	CHEM ENG 3141	3
CHEM ENG 3120[1]	3	CHEM ENG 3150	3
SP&M S 1185[3]	3	ENGLISH 3560[3]	3
Science Elective[4]	4	CHEM ENG 5250	3
	17		15
Senior Year[3]			
First Semester	Credits	Second Semester	Credits
CHEM ENG 4091	3	CHEM ENG 4097[2]	3
CHEM ENG 4110	3	CHEM ENG 4220	3
CHEM ENG 4201	3	CHEM ENG 4241	3
CHEM ENG 4210	3	CHEM ENG 4311	1

CHEM ENG 4301	1	Science Elective[4]	4
Gen.Ed. Elective[2]	3	Gen.Ed. Elective[2]	3
	16		17

Total Credits: 130

Note: The minimum number of hours required for a degree in chemical engineering with an emphasis in biochemical engineering is 130.

A cumulative grade point average of 2.50 or better and a “C” or better in CHEM 1310, CHEM 1319, CHEM 1320, MATH 1214, MATH 1215 and PHYSICS 1135 are required to be admitted into the chemical engineering major.

1

A grade of "C" or better is required in CHEM ENG 2100 & CHEM ENG 2110 in order to enroll in CHEM ENG 3120.

2

Gen. Ed. electives must fulfill the Missouri S&T general education requirements applicable to the student's catalog year.

3

Gen. Ed. discipline-specific required course

4

A minimum of 12 credit hours in Science Electives are required. Select three courses from CHEM 2220 CHEM 4610, CHEM 4620, BIO SCI 2213, BIO SCI 3313, and BIO SCI 4323; and a minimum of two laboratory courses from CHEM 2229 or CHEM 2219 CHEM 4619, BIO SCI 2219, BIO SCI 3319, and BIO SCI 4329.

5

MATH 1210 and MATH 1211 may be substituted for MATH 1214.

Justification for request

Removed stat courses the math department says is being inactivated per their email sent to departments on September 15.

Attach Budget

System Approval Letter

MDHE Approval

Supporting Documents

Reviewer Comments

Crystal Wilson (wilsoncry) (10/03/25 8:58 am): With department approval I removed reference of Math 1208 and 1221 from the DC form. These courses are not printed in the catalog and have not been taught since fall 2016.

Program Change Request

Date Submitted: 10/02/25 9:35 am

Viewing: CHEM-BA : Chemistry BA

Last approved: 08/28/25 7:49 am

Last edit: 10/02/25 9:35 am

Changes proposed by: Crystal Wilson (wilsoncry)

Catalog Pages Using this Program

Chemistry

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Bachelor of Arts
Academic Level	Undergraduate
Program Code	CHEM-BA
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. 10/02/25 12:35 pm Chariklia Sotiriou-Leventis (cslevent): Approved for RCHEMIST Chair
2. 10/02/25 3:34 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/31/25 1:25 pm Katie Shannon (shannonk): Approved for Sciences DSCC Chair
4. 11/03/25 3:33 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:08 am Jade McCain

(jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:12 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Mar 18, 2014 by Lahne Black (lahne)
2. Jul 15, 2015 by pantaleoa
3. Jun 18, 2018 by Thomas Schuman (tschuman)
4. Dec 3, 2019 by Thomas Schuman (tschuman)
5. Mar 3, 2020 by Thomas Schuman (tschuman)
6. May 2, 2023 by Thomas Schuman (tschuman)
7. Apr 1, 2024 by Thomas Schuman (tschuman)
8. Jul 5, 2024 by Crystal Wilson (wilsoncry)
9. Dec 20, 2024 by Jade McCain (jm558v)
10. Jul 1, 2025 by Thomas Schuman (tschuman)
11. Aug 27, 2025 by

Crystal Wilson (wilsoncry)

12. Aug 28, 2025 by Crystal Wilson (wilsoncry)

Chemistry BA

CIP Code 40.0501 - Chemistry, General.

Program Requirements and Description

Bachelor of Arts

Chemistry

Freshman Year			
First Semester	Credits	Second Semester	Credits
CHEM 1100	1	CHEM 1320	3
CHEM 1110	1	CHEM 1510	2
CHEM 1310	4	MATH 1215	4
CHEM 1319	1	HISTORY 1100	3
ENGLISH 1120	3	Humanities Elective[1]	3
MATH 1214 or 1210 ***and*** 1211	4		
	14		15
Sophomore Year			
First Semester	Credits	Second Semester	Credits
CHEM 2210	3	CHEM 2220	3
CHEM 2219	1	CHEM 2229	1
HISTORY 1200	3	ENGLISH 1160 or 3560	3
Foreign Language Elective	4	Foreign Language Elective	4
Biological Science Elective	3	Social Science Elective[1]	3
		Minor Degree Elective	3
	14		17
Junior Year			
First Semester	Credits	Second Semester	Credits
CHEM 2510	4	CHEM 2410	3
STAT 3113	3	Chemistry Elective	3
PHYSICS 1145 or 1135	4	PHYSICS 2145 or 2135	4
Foreign Language Elective	4	Humanities Elective[1]	3
		Social Science Elective[1]	3

	15		16
Senior Year			
First Semester	Credits	Second Semester	Credits
CHEM 3419	1	Chemistry Elective	3
CHEM 4010 or 4099	1	Humanities Elective[1]	3
Chemistry Elective	3	Social Sciences Elective[1]	3
Humanities Elective (Literature)[1]	3	Minor Degree Electives	6
Social Science Elective[1]	3		
Minor Degree Elective	3		
	14		15

Total Credits: 120

1

Gen. Ed. Elective must fulfill the Missouri S&T general education requirements applicable to the students catalog year.

Students must complete a minimum of 120 credit hours for the Bachelor of Arts in Chemistry degree and comply with the campus B.A. requirements.

Elective credits must include an approved campus minor; see Undergraduate catalog for courses required for specific minors. All chemistry majors are encouraged to conduct research through CHEM 4099. A total of 12 credits of a modern foreign language must also be taken as part of the electives above. Chemistry Electives must be selected from 3000 or higher-level courses. A grade of "C" or better is required for each Chemistry course counted towards the degree.

Bachelor of Arts

Chemistry

Secondary Education Emphasis Area

Freshman Year			
First Semester	Credits	Second Semester	Credits
CHEM 1100	1	CHEM 1320	3
CHEM 1310	4	CHEM 1510	2
CHEM 1319	1	MATH 1215	4
MATH 1214 or 1210 ***and*** 1211	4	EDUC 1104	1
EDUC 1074	3	BIO SCI 1113	3
ENGLISH 1120	3	PSYCH 1101	3
	16		16
Sophomore Year			
First Semester	Credits	Second Semester	Credits
CHEM 2210	3	CHEM 2220	3
CHEM 2219	1	EDUC 3216	3
PHYSICS 1145 or 1135	4	ENGLISH 1221 or 1222	3
EDUC 2102 or PSYCH 2300	3	HISTORY 1100	3

ENGLISH 1160 or 3560	3	ECON 1100, or 1200, or POL SCI 1200	3
	14		15

Junior Year

First Semester	Credits	Second Semester	Credits
CHEM 2510	4	CHEM 2410	3
CHEM 4010 or 4099	1	EDUC 3298	1
EDUC 1164	2	PSYCH 4310 or EDUC 2310	3
BIO SCI 2263	3	HISTORY 1200	3
EDUC 3170	3	HISTORY 3530, or PHILOS 4345, or HISTORY 3534	3
PHYSICS 1505 or GEOLOGY 1110	3	ART 1180, or MUSIC 1150, or THEATRE 1190	3
	16		16

Senior Year

First Semester	Credits	Second Semester	Credits
CHEM 4610	3	EDUC 4298	1
CHEM 3419	1	EDUC 4299	12
EDUC 3280	3		
EDUC 3340	3		
PSYCH 3310	3		
PHILOS 1105	3		
	16		13

Total Credits: 122

Students must complete a minimum of 122 credit hours for the Bachelor of Arts in Chemistry degree with a Secondary Education Emphasis Area. The degree program is intended to culminate in a Certification Recommendation for an initial Missouri teaching certification. To be eligible for student teaching and certification, students must have a 2.5 content GPA and a 3.0 education GPA. Students should also consult the Education department for Teacher Certification requirements. This program is approved by the Missouri Department of Elementary and Secondary Education. License reciprocity determinations outside of Missouri can be found at https://teaching.missouri.edu/student/state-authorization/mst/licensure.

For this Bachelor of Arts degree program, the minor degree and foreign language requirements of the typical program of study are waived and there are other course substitutions in lieu of education coursework and requirements. A total of nine humanities credit hours are required to be selected from ENGLISH 1221 or ENGLISH 1222 ; PHILOS 1105 ; and one of ART 1180 , MUSIC 1150 , or THEATRE 1190 . All chemistry majors are encouraged to conduct research through CHEM 4099. A grade of “C” or better is required for each Chemistry course counted towards the degree.

Justification for request

Removed stat courses the math department says is being inactivated per their email sent to departments on September 15.

Attach Budget	
System Approval Letter	
MDHE Approval	
Supporting Documents	Bachelor of Arts Chemistry sp2025 redline.docx
Reviewer Comments	

Key: 151

Program Change Request

Date Submitted: 10/02/25 9:37 am

Viewing: CHEM-BS : Chemistry BS

Last approved: 07/01/25 11:07 am

Last edit: 10/02/25 9:37 am

Changes proposed by: Crystal Wilson (wilsoncry)

Catalog Pages Using this Program

Chemistry

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. 10/02/25 12:35 pm Chariklia Sotiriou-Leventis (cslevent): Approved for RCHEMIST Chair
2. 10/02/25 3:35 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/31/25 1:25 pm Katie Shannon (shannonk): Approved for Sciences DSCC Chair
4. 11/03/25 3:33 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:08 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:12 am

Final Catalog FS2026-SP2027

Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Apr 28, 2014 by Thomas Schuman (tschuman)
2. Jun 19, 2015 by Klaus Woelk (woelkk)
3. Jun 28, 2017 by Thomas Schuman (tschuman)
4. May 3, 2018 by Thomas Schuman (tschuman)
5. Dec 3, 2019 by Thomas Schuman (tschuman)
6. Sep 2, 2020 by Crystal Wilson (wilsoncry)
7. Jun 10, 2021 by Thomas Schuman (tschuman)
8. Jun 14, 2022 by Thomas Schuman (tschuman)
9. Apr 1, 2024 by Thomas Schuman (tschuman)
10. Apr 15, 2024 by Evie Sherlock (esdk3)
11. Jun 14, 2024 by Jennifer Pohlsander (jpnfd)
12. Jul 1, 2025 by Thomas Schuman (tschuman)

Rationale for Inactivation

Supporting Documents

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Bachelor of Science
CIM Prospectus	
Academic Level	Undergraduate
Program Code	CHEM-BS
Department	Chemistry
Discipline	Chemistry
Offered by	
Title	Chemistry BS
CIP Code	

Purpose

Intended Audience

Program-Specific Admission

Program Requirements and Description

Bachelor of Science

Chemistry

A minimum of 120 credit hours is required for a Bachelor of Science degree in Chemistry and an average of at least two grade points per credit hour must be obtained. These requirements for the B.S. degree are in addition to credit received for algebra, trigonometry, and basic ROTC.

General Education Electives must fulfill the Missouri S&T general education requirements applicable to the student's catalog year. The Chemistry science curriculum requires twelve (12) semester hours in humanities and must include ENGLISH 1120 and ENGLISH 1160 or ENGLISH 3560 . A minimum of nine (9) semester hours is required in social sciences, including either HISTORY 1300 , HISTORY 1310 , HISTORY 1200 , or POL SCI 1200 . Specific requirements for the bachelor degree are outlined in the sample program listed below.

Freshman Year

First Semester	Credits	Second Semester	Credits
CHEM 1100	1	CHEM 1320	3
CHEM 1110	1	CHEM 1510	2
CHEM 1310	4	MATH 1215	4
CHEM 1319	1	COMP SCI 1500	3
MATH 1214 or 1210 ***and*** 1211	4	ENGLISH 1160	3
ENGLISH 1120	3		
	14		15

Sophomore Year

First Semester	Credits	Second Semester	Credits
CHEM 2210	3	CHEM 2220	3
CHEM 2219	1	CHEM 2229	1
MATH 2222	4	CHEM 2410	3
PHYSICS 1135	4	CHEM 2510	4
Humanities Elective[1]	3	PHYSICS 2135	4
	15		15

Junior Year

First Semester	Credits	Second Semester	Credits
CHEM 2420	3	CHEM 2459	2
CHEM 3310	3	CHEM 3320	3
CHEM 3510	4	CHEM 3329	1
STAT 3113	3	CHEM 4010 or 4099	1
Humanities Elective[1]	3	CHEM 4099	1
		Social Science Elective[1]	3
		General elective	3
	16		14

Senior Year

First Semester	Credits	Second Semester	Credits
CHEM 4099	1	CHEM 4297	3
CHEM 4610	3	Social Science Elective[1]	3
CHEM 4810	3	General electives	9
HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3		
General electives	6		
	16		15

Total Credits: 120

1

Gen. Ed. Elective must fulfill the Missouri S&T general education requirements applicable to the students catalog year.

Notes:

Grade Requirements: A minimum grade of "C" is required for each chemistry course counted towards the degree.

ROTC: Basic ROTC may be taken in the freshman and sophomore year, but does not count towards the degree.

Electives: The degree has eighteen (18) hours of general electives credit that may not include Math courses prerequisite to calculus. Not more than one (1) credit hour of CHEM 4010 can be included for degree credit. Up to eight (8) credit hours may be taken of CHEM 4099.

Chemistry

Biochemistry Emphasis Area

Freshman Year

First Semester	Credits	Second Semester	Credits
CHEM 1100	1	BIO SCI 2213	3
CHEM 1110	1	BIO SCI 2219	1
CHEM 1310	4	CHEM 1320	3
CHEM 1319	1	CHEM 1510	2
ENGLISH 1120	3	ENGLISH 1160	3
MATH 1214 or 1210 ***and*** 1211	4	MATH 1215	4
	14		16

Sophomore Year

First Semester	Credits	Second Semester	Credits
CHEM 2210	3	CHEM 2220	3
CHEM 2219	1	CHEM 2229	1
COMP SCI 1500	3	CHEM 2410	3
MATH 2222	4	CHEM 2510	4
PHYSICS 1135	4	PHYSICS 2135	4
	15		15

Junior Year

First Semester	Credits	Second Semester	Credits
CHEM 2420	3	CHEM 3329	1
CHEM 3310	3	CHEM 3320	3
CHEM 4610	3	CHEM 2459	2
CHEM 4619	2	CHEM 4620	3
STAT 3113	3	CHEM 4099	1
		CHEM 4010 or 4099	1
		Humanities Elective[1]	3
	14		14

Senior Year

First Semester	Credits	Second Semester	Credits
CHEM 3510	4	CHEM 4297	3
CHEM 4099	1	Social Science Electives[1]	6
CHEM 4810	3	General electives	6
CHEM 4630	3		
HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3		

Humanities Elective[1]	3		
	17		15

Total Credits: 120

[1]

Gen. Ed. Elective must fulfill the Missouri S&T general education requirements applicable to the students catalog year.

Notes:

Grade Requirements: A minimum grade of "C" is required for each chemistry course counted towards the degree.

ROTC: Basic ROTC may be taken in the freshman and sophomore years, but does not count towards the degree.

Electives: The degree has six (6) credit hours of general electives credit that may not include Math courses prerequisite to calculus.Three (3) hours upper technical elective credit must be 2xxx, 3xxx, 4xxx (or 5xxx or higher with permission) level in chemistry or can be taken in another technical area with permission of department. Not more than 1 credit hour of CHEM 4010 can be included for degree credit. Up to eight (8) credit hours may be taken of CHEM 4099.

Polymer & Coatings Science Emphasis Area

Freshman Year			
First Semester	Credits	Second Semester	Credits
CHEM 1100	1	CHEM 1320	3
CHEM 1110	1	CHEM 1510	2
CHEM 1310	4	COMP SCI 1500	3
CHEM 1319	1	ENGLISH 1160	3
MATH 1214 or 1210 ***and*** 1211	4	MATH 1215	4
ENGLISH 1120	3		
	14		15
Sophomore Year			
First Semester	Credits	Second Semester	Credits
CHEM 2210	3	CHEM 2220	3
CHEM 2219	1	CHEM 2229	1
CHEM 4810	3	CHEM 2410	3
MATH 2222	4	CHEM 2510	4
PHYSICS 1135	4	PHYSICS 2135	4
	15		15
Junior Year			
First Semester	Credits	Second Semester	Credits
CHEM 2420	3	CHEM 2459	2
CHEM 3310	3	CHEM 3320	3
CHEM 3510	4	CHEM 4850	3
PHYSICS 4523	3	CHEM 3329	1
STAT 3113	3	CHEM 4099	2
		Humanities Elective[1]	3
		Social Science Elective[1]	3
	16		17
Senior Year			
First Semester	Credits	Second Semester	Credits
CHEM 4010	1	CHEM 4297	3
CHEM 4099	1	Social Science Elective[1]	3

CHEM 4610	3	General Electives	6
CHEM 4819	1		
HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3		
Humanities Elective[1]	3		
General Electives	4		
	16		12

Total Credits: 120

[1]

Gen. Ed. Elective must fulfill the Missouri S&T general education requirements applicable to the students catalog year.

Notes:

Grade Requirements: A minimum grade of "C" is required for each chemistry course counted towards the degree.

ROTC: Basic ROTC may be taken in the freshman and sophomore years, but does not count towards the degree.

Undergraduate Research: The undergraduate research CHEM 4099 must be done in Polymers and Coatings Science.

Electives: The degree has ten (10) credit hours of general electives credit that may not include Math courses prerequisite to calculus. Not more than 1 credit hour of CHEM 4010 can be included for degree credit. Up to eight (8) credit hours may be taken of CHEM 4099.

Pre-medicine Emphasis Area

Freshman Year			
First Semester	Credits	Second Semester	Credits
CHEM 1100	1	BIO SCI 1113	3
CHEM 1110	1	CHEM 1320	3
CHEM 1310	4	CHEM 1510	2
CHEM 1319	1	ENGLISH 1160 or 3560	3
MATH 1214 or 1210 ***and*** 1211	4	MATH 1215	4
ENGLISH 1120	3		
	14		15
Sophomore Year			
First Semester	Credits	Second Semester	Credits
BIO SCI 2213	3	BIO SCI 2223	3
BIO SCI 2219	1	CHEM 2220	3
CHEM 2210	3	CHEM 2229	1
CHEM 2219	1	CHEM 2510	4
COMP SCI 1500	3	PHYSICS 2145	4
PHYSICS 1145	4		
	15		15
Junior Year			
First Semester	Credits	Second Semester	Credits
BIO SCI 3333	3	BIO SCI 3343	3
BIO SCI 3359	1	CHEM 2410	3
CHEM 3310	3	CHEM 3329	1
CHEM 4610	3	CHEM 4010 or 4099	1
CHEM 4619	2	CHEM 4620	3
STAT 3425	4	PSYCH 1101	3
	16		14

Senior Year

First Semester	Credits	Second Semester	Credits
CHEM 3510	4	BIO SCI 3313	3
CHEM 4630	3	CHEM 4297	3
CHEM 4650	3	Humanities Elective[1]	3
HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3	Social Science Elective[1]	3
Humanities Elective[1]	3	General Elective	3
	16		15

Total Credits: 120

[1]

Gen. Ed. Elective must fulfill the Missouri S&T general education requirements applicable to the students catalog year.

Notes:

Grade Requirements: A minimum grade of "C" is required for each chemistry course counted towards the degree.

ROTC: Basic ROTC may be taken in the freshman and sophomore years, but does not count towards the degree.

Electives: The degree has three (3) credit hours of general electives credit that may not include Math courses prerequisite to calculus. Not more than 1 credit hour of CHEM 4010 can be included for degree credit. Up to eight (8) credit hours may be taken of CHEM 4099.

Justification for request	Removed stat courses the math department says is being inactivated per their email sent to departments on September 15.
Attach Budget	
System Approval Letter	
MDHE Approval	
Supporting Documents	
Reviewer Comments	

Key: 16

Program Change Request

Date Submitted: 10/14/25 11:55 am

Viewing: CP ENG-BS : Computer Engineering BS

Last approved: 08/27/25 11:48 am

Last edit: 11/03/25 3:25 pm

Changes proposed by: R.Joe Stanley (stanleyj)

Catalog Pages Using this Program

Computer Engineering

Final Catalog FS2026-SP2027

Rationale for Supporting

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Bachelor of Science
CIM Prospectus	
Academic Level	Undergraduate
Program Code	CP ENG-BS
Department	Electrical & Computer Engr
Discipline	Computer Engineering
Offered by	
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. **FS Meeting Agenda**
8. Faculty Senate Chair
9. Registrar

Approval Path

1. 10/14/25 12:26 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/17/25 1:37 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:55 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:34 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:09 am

Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:13 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Aug 6, 2014 by R.Joe Stanley (stanleyj)
2. Aug 13, 2014 by pantaleoa
3. Sep 21, 2015 by kleb6b
4. Apr 25, 2016 by R.Joe Stanley (stanleyj)
5. Dec 1, 2016 by R.Joe Stanley (stanleyj)
6. Sep 19, 2017 by R.Joe Stanley (stanleyj)
7. Jun 18, 2018 by R.Joe Stanley (stanleyj)
8. Nov 2, 2018 by R.Joe Stanley (stanleyj)
9. May 2, 2019 by R.Joe Stanley (stanleyj)
10. May 14, 2019 by ershenb
11. Mar 3, 2020 by

R.Joe Stanley (stanleyj)
12. May 2, 2022 by R.Joe Stanley (stanleyj)
13. Sep 26, 2022 by R.Joe Stanley (stanleyj)
14. Jun 7, 2023 by R.Joe Stanley (stanleyj)
15. Jan 29, 2024 by R.Joe Stanley (stanleyj)
16. Apr 30, 2024 by R.Joe Stanley (stanleyj)
17. Jul 1, 2025 by R.Joe Stanley (stanleyj)
18. Jul 2, 2025 by Jade McCain (jm558v)
19. Jul 2, 2025 by Jade McCain (jm558v)
20. Jul 7, 2025 by Jade McCain (jm558v)
21. Aug 27, 2025 by Crystal Wilson (wilsoncry)

Computer Engineering BS

CIP Code

Purpose

Intended Audience

Program-Specific Admission

Program Requirements and Description

Bachelor of Science Computer Engineering[1]

For the Bachelor of Science degree in Computer Engineering, a minimum of 128 credit hours is required. These requirements are in addition to credit received for algebra, trigonometry, and basic ROTC courses. An average of at least two grade points per credit hour must be attained. At least two grade points per credit hour must also be attained in all courses taken in Computer Engineering.

The Computer Engineering program at Missouri S&T is characterized by its focus on the scientific basics of engineering and its innovative application; indeed, the underlying theme of this educational program is the application of the scientific basics to engineering practice through attention to problems and needs of the public. 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. These interrelations are presented and discussed through classroom and laboratory instruction.

Free Electives Footnote:

Each student is required to take three hours of free electives in consultation with his/her academic advisor. Credits which do not count towards this requirement are deficiency courses (such as algebra and trigonometry), and extra credits in required courses. Any courses outside of engineering and science must be at least three credit hours.

Freshman Year

First Semester	Credits	Second Semester	Credits
FR ENG 1100[2]	1	COMP SCI 1500	3
MATH 1214 or 1211[3,18]	4	MATH 1215[3]	4
CHEM 1310	4	PHYSICS 1135[3,4]	4
CHEM 1319	1	Gen Ed Elective[5]	6
HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3		
ENGLISH 1120	3		
	16		17

Sophomore Year

First Semester	Credits	Second Semester	Credits
ELEC ENG 2100[3,6]	3	COMP ENG 2210[3,6]	3
ELEC ENG 2101[3,6]	1	COMP ENG 2211[3,6]	1
MATH 3304[3]	3	ELEC ENG 2120[3,6]	3
COMP SCI 1570[3]	3	MATH 2222[3]	4
COMP SCI 1580[3]	1	COMP SCI 1200[3]	3
PHYSICS 2135[3,4]	4	COMP SCI 1575[3]	3
		COMP ENG 2010 or ELEC ENG 2010	1

	15		18
Junior Year			
First Semester	Credits	Second Semester	Credits
COMP ENG 3110[3]	3	COMP ENG Elective A[3,11]	3
~~COMP ENG 3150[3,6,8]~~	~~3~~	COMP ENG 3150[3]	3
~~COMP ENG 3151[3,6,8]~~	~~1~~	ELEC ENG 3410[3,6]	3
ELEC ENG 2200[3,6]	3	COMP SCI 3800 or 2500[3]	3
ELEC ENG 2201[3,6]	1	~~STAT 3117[12]~~	~~3~~
STAT 3117[9]	3	ENGLISH 3560 or 1160	3
Mathematics Elective[7]	3		
SP&M S 1185[10]	3		
	16		15
Senior Year			
First Semester	Credits	Second Semester	Credits
COMP ENG Elective C[3,14]	3	COMP ENG Elective D[3,12,13]	3
COMP ENG 4096[3,15]	1	COMP ENG Elective E[3,12,13]	3
COMP ENG 5410[3, 11, 14]	3	COMP ENG 4097[15]	3
Engineering Science Elective [8]	3	Professional Development Elective[17]	3
Gen Ed Elective[5]	3	Free Elective[16]	3
COMP ENG Elective B[3,11]	3		
	16		15

Total Credits: 128

1

The minimum number of hours required for a degree in Computer Engineering is 128.

2

Students that transfer to Missouri S&T after their freshman year are not required to enroll in Foundational Engineering and Computing Seminars.

3

A minimum grade of "C" must be attained in MATH 1214 or MATH 1211, MATH 1215, MATH 2222, and MATH 3304, PHYSICS 1135 and PHYSICS 2135 (or their equivalents), COMP SCI 1570, COMP SCI 1575, COMP SCI 1580, COMP SCI 1200, COMP SCI 2500 or COMP SCI 3800, COMP ENG 2210, COMP ENG 2211, COMP ENG 3110, COMP ENG 3150, COMP ENG 4096, COMP ENG 5410, and ELEC ENG 2100, ELEC ENG 2101, ELEC ENG 2120, ELEC ENG 2200, ELEC ENG 2201, and ELEC ENG 3410 and the COMP ENG electives A, B, C, D and E. Also, students may not enroll in other courses that use these courses as prerequisites until the minimum grade of "C" is attained.

4

Students may take PHYSICS 1111 and PHYSICS 1119 in place of PHYSICS 1135. Students may take PHYSICS 2111 and PHYSICS 2119 in place of PHYSICS 2135.

5

All electives must be approved by the student's advisor. Gen. Ed. electives must fulfill the Missouri S&T general education requirements applicable to the student's catalog year. These requirements are specified in the current

catalog.

6

Students who drop a lecture course prior to the deadline to drop a class must also drop the corequisite lab course.

7

Students must take one of the following courses:
MATH 3108, MATH 3109, MATH 5302, MATH 5603, MATH 5105, MATH 5106, MATH 5107, MATH 5108, MATH 4209, MATH 4211, MATH 5215, MATH 5222, MATH 5325, MATH 4530, MATH 5737, MATH 5351, MATH 5154, MATH 4096, MATH 5483, MATH 5585, STAT 5644, STAT 5346, STAT 5353.

8

Students must take one of MECH ENG 2340, MECH ENG 2519, MECH ENG 2527, PHYSICS 2311, PHYSICS 2401, CHEM 2210, BIO SCI 2213, BIO SCI 2223, CIV ENG 2200, MECH ENG 2350, PHYSICS 2305, PHYSICS 4311, CER ENG 4240, or NUC ENG 3205.

9

Students may replace STAT 3117 with STAT 5643.

10

Students may replace SP&M S 1185 with the ROTC sequence of MIL ARMY 4250 and MIL ARMY 4500 or MIL AIR 4110 and MIL AIR 4120.

11

Comp Eng Senior Electives A and B, respectively, must be selected from 4xxx or 5xxx courses in Comp Eng, except COMP ENG 4000, COMP ENG 4099, COMP ENG 4096, COMP ENG 4097, COMP ENG 5000, and COMP ENG 5099. The two courses selected for electives A and B, respectively, should be from two different Comp Eng emphasis areas. The emphasis areas, with course number options, are as follows:
Electronic Computer System Design: Elec Eng 36xx, Elec Eng 56xx, Comp Eng 51xx
Computational Intelligence: Comp Eng 53xx
Computer Chips and Semiconductor Engineering: Elec Eng 5230, Elec Eng 3100, Comp Eng 32xx/42xx/52xx, Comp Eng 51xx
Networks and Cyber Physical Systems: Comp Eng 44xx, Comp Eng 54xx, Elec Eng 5160, Elec Eng 53xx, except COMP ENG 5410.

12

Comp Eng Senior Electives D and E must be selected from an approved list that contains most 3xxx, 4xxx and 5xxx courses in science, mathematics, and engineering except required courses in Comp Eng, Elec Eng, and Comp Sci and except COMP SCI 3610 and COMP SCI 5600.

13

COMP ENG Electives D and E cannot include more than three hours of COMP ENG 3002/ELEC ENG 3002, COMP ENG 4000/COMP ENG 4099, ELEC ENG 4000/ ELEC ENG 4099, COMP SCI 4000/COMP SCI 4099.

14

Comp Eng Senior Elective C must be selected from 3xxx, 4xxx or 5xxx courses in Comp Eng, Elec Eng, or Comp Sci, except COMP ENG 3000/ COMP ENG 4000/ COMP ENG 4096/ COMP ENG 4097/ COMP ENG 4099/ COMP ENG 5000/ COMP ENG 5099, ELEC ENG 3000/ELEC ENG 4000/ ELEC ENG 4096/ ELEC ENG 4097/ ELEC ENG 4099/ELEC ENG 5000/ ELEC ENG 5099, COMP SCI 3000/ COMP SCI 4000/ COMP SCI 4096/

COMP SCI 4097/COMP SCI 4099/ COMP SCI 5000, and COMP SCI 5099 and COMP SCI 4010, COMP SCI 3610 . and COMP SCI 5600. The emphasis area with course number options, are as follows:
Networking, Security, and Reliability: 44xx/54xx, except COMP ENG 5410.
15

Students pursuing dual degrees in COMP ENG and ELEC ENG may take either COMP ENG 4096 or ELEC ENG 4096 and COMP ENG 4097 or ELEC ENG 4097. Students may not receive credit for both COMP ENG 4096 and ELEC ENG 4096 or COMP ENG 4097 and ELEC ENG 4097 in the same degree program.
16

Students are required to take at least three credit hours. ELEC ENG 2800 level, ELEC ENG 4096, ELEC ENG 4097, COMP ENG 4096 and COMP ENG 4097 may not be used for free electives. No more than one credit hour of COMP ENG 3002 or ELEC ENG 3002 may be applied to the BS degree for free electives.
17

Students must take one of the following courses: BUS 5980, ECON 4430, ECON 5337, ENG MGT 2310, ENG MGT 3320, ENG MGT 4110, ENG MGT 5514, PHILOS 3225.
18

The course combination MATH 1210 and MATH 1211 may be taken in place of MATH 1214.
19

~~Comp Eng Senior Elective C must be selected from 3xxx, 4xxx or 5xxx courses in Comp Eng, Elec Eng, or Comp Sci, except COMP ENG 3000/ COMP ENG 4000/ COMP ENG 4096/ COMP ENG 4097/ COMP ENG 4099/ COMP ENG 5000/ COMP ENG 5099, ELEC ENG 3000/ELEC ENG 4000/ ELEC ENG 4096/ ELEC ENG 4097/ ELEC ENG 4099/ELEC ENG 5000/ ELEC ENG 5099, COMP SCI 3000/ COMP SCI 4000/ COMP SCI 4096/ COMP SCI 4097/COMP SCI 4099/ COMP SCI 5000, and COMP SCI 5099 and COMP SCI 4010, COMP SCI 3610 . and COMP SCI 5600.~~
20

~~Students must take one of the following courses: BUS 5980, ECON 4430, ECON 5337, ENG MGT 2310, ENG MGT 3320, ENG MGT 4110, ENG MGT 5514, PHILOS 3225.~~
21~~The course combination MATH 1210 and MATH 1211 may be taken in place of MATH 1214.~~

Emphasis Areas for Computer Engineering

A declared emphasis area is not required. A student may choose to obtain a Computer Engineering degree without a formal emphasis or may choose to obtain a Computer Engineering degree with a declared emphasis in one or more of the emphasis areas of computer engineering. A major change request is required to add the emphasis area option to the degree program.

~~Emphasis areas that may be declared,include:Integrated Circuits and Logic Design, Computer Architecture and Embedded Systems, and Networking, Security, and Dependability.~~Emphasis areas ~~Note~~ that may be declared, include: **Integrated Circuits and Logic Design, ~~Computational Intelligenceis also a~~ Computer Architecture and Embedded Systems, and Networking, Security, and Dependability**. Note that **Computational Intelligence** is also a Computer Engineering emphasis area but is focused in the graduate program.

For students who seek a Computer Engineering degree without a formal emphasis, these emphasis areas may guide the choice of their COMP ENG Electives A, B, C, D, and E as well as their free electives. Students should

consult with their advisors on such course selections.
For students who seek a Computer Engineering degree with a declared emphasis, courses in the declared emphasis area will be applied to COMP ENG Electives A, C, and D in the degree requirements. For students who choose to have multiple emphasis areas, the additional courses will apply to COMP ENG Electives B and E and free elective requirements. Students should seek guidance from their advisors on emphasis areas and on courses that are relevant to more than one emphasis area. Students may have an emphasis area or emphasis areas listed on their transcript by completing **three three-credit-hour courses** in computer engineering from the designated lists. For a single emphasis area, this requirement will be satisfied by completing the relevant 4XXX-level or above course for Elective A and 3XXX-level or above courses for Electives C and D from the designated emphasis area course list. For a second emphasis area, this requirement will be satisfied by completing the relevant 4XXX-level or above course for Elective B, a 3XXX-level or above course for Electives E, and a 3XXX-level or above course for the free elective from the designated second emphasis area course list. Courses not on the emphasis area list, including experimental courses (5001) require departmental approval to apply toward the designated emphasis area.
Computer Engineering Course List Designations:

Integrated Circuits and Logic Design	**9**
COMP ENG 42XX and COMP ENG 52XX Courses	
Computer Architecture and Embedded Systems	**9**
COMP ENG 41XX, COMP ENG 51XX, COMP ENG 45XX, COMP ENG 55XX, COMP ENG 46XX, and COMP ENG 56XX Courses	
Networking, Security, and Dependability	**9**
COMP ENG 44XX and COMP ENG 54XX Courses, Except COMP ENG 5410	
Computational Intelligence	**9**
COMP ENG 53XX Courses	

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Justification for request

Comp Eng 5410 course number has been changed to Comp Eng 4410 to reflect that it's a senior-level undergraduate course. CC forms have been submitted to renumber Comp Eng 5410 to Comp 4410 and to replace Comp Eng 5410 with Comp Eng 4410 as the correct prerequisite in other courses.

The current Computer Engineering emphasis areas have been in place, with minor tweaks, since 2013. Computer Engineering faculty turnover, technology changes, the inability to regularly offer courses in current emphasis areas, and faculty research areas of expertise

changes have led to examine the Computer Engineering emphasis areas. The emphasis areas with associated courses have been revised to address emerging areas of technology and Computer Engineering faculty strengths and areas of research. The ECE faculty approved the emphasis area changes with associated courses on Oct 9, 2025.

Comp Eng 3150/3151 is being changed to Comp Eng 3150 (2 hrs lecture/1 hr lab) to integrate the introductory microcontroller and embedded system curriculum using a target microcontroller with hands-on laboratory experiments and projects. The change from 4 credit hours (Comp Eng 3150/3151) to 3 credit hours (Comp Eng 3150) requires all students to enroll in the 2 credit hour lecture and 1 credit hour lab. The Computer Engineering faculty approved this course change on May 5, 2025 and the ECE faculty in May 2025. A CC form has been submitted for this course change to be effective Fall 2026.
Also, in May 2025, the ECE faculty approved a separate Computer Engineering sophomore seminar course (1 credit hour) that covers relevant topics that are currently covered in seminars that are included in Elec Eng 2120. A CC form for the Computer Engineering sophomore seminar course (Comp Eng 2010, 1 credit hour) is also submitted to be effective Fall 2026.

In August 2025, the ECE department approved a change to the advancement exam policy for the core sophomore level courses (Elec Eng 2100, Elec Eng 2120, Elec Eng 2200, Comp Eng 2210) to remove the C or better requirement on the advancement exam to pass the respective courses. The footnotes related to passing the advancement exams have been removed from the Comp Eng BS program.

Comp Eng 3110 is the foundational course for computer organization and has been moved to precede Comp Eng 3150 in the Comp Eng BS program (rather than being taken concurrently with Comp Eng 3150). The curriculum and prerequisites for Comp Eng 3110 are unchanged.

Attach Budget

System Approval
Letter

MDHE Approval

Supporting
Documents

Reviewer
Comments

Crystal Wilson (wilsoncry) (10/15/25 8:22 am): Removed the number 3 footnote reference from senior year, second semester, listing for COMP ENG 4097. DC from history September 21,

2015 shows this course was removed from footnote 3, but the number was not removed from the grid.

Jade McCain (jm558v) (10/16/25 11:27 am): Added back Comp Eng 5410 and removed Comp Eng 4410 from senior year first semester of the plan of study grid due to needing necessary approval paperwork to remove Comp Eng 5410 from graduate certificates.

Jade McCain (jm558v) (10/16/25 11:32 am): Added footnote 3 to Comp Eng 5410 in plan of study grid and replaced Comp Eng 4410 with Comp Eng 5410 in footnote 3.

Jade McCain (jm558v) (10/17/25 9:55 am): Made updates to footnotes regarding Comp Eng 5410 per department request via email on 10/16/2025.

Jade McCain (jm558v) (10/17/25 1:34 pm): Added Elec Eng 2010 as "or class" to Comp Eng 2010 in sophomore year, second semester per department request via email on 10/17/2025.

Crystal Wilson (wilsoncry) (10/31/25 3:15 pm): Fixed formatting for footnote 3.

Crystal Wilson (wilsoncry) (11/03/25 12:09 pm): Added footnote 3 to Math 3304 and Math 2222 on plan of study grid as they appear to have been left off when changes were previously made, these courses are listed under footnote 3.

Jade McCain (jm558v) (11/03/25 3:25 pm): Reversed changes to emphasis areas due to not having required approval paperwork.

Program Change Request

Date Submitted: 10/02/25 9:31 am

Viewing: CR ENG-BS : Ceramic Engineering BS

Last approved: 07/01/25 11:08 am

Last edit: 10/27/25 10:32 am

Changes proposed by: Crystal Wilson (wilsoncry)

Catalog Pages Using this Program

Ceramic Engineering

In Workflow

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

Approval Path

1. 10/04/25 7:50 am Michael Moats (moatsm): Approved for RMATSENG Chair
2. 10/06/25 11:21 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/09/25 7:47 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:34 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:09 am Jade McCain (jm558v): Approved for CCC Meeting Agenda

Final Catalog	FS2026-SP2027

6. 11/21/25 11:13 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Oct 10, 2013 by Lahne Black (lahne)
2. Apr 22, 2014 by Lahne Black (lahne)
3. Aug 6, 2014 by F. Scott Miller (smiller)
4. Jun 19, 2015 by F. Scott Miller (smiller)
5. Jul 15, 2015 by pantaleoa
6. Jun 28, 2017 by F. Scott Miller (smiller)
7. Mar 3, 2020 by ershenb
8. Apr 6, 2022 by F. Scott Miller (smiller)
9. Jun 14, 2024 by David Lipke (lipke)
10. Dec 20, 2024 by Crystal Wilson (wilsoncry)
11. Jul 1, 2025 by David Lipke (lipke)

Rationale for Inactivation	
Supporting Documents	

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Bachelor of Science
CIM Prospectus	
Academic Level	Undergraduate

Program Code	CR ENG-BS
Department	Materials Science & Engineering
Discipline	Ceramic Engineering
Offered by	
Title	Ceramic Engineering BS
CIP Code	

Purpose

Intended Audience

Program-Specific Admission

Program Requirements and Description

Bachelor of Science
Ceramic Engineering

For the Bachelor of Science degree in Ceramic Engineering a minimum of 128 credit hours is required. A cumulative grade point average of at least 2.0 is required for all courses applied toward the degree, as well as for all required courses in the major field of study.

Freshman Year			
First Semester	Credits	Second Semester	Credits
FR ENG 1100	1	CER ENG 2210[1]	2
CHEM 1310[1]	4	CHEM 1320[1]	3
CHEM 1319	1	MATH 1215[1]	4
MATH 1214 or 1211	4	MECH ENG 1720	3
ENGLISH 1120	3	PHYSICS 1135	4

HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3		
	16		16
Sophomore Year			
First Semester	Credits	Second Semester	Credits
CER ENG 2110[1]	3	CER ENG 2120	3
CER ENG 2315	2	CER ENG 2325[1]	2
CER ENG 3230[1]	3	CIV ENG 2200	3
MATH 2222	4	MATH 3304[1]	3
PHYSICS 2135[1]	4	ENGLISH 1160, or 3560, or SPM S 1185[5]	3
		General Education Elective[2]	3
	16		17
Junior Year			
First Semester	Credits	Second Semester	Credits
CER ENG 3210	3	CER ENG 3325	2
CER ENG 3220[1]	3	CER ENG 3410	3
CER ENG 3315[1]	2	CER ENG 4310	3
CIV ENG 2210[1]	3	PHYSICS 2305[1]	3
STAT 3113 or 3117	3	Advanced Chemistry Elective[3]	3
Technical Elective[4]	2	General Education Elective[2]	3
	16		17
Senior Year			
First Semester	Credits	Second Semester	Credits
CER ENG 4096[4]	3	CER ENG 4097	3
CER ENG 4250	3	CER ENG 4220	3
CER ENG 4410	3	CER ENG 4240	3
Technical Elective[4]	3	Technical Elective[4]	3
General Education Elective[2]	3	General Education Elective[2]	3
	15		15

Total Credits: 128

1

A grade of “C” or better is required in the following courses to satisfy prerequisite requirements for subsequent coursework and to meet graduation criteria: CER ENG 2110, CER ENG 2210, CER ENG 2325, CER ENG 3315, CER ENG 3220, CER ENG 3230, CER ENG 4096, CHEM 1310, CHEM 1320, CIV ENG 2210, MATH 1215, MATH 3304, PHYSICS 2135, PHYSICS 2305.

2

Gen. Ed. electives must fulfill the Missouri S&T general education requirements applicable to the student's catalog year.

3

All ceramic engineering students must select an advanced chemistry elective with the advisor's approval. The courses that can be considered are CHEM 2210, CHEM 3310, CHEM 3420, CHEM 4310, or CHEM 4810.

4

Technical Electives must be selected from upper-level (i.e., 2000-level with pre-requisite or 3000-level and above) courses with advisor approval in any of the following disciplines: MATH, STAT, PHYS, CHEM, BIO SCI, GEOLOGY, COMP SCI, IS&T, ENG MGT, or any engineering program. Courses designated BUS, ECON, EDUC, ERP, MIL SCI, or any H/SS program do not satisfy Technical Electives requirements.

5

Students may replace SP&M S 1185 with the ROTC sequence of MIL ARMY 4250 and MIL ARMY 4500 or MIL AIR 4110 andMIL AIR 4120.

Justification for request	Removed stat courses the math department says is being inactivated per their email sent to departments on September 15. Removed math 1221. Fixed formatting of footnote 1.
Attach Budget	
System Approval Letter	
MDHE Approval	
Supporting Documents	
Reviewer Comments	

Key: 149

Program Change Request

Date Submitted: 10/14/25 3:43 pm

Viewing: EL ENG-BS : Electrical Engineering BS

Last approved: 07/01/25 11:09 am

Last edit: 11/03/25 1:34 pm

Changes proposed by: Kelvin Erickson (kte)

Catalog Pages Using this Program

Electrical Engineering

Final Catalog FS2026-SP2027

Rationale for Supporting

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Bachelor of Science
CIM Proposal	
Academic Level	Undergraduate
Program Code	EL ENG-BS
Department	Electrical & Computer Engr
Discipline	Electrical Engineering
Offered by	
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. **FS Meeting Agenda**
8. Faculty Senate Chair
9. Registrar

Approval Path

1. 10/14/25 5:39 pm Jonathan Kimball (kimballjw): Approved for RELECENG Chair
2. 10/15/25 3:21 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:55 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:35 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:10 am

Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:13 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Aug 6, 2014 by watkins
2. Aug 13, 2014 by pantaleoa
3. Apr 25, 2016 by watkins
4. Jun 18, 2018 by watkins
5. May 15, 2019 by Mehdi Ferdowsi (ferdowsi)
6. Mar 3, 2020 by ershenb
7. Oct 28, 2020 by Marita Raper (tibbettsmg)
8. Oct 1, 2021 by Crystal Wilson (wilsoncry)
9. May 2, 2022 by R.Joe Stanley (stanleyj)
10. Sep 26, 2022 by Kelvin Erickson (kte)
11. Apr 30, 2024 by Kelvin Erickson (kte)
12. Jul 1, 2025 by Kelvin Erickson (kte)

Electrical Engineering BS

CIP Code	14.1001 - Electrical and Electronics Engineering.

Purpose

Intended Audience

Program-Specific Admission

Program Requirements and Description

Bachelor of Science
Electrical Engineering[1]

For the Bachelor of Science degree in Electrical Engineering a minimum of 128 credit hours is required. These requirements are in addition to credit received for algebra, trigonometry, and basic ROTC courses. An average of at least two grade points per credit hour must be attained. At least two grade points per credit hour must also be attained in all courses taken in Electrical Engineering.

The Electrical Engineering program at Missouri S&T is characterized by its focus on the scientific basics of engineering and its innovative application; indeed, the underlying theme of this educational program is the application of the scientific basics to engineering practice through attention to problems and needs of the public. 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.

Free Electives Footnote:

Students are required to take six hours of free electives in consultation with their academic advisor. Credits which do not count towards this requirement are deficiency courses (such as algebra and trigonometry), and extra credits in required courses. Any courses outside of engineering and science must be at least three credit hours.

Freshman Year

First Semester	Credits	Second Semester	Credits
FR ENG 1100[2]	1	MECH ENG 1720	3
CHEM 1310	4	MATH 1215[3]	4
CHEM 1319	1	PHYSICS 1135[3,4]	4
MATH 1214 or 1211[3, 17]	4	Gen Ed Elective[5]	6
HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3		
ENGLISH 1120	3		
	16		17

Sophomore Year

First Semester	Credits	Second Semester	Credits
ELEC ENG 2100[3,6]	3	ELEC ENG 2120[3]	3
ELEC ENG 2101[3,6]	1	ELEC ENG 2410[3, 6]	3
ELEC ENG 2010 or COMP ENG 2010	1	ELEC ENG 2411[3, 6]	1

MATH 3304[3]	3	MATH 2222[3]	4
COMP ENG 2210[3,6]	3	Engineering Science Elective[7]	3
COMP ENG 2211[3,6]	1	COMP SCI 1500	3
PHYSICS 2135[3,4]	4		
	16		17

Junior Year

First Semester	Credits	Second Semester	Credits
ELEC ENG 3100[3,6]	3	ELEC ENG 3600[3]	3
ELEC ENG 3101[3,6]	1	El Eng Elective A[10,15]	3
ELEC ENG 3320[3,6]	3	ELEC ENG 3430[3,6]	3
ELEC ENG 3321[3,6]	1	ELEC ENG 3431[3,6]	1
SP&M S 1185[9]	3	STAT 3117[8]	3
MATH 3108	3	ENGLISH 3560 or 1160	3
	14		16

Senior Year

First Semester	Credits	Second Semester	Credits
El Eng Power Elective[3,6,11]	3	El Eng Elective C[10]	3
El Eng Power Elective Lab[3,6,11]	1	El Eng Elective E[13,15]	3
El Eng Elective B[10]	3	ELEC ENG 4097	3
El Eng Elective D[12,15]	3	Professional Development Elective[16]	3
ELEC ENG 4096[3]	1	Free Elective[14]	3
Free Elective[14]	3		
Gen Ed Elective[5]	3		
	17		15

Total Credits: 128

1

The minimum number of hours required for a degree in Electrical Engineering is 128.

2

Students that transfer after their freshman year are not required to enroll in FR ENG 1100.

3

A minimum grade of "C" must be attained in MATH 1214, MATH 1215, MATH 2222, and MATH 3304, PHYSICS 1135 and PHYSICS 2135 (or their equivalents), ELEC ENG 2100, ELEC ENG 2101, ELEC ENG 2120, ELEC ENG 2410, ELEC ENG 2411, ELEC ENG 3320, ELEC ENG 3321, ELEC ENG 3430, ELEC ENG 3431, ELEC ENG 3100, ELEC ENG 3101, and ELEC ENG 3600, the ELEC ENG power elective (ELEC ENG 3500 and ELEC ENG 3501 or ELEC ENG 3540 and ELEC ENG 3541), ELEC ENG 4096 and COMP ENG 2210 and COMP ENG 2211. Also, students may not enroll in other courses that use these courses as prerequisites until the minimum grade of "C" is attained.

4

Students may take PHYSICS 1111 and PHYSICS 1119 in place of PHYSICS 1135. Students may take PHYSICS 2111 and PHYSICS 2119 in place of PHYSICS 2135.

5

All electives must be approved by the student's advisor. Gen. Ed. electives must fulfill the Missouri S&T general education requirements applicable to the student's catalog year. These requirements are specified in the current catalog.

6

Students who drop a lecture course prior to the last week to drop a class must also drop the corequisite lab.

7

Students must take MECH ENG 2340, MECH ENG 2519, MECH ENG 2527, PHYSICS 2305, PHYSICS 2311, PHYSICS 2401, NUC ENG 3103, CHEM 2210, BIO SCI 2213, or BIO SCI 2223. The following pairs of course are substitutions: CIV ENG 2200 and MECH ENG 2350 or ENG MGT 2110 and ENG MGT 3310.

8

Students may replace STAT 3117 with STAT 5643.

9

Students may replace SP&M S 1185 with the ROTC sequence of MIL ARMY 4250 and MIL ARMY 4500 or MIL AIR 4110 and MIL AIR 4120.

10

ELEC ENG Electives A, B, and C must be chosen from ELEC ENG 56XX, ELEC ENG 3500, ELEC ENG 3540, ELEC ENG 3410, ELEC ENG 3250, ELEC ENG 3340, ELEC ENG 3440, ELEC ENG 3120, and COMP ENG 3150. Only one ELEC ENG 56XX course may be used.

11

The ELEC ENG Power Elective may be satisfied with ELEC ENG 3500 and ELEC ENG 3501 or ELEC ENG 3540 and ELEC ENG 3541.

12

ELEC ENG Elective D must be a 4XXX-level or above ELEC ENG or COMP ENG course with at least a 3-hour lecture component. ELEC ENG 4000, ELEC ENG 5000, COMP ENG 4000, COMP ENG 5000, ELEC ENG 4099, COMP ENG 4099, ELEC ENG 4096, COMP ENG 4096, ELEC ENG 4097, COMP ENG 4097, ELEC ENG 5070, COMP ENG 5070, ELEC ENG 58XX, and COMP ENG 58XX may not be used for Elective D.

13

ELEC ENG Elective E may be any 3XXX-level or above ELEC ENG or COMP ENG course except ELEC ENG 3002, ELEC ENG 38XX, ELEC ENG 4096, ELEC ENG 4097, ELEC ENG 5070, COMP ENG 3002, COMP ENG 38XX, COMP ENG 4000, COMP ENG 4096, COMP ENG 4097, and COMP ENG 5070.

14

Students are required to take six hours of free elective in consultation with their academic advisors. Credits that do not count toward this requirement are deficiency courses (such as algebra and trigonometry) and extra credits from courses meeting other requirements. Any courses outside of engineering and science must be at least three credit hours. ELEC ENG 28XX, ELEC ENG 38XX, ELEC ENG 4096, ELEC ENG 4097, COMP ENG 28XX, COMP ENG 38XX, COMP ENG 4096 and COMP ENG 4097 may not be used for free electives. No more than one credit hour of ELEC ENG 3002 or COMP ENG 3002 may be applied to the BS degree for free electives.

15

Students that pursue an optional degree emphasis area have restricted options for El Eng Electives A, D, and E. Students admitted to the accelerated BS/MS program must satisfy El Eng Electives D and E with 5xxx or 6xxx-level courses and a minimum grade of B.

16

Students must take one of the following courses: BUS 5980, ECON 4430, ECON 5337, ENG MGT 2310, ENG MGT 3320, ENG MGT 4110, ENG MGT 5514, or PHILOS 3225.

17

Both MATH 1210 and MATH 1211 may be taken in place of MATH 1214. A C or better grade is required in both courses.

18

~~Students that pursue an optional degree emphasis area have restricted options for El Eng Electives A, D, and E. Students admitted to the accelerated BS/MS program must satisfy El Eng Electives D and E with 5xxx or 6xxx-level courses and a minimum grade of B.~~

19

~~Students must take one of the following courses: BUS 5980, ECON 4430, ECON 5337, ENG MGT 2310, ENG MGT 3320, ENG MGT 4110, ENG MGT 5514, or PHILOS 3225.~~

20

~~Both MATH 1210 and MATH 1211 may be taken in place of MATH 1214. A C or better grade is required in both courses.~~

All Electrical Engineering students are encouraged to take the fundamentals of Engineering Examination prior to graduation. It is the first step toward becoming a registered professional engineer.

An accelerated BS/MS program and a formal emphasis in circuits and electronics, optics and devices, controls and systems, communications and signal processing, power and energy, electromagnetics, or computer engineering are optional.

Emphasis Areas for Electrical Engineering

Circuits and Electronics, Communications and Signal Processing, Computer Engineering, Controls and Systems, Electromagnetics, Optics and Devices, Power and Energy

A declared emphasis area is not required. A student may choose to obtain an Electrical Engineering degree without a formal emphasis or may choose to obtain an Electrical Engineering degree with a declared emphasis in one or more of the emphasis areas of electrical engineering. A major change request is required to add the emphasis area option to the degree program.

For students who seek an Electrical Engineering degree without a formal emphasis, these emphasis areas may guide the choice of their ELEC ENG Electives A, B, C, D, and E as well as their free electives. Students should consult with their advisors on such course selections.

For students who seek an Electrical Engineering degree with a declared emphasis, courses in the declared emphasis area will be applied to ELEC ENG Electives A, D, and E in the degree requirements. For students who choose to have multiple emphasis areas, the additional courses will apply to ELEC ENG Elective B or C and free elective requirements. Students should seek guidance from their advisors on emphasis areas and on courses that are relevant to more than one emphasis area. Students may have an emphasis area or emphasis areas listed on their transcript by completing three three-credit-hour courses in electrical and computer engineering from the designated lists with at least one of the courses being at the 4XXX-level or above. This requirement will be satisfied by completing the relevant ABC Elective course, a 4XXX-level or above course for Elective D, and another

3XXX-level or above course for Elective E from the designated listing. The required ELEC ENG courses ELEC ENG 3320, ELEC ENG 3430, ELEC ENG 3100, and ELEC ENG 3600 and the course used to satisfy the power requirement (ELEC ENG 3500 or ELEC ENG 3540) may not be used to meet the three course requirement. Transfer courses do not apply to emphasis areas. A co-listed course may count toward both areas. Experimental courses ELEC ENG 3001, ELEC ENG 4001, ELEC ENG 5001, COMP ENG 3001, COMP ENG 4001, or COMP ENG 5001 require departmental approval to apply toward an emphasis area.

Circuits and Electronics		
ELEC ENG 3120	Electronics II	3
ELEC ENG 41XX and ELEC ENG 51XX Courses		
Communications and Signal Processing		
ELEC ENG 3410	Digital Signal Processing	3
ELEC ENG 3440	Digital Communications II	3
ELEC ENG 44XX and ELEC ENG 54XX Courses		
Computer Engineering		
ELEC ENG 3410, COMP ENG 3XXX-level or above Courses (Excluding COMP ENG 3000, COMP ENG 4000, COMP ENG 5000, COMP ENG 3002, COMP ENG 4096, COMP ENG 4097, and COMP ENG 5070) See the COMP ENG degree program for details on COMP ENG areas.		
Controls and Systems		
ELEC ENG 3340	Basic Programmable Logic Controllers	3
ELEC ENG 43XX and ELEC ENG 53XX Courses		
Electromagnetics		
ELEC ENG 46XX and ELEC ENG 56XX Courses		
Optics and Devices		
ELEC ENG 3250	Electronic And Photonic Devices	3
ELEC ENG 42XX and ELEC ENG 52XX Courses		
Power and Energy		
ELEC ENG 3500	Electromechanics	3
ELEC ENG 3540	Power System Design And Analysis	3
ELEC ENG 5150	Photovoltaic Systems Engineering	3
ELEC ENG 5520	Power Electronics	3

Justification for request

Add EE 2010 or CpE 2010 to Sophomore year, first semester. Number of hours increases from 15 to 16

Decrease EE 3600 hours (Junior year, second semester) to 3.0. Number of hours decreases from 17 to 16

Footnote for Stat 3117 deleted Stat 3115 since it will not longer be offered.

Delete footnotes about advancement exams, as they were eliminated.

Attach Budget

System Approval Letter

MDHE Approval

Supporting Documents

Reviewer Comments

Jade McCain (jm558v) (11/03/25 1:34 pm): Corrected footnote numbering.

Program Change Request

Date Submitted: 10/03/25 1:25 pm

Viewing: ENG MG-BS : Engineering Management BS

Last approved: 07/01/25 11:09 am

Last edit: 10/28/25 9:50 am

Changes proposed by: Crystal Wilson (wilsoncry)

Catalog Pages Using this Program

Engineering Management

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Bachelor of Science
Academic Level	Undergraduate
Program Code	ENG MG-BS
Department	Engineering Mgt & Sys Engr
Discipline	Engineering Management
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. 10/03/25 1:35 pm Amaury Lendasse (altmg): Approved for RENGMNGT Chair
2. 10/06/25 3:32 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/17/25 2:15 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:36 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:11 am

Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:15 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Sep 24, 2013 by Lahne Black (lahne)
2. Apr 28, 2014 by Stephen Raper (sraper)
3. Jun 12, 2014 by pantaleoa
4. Nov 18, 2014 by kleb6b
5. Jan 30, 2015 by Stephen Raper (sraper)
6. Jul 20, 2015 by pantaleoa
7. Jun 27, 2016 by Stephen Raper (sraper)
8. Jun 18, 2018 by Stephen Raper (sraper)
9. Mar 3, 2020 by ershenb
10. Apr 6, 2022 by Stephen Raper (sraper)
11. Jun 14, 2022 by Jennifer Pohlsander (jpnfd)

12. Jun 7, 2023 by Joan Schuman (schumanj)
13. Jun 14, 2024 by David Enke (enke)
14. Jan 6, 2025 by Crystal Wilson (wilsoncry)
15. Jul 1, 2025 by Joan Schuman (schumanj)

Engineering Management BS

CIP Code

Program Requirements and Description

Bachelor of Science

Engineering Management

The engineering management program at Missouri S&T is characterized by its focus on the scientific basics of engineering and its innovative application; indeed, the underlying theme of this educational program is the application of the scientific basics to engineering practice through attention to problems and needs of the public. 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.

The bachelor of science degree in engineering management requires a minimum of 121 credit hours. These requirements are in addition to credit received for algebra, trigonometry, and basic ROTC courses. An average of at least two grade points per credit hour must be attained. At least two grade points per credit hour must also be attained in all courses taken in engineering management.

Freshman Year

First Semester	Credits	Second Semester	Credits
FR ENG 1100	1	MECH ENG 1720	3
CHEM 1310[1]	4	MATH 1215	4
CHEM 1319	1	PHYSICS 1135[1]	4
CHEM 1100	1	Programming Elective[3]	3
MATH 1214 or 1211[1]	4	General Education Elective[2]	3
ENGLISH 1120	3		

HISTORY 1200, or 1300, or 1310, or POL SCI 1200[4]	3		
	17		17
Sophomore Year			
First Semester	Credits	Second Semester	Credits
MATH 2222[1]	4	MATH 3304[1]	3
PHYSICS 2135[1]	4	~~STAT 3115 or 3117[1]~~	~~3~~
CIV ENG 2200[1]	3	STAT 3117[1]	3
ENG MGT 1210[1]	2	ENG MGT 2110[1]	3
ENG MGT 2310[1]	3	ENG MGT 2211[1]	3
		PSYCH 1101[4]	3
	16		15
Junior Year			
First Semester	Credits	Second Semester	Credits
ENG MGT 3310[1]	3	ENG MGT 4710[1]	3
CIV ENG 2210	3	MECH ENG 2527	3
ENG MGT 3510[1]	3	ENGLISH 3560 or 1160	3
SP&M S 1185[4]	3	ENG MGT 3320[1]	3
General Education Elective[2]	3	MECH ENG 2350	2
	15		14
Senior Year			
First Semester	Credits	Second Semester	Credits
Emphasis Area Required Course	3	ENG MGT Technical Elective	3
Emphasis Area Required Course	3	Emphasis Area Required Course	3
Emphasis Area Required Course	3	ENG MGT 4907[1]	3
ENG MGT 4110[1]	3	General Education Elective[2]	3
ELEC ENG 2800	3		
	15		12

Total Credits: 121

Example Emphasis Area Programs for Engineering Management Students

One unique aspect of the engineering management degree is the student's ability to select an established emphasis area or create a specialized emphasis. Two examples of established emphasis areas are shown below.

Management of Technology

ENG MGT 5511	Technical Entrepreneurship	3
ENG MGT 5512	Legal Environment	3

ENG MGT 5410	Industrial System Simulation	3
ENG MGT 5614	Supply Chain Management Systems	3
ENG MGT Technical Elective (in consultation with your advisor)		3

Industrial Engineering

ENG MGT 4310	Materials Handling and Plant Layout	3
ENG MGT 4330	Human Factors	3
ENG MGT 5410	Industrial System Simulation	3
ENG MGT 5414	Introduction To Operations Research	3
ENG MGT Technical Elective (in consultation with your advisor)		3

General

Engineering Area Courses (Engineering Discipline)	12
ENG MGT-Technical Elective (in consultation with your advisor)	3

Note: All electives must be chosen in consultation with the student's advisor. Students must satisfy the common freshman year academic requirements in addition to the sophomore, junior, and senior year requirements listed above with a minimum of 121 hours.

1

Must have a grade of "C" or better in these courses for graduation.

2

General Education Elective must fulfill the Missouri S&T general education requirements applicable to the students catalog year.

3

The programming elective consists of a lecture and lab combination, and may be selected from COMP SCI 1971/COMP SCI 1981, COMP SCI 1972/COMP SCI 1982, or COMP SCI 1570/COMP SCI 1580. Note that COMP SCI 1570/COMP SCI 1580 requires one more credit hour than the other options. The lecture component must be completed with a grade of "C" or better.

4

General Education discipline specific required course.

Accelerated BS/MS Program Option for Engineering Management

Undergraduates currently majoring in Engineering Management at Missouri S&T may opt to apply for a Graduate Track Pathway, which allows students to transfer nine credit hours from their Missouri S&T Engineering Management bachelor's degree to their Engineering Management or Systems Engineering master's degree. In this pathway, a student can achieve both degrees faster than if pursuing the degrees separately. The benefits of the pathway for admitted students include:

1. Nine hours of 5000 graduate-level or above EMSE courses may be transferred from their Missouri S&T bachelor's degree to their EMSE master's degree,
2. The classes taken for shared BS/MS credit may be taken at the lower undergraduate tuition rate,
3. The GRE is not required for admission into the master's degree, and
4. Work on a thesis project may begin before the bachelor's degree requirements are completed (if thesis option is chosen)

No M.S. degree requirements are changed. The MS degree may be either a thesis or non-thesis option. To be admitted, the student must complete the Grad Track Pathway Admission and Course Approval Form. To be admitted to the student must have approval of their EMSE academic advisor. The program may be combined with existing honors research and emphasis area options. Admitted students will only have an undergraduate record in the Registrar's Office. Once they complete the bachelor's degree, and apply and are admitted into the master's degree then they will have a graduate record in the Registrar's Office. The Grad Track Pathway Admission and Course Approval Form must be completed when the student has one year left in the bachelor's program. Courses to be transferred will be identified on this form, and on Graduate Form 1, which is submitted after the student has been accepted to the master's program. Students must apply for admission to the master's program but will not be fully accepted until meeting all undergraduate degree requirements and earning their bachelor's degree. The nine hours of transferred coursework that will be taken as undergraduate credit must be approved by the student's academic advisor, and may not be undergraduate research, special problems, or courses transferred to the bachelor's degree.

To be eligible for the Grad Track Pathway, an EMSE undergraduate student must be:

- One year from graduation of their bachelor's degree (excluding the semester they are currently enrolled)
- Have at least a 3.50 GPA in all EMSE courses taken at Missouri S&T,
- Have a 3.0 cumulative GPA.

Students will be admitted into the master's degree, so long as they meet EMSE graduate student academic performance requirements: To remain in the pathway, the student must maintain good standing within the undergraduate EMSE program, and must maintain continuous enrollment at Missouri S&T. Students must maintain a cumulative GPA of at least 3.00 until they receive their bachelor's degree. Students must receive grades of B or better in the graduate courses they enroll in as part of the pathway course sequence. The semester admit term for the master's degree immediately follows the semester that the bachelor's degree is awarded. If the student exits the pathway before completion of the MS degree requirements, or fails to maintain continuous enrollment at Missouri S&T, the courses taken as part of the pathway may not apply toward graduate requirements in the event of future readmission. Credits earned in graduate-level courses will be posted according to established registrar procedures to the undergraduate transcript and will apply toward the student's undergraduate degree hours as needed to obtain the undergraduate degree and thus ensure all stated degree requirements are met. Once the bachelor's degree is awarded, the student is fully admitted to the master's program, Form 1 is approved, the courses from the pathway will be included on the student's graduate degree audit.

The student applicant is responsible for checking on how graduate coursework will affect scholarships and other financial aid. Once a student becomes a graduate student, they are not eligible for Federal Pell Grants, though are still eligible for Federal Financial Aid, and will be eligible for fellowships and teaching/research assistantships. International students should check with international affairs during completion of a Grad Track Pathway, to

ensure immigration status will be maintained throughout the program.

Justification for request

Removed reference of Math 1208 and 1221 from the DC form. These courses are not printed in the catalog and have not been taught since fall 2016.

Attach Budget

System Approval Letter

MDHE Approval

Supporting Documents

Reviewer Comments

Crystal Wilson (wilsoncry) (10/28/25 9:50 am): Removed Stat 3115 from the form sophomore year, second semester. This course will no longer be offered.

Program Change Request

Date Submitted: 10/08/25 4:23 pm

Viewing: ENTPRNS-MI : Entrepreneurship Minor

Last approved: 07/01/25 11:09 am

Last edit: 10/09/25 11:15 am

Changes proposed by: Cecil Eng Huang Chua (cecq8z)

Catalog Pages Using this Program

Business and Management Systems

Information Science and Technology

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Minor
Academic Level	Undergraduate
Program Code	ENTPRNS-MI
Department	Business Administration
Discipline	Business
Title	

In Workflow

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

Approval Path

1. 10/08/25 4:26 pm Cassie Elrod (cassa): Approved for RBUSADMN Chair
2. 10/09/25 11:16 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/09/25 11:54 am Cecil Eng Huang Chua (cchua): Approved for Social Sciences DSCC Chair
4. 11/03/25 3:36 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:11 am Jade McCain

(jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:15 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Aug 5, 2014 by pantaleoa
2. Jun 17, 2015 by pantaleoa
3. Jun 18, 2015 by pantaleoa
4. Jul 14, 2015 by pantaleoa
5. Oct 28, 2020 by Marita Raper (tibbettsmg)
6. Jun 10, 2021 by Cecil Eng Huang Chua (cchua)
7. Apr 30, 2024 by Cecil Eng Huang Chua (cchua)
8. Jul 1, 2025 by Cecil Eng Huang Chua (cchua)

Entrepreneurship Minor

CIP Code

Program Requirements and Description

Minor in Entrepreneurship

The minor in entrepreneurship requires the following 15 hours of coursework:

BUS 1110	Introduction to Management and Entrepreneurship	3
BUS 5980	Business Models for Entrepreneurship and Innovation	3
MKT 5310	Digital Marketing and Promotions	3
Two courses from the following list:		6
BUS 5150	Customer Focus and Satisfaction	
~~BUS 5580~~	~~Strategic Management~~	
IS&T 4654	Introduction to Web Design and Digital Media Studies	
BUS 5510	Corporate Entrepreneurship and Ecosystem Strategy	
IS&T 5251	Management and Leadership of Technological Innovation	
ENG MGT 5511	Technical Entrepreneurship	
ENG MGT 5411	Engineering Design Optimization	

Justification for request

Updating curriculum to reflect current business topics and also the mission of the Kummer College (entrepreneurship). Also, makes sense an entrepreneurship course is in the entrepreneurship minor.

Attach Budget

System Approval Letter

MDHE Approval

Supporting Documents

Reviewer Comments

Jade McCain (jm558v) (10/09/25 11:15 am): Changed requested effective date to Fall 2026 per CCC deadlines.

Key: 50

Program Change Request

Date Submitted: 10/02/25 12:13 pm

Viewing: GE ENG-BS : Geological Engineering BS

Last approved: 07/01/25 11:10 am

Last edit: 10/03/25 8:42 am

Changes proposed by: Crystal Wilson (wilsoncry)

Catalog Pages Using this Program

Geological Engineering

Final Catalog	FS2026-SP2027
Rationale for Inactivation	
Supporting Documents	

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Bachelor of Science
CIM Prospectus	
Academic Level	Undergraduate
Program Code	GE ENG-BS
Department	Earth Sciences and Engineering
Discipline	Geological Engineering

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

Approval Path

1. 10/02/25 12:58 pm Stephen Gao (sgao): Approved for RGEOSENG Chair
2. 10/02/25 3:36 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/09/25 7:47 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:36 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:11 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:15 am Cecil Eng Huang Chua (cchua):

Offered by

Title

Geological Engineering BS

CIP Code

Approved for Campus Curricula Committee Chair

History

1. Mar 18, 2014 by Lahne Black (lahne)
2. Nov 18, 2014 by pantaleoa
3. Nov 18, 2014 by pantaleoa
4. Jul 20, 2015 by pantaleoa
5. Feb 27, 2018 by Katherine Grote (grotekr)
6. Jun 18, 2018 by Katherine Grote (grotekr)
7. Jun 14, 2019 by Katherine Grote (grotekr)
8. Mar 3, 2020 by ershenb
9. Jul 1, 2020 by Leslie Gertsch (gertschl)
10. Jun 10, 2021 by Sharon Lauck (laucks)
11. Oct 28, 2021 by Katherine Grote (grotekr)
12. Jun 14, 2022 by Katherine Grote (grotekr)
13. Jun 14, 2024 by Katherine Grote (grotekr)
14. Mar 17, 2025 by Katherine Grote (grotekr)
15. Jul 1, 2025 by Katherine Grote (grotekr)

Purpose

Intended Audience

Program-Specific
Admission

Program Requirements and Description

Bachelor of Science
Geological Engineering

For the bachelor of science degree in geological engineering a minimum of 125 credit hours is required. These requirements are in addition to credit received for algebra, trigonometry, and basic ROTC courses. The student must maintain at least two grade points per credit hour (grade of C) for all courses taken in geological engineering. Geological engineering students must take the Fundamentals of Engineering Examination prior to graduation. A passing grade is not required; however, passing this examination is the first step toward becoming a registered professional engineer. This requirement is part of the Missouri S&T assessment process.

The geological engineering program at Missouri S&T is characterized by comprehensive understanding of the scientific basics of engineering and innovative application. We focus on solving the problems and meeting the needs of civilization as those are affected by geological materials, structures, or events. The necessary interactions required for this among the various sciences, engineering disciplines, and human professions are emphasized in research, analysis, synthesis, and design. Learning occurs in classroom, laboratory, online, field, and combined modes.

Freshman Year

First Semester	Credits	Second Semester	Credits
MATH 1214 or 1211[1]	4	MATH 1215	4
CHEM 1100	1	MECH ENG 1720	3
CHEM 1310	4	PHYSICS 1135	4
CHEM 1319	1	GEO ENG 1150 or GEOLOGY 1110	3
ENGLISH 1120	3	General Education Elective[2]	3
FR ENG 1100	1		
~~History 1200 or 1300 or 1310 or Political Science 1200~~	~~3~~		
HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3		
	17		17

Sophomore Year

First Semester	Credits	Second Semester	Credits
MATH 2222	4	MATH 3304	3
PHYSICS 2135	4	CIV ENG 2200	3
GEO ENG 3148	3	GEO ENG 2110	1
Programming Elective[3]	3	GEOLOGY 2611	3
		GEO ENG 3175	3
		General Education Elective[2]	3
	14		16

Junior Year

First Semester	Credits	Second Semester	Credits
MECH ENG 2350	2	CIV ENG 3330	3
CIV ENG 2210	3	CIV ENG 3715 or MIN ENG 5823	3
GEO ENG 5331	3	GEO ENG 5174	3
GEOLOGY 3310	3	Technical Elective[4]	3
GEOLOGY 3319	1	Technical Elective[4]	3
General Education Elective[2]	3		
	15		15

Senior Year

First Semester	Credits	Second Semester	Credits
GEO ENG 4010	0.5	GEO ENG 4010	0.5
GEO ENG 5441	3	GEO ENG 5090	3
GEO ENG 5443	3	Geo Eng Elective[7]	3
Geophysics Elective[5]	3	Eng Econ Elective[8]	3
Technical Elective[4]	3	Statistics Elective[9]	3
ENGLISH 3560[6]	3	General Education Elective[2]	3
	15.5		15.5

Total Credits: 125

1 MATH 1211 may be substituted for MATH 1214.

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

3 Programming Elective: Select from COMP SCI 1500, both COMP SCI 1971 and COMP SCI 1981, or both COMP SCI 1972 and COMP SCI 1982.

4 Technical Elective: Select from advanced courses in engineering as approved by advisor.

5 Geophysics Elective: Select from GEO ENG 5736, GEO ENG 5761, or GEO ENG 5782.

6 General Education Requirement - discipline specific requirement

7 Geological Engineering Elective: Select from GEO ENG 5471, GEO ENG 5381, GEO ENG 5556, MIN ENG 5823, PET ENG 2510, PET ENG 3520, CIV ENG 3715, CIV ENG 4729, or CIV ENG 5715.

8 Engineering Economics Elective: Select from ENG MGT 5210, MIN ENG 3512, or PET ENG 4590 or both ENG MGT 1100 and ENG MGT 1210.

9		
Statistics Elective: Select one course from GEO ENG 4115 or STAT 3113.		

Geological Engineering Focus Areas

The student uses the following course lists as guidance to satisfy the various elective requirements (chemistry/geochemistry, technical, geophysics, and geological engineering) while focusing preparation for their chosen career specialty. Other courses can be substituted with advisor approval.

Dual Professional Registration as a Geologist		
GEOLOGY 2096	Field Geology	3
GEOLOGY 3410	Introduction To Geochemistry	3
GEOLOGY 3620	Stratigraphy And Sedimentation	3
GEOLOGY 4097	Advanced Field Geology	3
GEOLOGY 4841	Geological Field Studies	3
GEO ENG 5144	Remote Sensing Technology	3
Engineering Geology and Geotechnics		
GEO ENG 5146	Applications Of Geographic Information Systems	3
GEO ENG 5471	Rock Engineering	3
CIV ENG 3715	Fundamentals of Geotechnical Engineering	3
CIV ENG 4729	Foundation Engineering	3
MIN ENG 5823	Rock Mechanics	3
Environmental and Engineering Geophysics		
GEO ENG 5144	Remote Sensing Technology	3
GEO ENG 5736	Geophysical Field Methods	3
GEO ENG 5761	Transportation Applications of Geophysics	3
GEO ENG 5782	Environmental and Engineering Geophysics	3
GEOPHYS 4241	Electrical Methods In Geophysics	3
GEOPHYS 4261	Geophysical Instrumentation	1
GEOPHYS 5231	Seismic Data Processing	3
Groundwater Hydrology and Environmental Protection		
GEO ENG 4276	Environmental Aspects Of Mining	
GEO ENG 5233	Risk Assessment In Environmental Studies	3
GEO ENG 5235	Environmental Geological Engineering	3
GEO ENG 5237	Geological Aspects Of Hazardous Waste Management	3
GEO ENG 5320	Groundwater Modeling	3
GEO ENG 5381	Intermediate Subsurface Hydrology And Contaminant Transport Mechs	3
CIV ENG 5640	Environmental Law And Regulations	3

PET ENG 3330	Formation Evaluation	3
Quarry and Mine Engineering		
GEO ENG 4276	Environmental Aspects Of Mining	3
GEO ENG 5471	Rock Engineering	3
GEO ENG 5575	Aggregates And Quarrying	3
CIV ENG 3116	Construction Materials, Properties And Testing	3
MIN ENG 3913	Mineral Identification and Exploration	3
MIN ENG 5612	Principles of Explosives Engineering	3
MIN ENG 5822	Strata Control	3
MIN ENG 5823	Rock Mechanics	3
MIN ENG 5912	Mine Power and Drainage	3
Renewable and Conventional Energy Resources		
GEO ENG 5146	Applications Of Geographic Information Systems	3
GEO ENG 5556	Renewable Energy Systems	3
GEOLOGY 5511	Applied Petroleum Geology	3
MIN ENG 5322	Coal Mining Methods	3
MIN ENG 5422	Coal Preparation	3
MIN ENG 5823	Rock Mechanics	3
PET ENG 2510	Properties of Hydrocarbon Fluids	3
PET ENG 3330	Formation Evaluation	3
PET ENG 3520	Petroleum Reservoir Engineering	3
PET ENG 4520	Well Test Analysis	3

Accelerated BS/MS Option (Graduate Pathway)

Students nearing completion of a BS in geological engineering can share up to nine 5000- or 6000-level credit hours toward their BS degree and a MS degree in geological engineering simultaneously, if they satisfy the following criteria:

Have completed 64 credit hours of course work, including:

All chemistry and mathematics requirements, and

21 credit hours of geological engineering courses with a minimum GPA of 3.20 in the geological engineering courses.

Complete an application listing the courses to be shared, with approval from the undergraduate advisor and a recommendation from the geological engineering faculty member who agrees to serve as their MS advisor. The shared courses may not be undergraduate research, special problems, or transfer courses. Applications are due within one semester of completing the last shared course.

Follow all geological engineering non-thesis MS program requirements (see the Graduate Catalog).

All other MS degree requirements remain the same. The program may be combined with existing honors research, emphasis areas, and certificate options. An additional six credit hours of coursework for graduate credit (beyond the shared BS/MS credits) can be taken while in the undergraduate program by applying for dual undergraduate/graduate enrollment. Taking additional courses for graduate credit as a dual enrolled student will require formal application to the graduate program. Upon application,

acceptance to the geological engineering MS degree program from this option is automatic as long as the student remains in good standing (GPA above 3.0 and B's or better in all graduate courses within the program). To remain in this option, the student must meet geological engineering graduate academic performance requirements and maintain continuous enrollment at Missouri S&T. If the student exits the program before completion of the MS degree, or fails to maintain continuous enrollment at Missouri S&T, the shared-credit courses may not apply toward graduate requirements in the event of future readmission.
It is the student's responsibility to check how dual-enrollment status and graduate coursework would affect scholarships and other financial aid. Graduate students are not eligible for Federal Pell Grants, though they are eligible for Federal Financial Aid, as well as fellowships and teaching/research assistantships. International students are responsible for checking with the International Affairs Office during completion of an accelerated BS/MS to ensure immigration status is properly maintained throughout the program.
This option reduces the cost and the time required to earn a MS. See the Graduate Pathway section of this catalog, and the Geological Engineering Masters section of the Graduate Catalog, for additional details.

Justification for request	Removed stat courses the math department says is being inactivated per their email sent to departments on September 15.
Attach Budget	
System Approval Letter	
MDHE Approval	
Supporting Documents	
Reviewer Comments	**Crystal Wilson (wilsoncry) (10/03/25 8:42 am):** With department approval I removed reference of Math 1208 and 1221 from the DC form. These courses are not printed in the catalog and have not been taught since fall 2016.

Key: 156

Program Change Request

Date Submitted: 10/02/25 12:19 pm

Viewing: GL&GPH-BS : Geology and Geophysics BS

Last approved: 07/01/25 11:10 am

Last edit: 10/31/25 2:06 pm

Changes proposed by: Crystal Wilson (wilsoncry)

Catalog Pages Using this Program

Geology and Geophysics

Final Catalog	FS2026-SP2027
Rationale for Inactivation	
Supporting Documents	

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Bachelor of Science

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

Approval Path

1. 10/02/25 1:00 pm Stephen Gao (sgao): Approved for RGEOSENG Chair
2. 10/02/25 3:43 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/09/25 7:45 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 10/16/25 2:37 pm Crystal Wilson (wilsoncry): Rollback to RGEOSENG Chair for Pending CCC Agenda post

CIM Prospectus

Academic Level	Undergraduate
Program Code	GL&GPH-BS
Department	Earth Sciences and Engineering
Discipline	Geology

5. 10/16/25 4:53 pm Stephen Gao (sgao): Approved for RGEOSENG Chair
6. 10/17/25 12:25 pm Jade McCain (jm558v): Approved for CCC Secretary
7. 10/28/25 2:59 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
8. 11/03/25 3:37 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
9. 11/21/25 11:13 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
10. 11/21/25 11:16 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. May 6, 2014 by Francisca Oboh-Ikuenobe (ikuenobe)
2. Apr 24, 2015 by wronk
3. Mar 27, 2017 by Kelly Liu (liukh)
4. Jun 18, 2018 by

Offered by

Title

Kelly Liu (liukh)

5. Jun 14, 2019 by Sharon Lauck (laucks)
6. Jul 1, 2020 by Sharon Lauck (laucks)
7. Jun 10, 2021 by Sharon Lauck (laucks)
8. Oct 28, 2021 by Katherine Grote (grotekr)
9. Sep 16, 2024 by Crystal Wilson (wilsoncry)
10. Mar 26, 2025 by Kelly Liu (liukh)
11. Jul 1, 2025 by Kelly Liu (liukh)

Geology and Geophysics BS

CIP Code	40.0699 - Geological and Earth Sciences/ Geosciences, Other.

Purpose

Intended Audience

Program-Specific Admission

Program Requirements and Description

Bachelor of Science
Geology and Geophysics

A minimum of 121 ~~of 122~~ credit hours is required for a Bachelor of Science degree in Geology and Geophysics. Students must average at least two grade points per credit hour and must obtain a letter grade of "C" or better in all Geology and Geophysics courses.

Freshman Year

First Semester	Credits	Second Semester	Credits
GEOLOGY 1110 or GEO ENG 1150	3	GEOLOGY 1120	3
ENGLISH 1120	3	GEOLOGY 1129	1
CHEM 1310	4	Elective (Science & Eng)[2]	3
CHEM 1319	1	General Education Elective[1]	3
CHEM 1100	1	MATH 1214 or 1211[3]	4
General Education Elective[1]	3		
	15		14

Sophomore Year

First Semester	Credits	Second Semester	Credits
GEOPHYS 3210	3	GEOLOGY 2611	3
MATH 1215	4	GEOLOGY 3410	3
COMP SCI 1500	3	ENGLISH 1160, or 3560, or SPM S 1185	3
Elective (Geo & Geop)[4]	3	Elective (Geo & Geop)[4]	3
General Education Elective[1]	3	HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3
	16		15

Junior Year

First Semester	Credits	Second Semester	Credits	Summer Semester	Credits
GEOLOGY 3310	3	GEOLOGY 3620	3	GEOLOGY 4097	3
GEOLOGY 3319	1	GEOLOGY 3629	1		
PHYSICS 1135[5]	4	~~PHYSICS 2135~~[5]	4		
STAT 3113, or 3117, or GEO ENG 4115	3	GEOLOGY 2096	3		
Elective (Geo & Geop)[4]	3	Elective (Geo & Geop)[4]	3		
		General Education Elective[1]	3		
	14		13		3

Senior Year			
First Semester	Credits	Second Semester	Credits
GEOLOGY 4010	0.5	GEOPHYS 5096	3
Elective (Science & Eng)[2]	6	Elective (Science & Eng)[2]	9
Elective (Geo & Geop)[4]	9	Free Elective[6]	3
		GEOLOGY 4010	.5
	15.5		15.5

Total Credits: 121

1

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

2

All Geology and Geophysics students must complete at least 18 hours of elective course work in science (which may include additional Geology/Geophysics courses), mathematics, and/or engineering, courses required for the basic program. 12 hours of this course work must be numbered 2000 or above.

3

MATH 1211 may be substituted for MATH 1214.

4

All Geology and Geophysics students must complete at least 21 hours of elective course work numbered 2000 or above in Geology/Geophysics, in addition to the required core curriculum.

5

Students may substitute PHYSICS 1111 and PHYSICS 1119 for PHYSICS 1135.

6

Free elective hours may be taken in any combination of credit hours (1, 2, 3, etc.) and can include any course offerings at the University.

Core Curriculum

Taken by all students in Geology & Geophysics.		
GEOLOGY 1110	Physical and Environmental Geology	3
GEOLOGY 1120	Evolution Of The Earth	3
GEOLOGY 1129	Evolution of the Earth Laboratory [5]	1
GEOLOGY 2611	Physical Mineralogy And Petrology	3
GEOLOGY 3310	Structural Geology	3
GEOLOGY 3319	Structural Geology Lab	1
GEOLOGY 3410	Introduction To Geochemistry	3
GEOLOGY 3620	Stratigraphy And Sedimentation	3

GEOLOGY 3629	Stratigraphy Lab	1
GEOLOGY 4010	Seminar	0.5
GEOLOGY 2096	Field Geology	3
GEOLOGY 4097	Advanced Field Geology	3
GEOPHYS 3210	Introduction to Geophysics	3
GEOPHYS 5096	Global Tectonics	3
Total Credits		33.5

Geology and Geophysics Focus Areas

Geochemistry

Students should complete at least 5 courses (15 hours minimum) from the list. Students may also choose additional courses to be selected from an approval list and with guidance from student's advisor.		
GEOLOGY 3511	Introduction to Mineral Deposits	3
GEOLOGY 4451	Aqueous Geochemistry	3
GEOLOGY 4461	Isotope Geochemistry	3
GEOLOGY 4631	Advanced Igneous and Metamorphic Petrology	4
GEOLOGY 4841	Geological Field Studies	3
GEOLOGY 5611	Granites And Rhyolites	4
GEOLOGY 5671	Clay Mineralogy	3
CER ENG 2110	Atomic Structure Of Crystalline Ceramics	3
CER ENG 3220	Phase Equilibria	3

General Geology

Students should complete at least 5 courses (15 hours minimum) from the list. Students may also choose additional courses to be selected from an approval list and with guidance from student's advisor.		
GEOLOGY 3511	Introduction to Mineral Deposits	3
GEOLOGY 4630	Systematic Paleontology	3

GEOLOGY 3811	Fundamentals Of Geographic Information Systems	3
or GEO ENG 3148	Fundamentals Of Geographic Information Systems	
GEOLOGY 4631	Advanced Igneous and Metamorphic Petrology	4
GEOLOGY 4711	Paleoclimatology and Paleoecology	3
GEOLOGY 4841	Geological Field Studies	3
GEOLOGY 5513	Petroleum Geology	3
GEOLOGY 5611	Granites And Rhyolites	4
GEOLOGY 5741	Micropaleontology	3
GEOLOGY 6311	Advanced Structural Geology	3
GEO ENG 3175	Geomorphology And Terrain Analysis	3

Geophysics

Students must choose 1 math and 3 geophysics courses from the list. Students should also choose at least one additional course to be selected from an approved list and with guidance from student's advisor.

MATH 2222	Calculus III	4
MATH 3304	Elementary Differential Equations	3
MATH 3108	Linear Algebra I	3
MATH 5325	Partial Differential Equations	3
GEOPHYS 4231	Seismic Interpretation	3
GEOPHYS 5202	Exploration and Development Seismology	3
GEOPHYS 5231	Seismic Data Processing	3
GEOPHYS 5261	Computational Geophysics	3
GEOPHYS 5736	Geophysical Field Methods	3
or GEO ENG 5736	Geophysical Field Methods	
GEOLOGY 4310	Remote Sensing Technology	3

Groundwater and Environmental Geochemistry

Students should complete at least 5 courses (15 hours minimum) from the list. Students may also choose additional courses to be selected from an approval list and with guidance from student's

advisor.		
GEOLOGY 4431	Methods Of Karst Hydrogeology	3
GEOLOGY 4451	Aqueous Geochemistry	3
GEOLOGY 4711	Paleoclimatology and Paleoecology	3
GEOPHYS 5782	Environmental and Engineering Geophysics	3
or GEO ENG 5782	Environmental and Engineering Geophysics	
BIO SCI 1173	Introduction to Environmental Sciences	3
ENV ENG 2601	Fundamentals of Environmental Engineering and Science	3
ENV ENG 5640	Environmental Law And Regulations	3
GEO ENG 5237	Geological Aspects Of Hazardous Waste Management	3
GEO ENG 5331	Subsurface Hydrology	3
GEO ENG 5381	Intermediate Subsurface Hydrology And Contaminant Transport Mechs	3

Petroleum Geology

Students should complete at least 5 courses (15 hours minimum) from the list. Students may also choose additional courses to be selected from an approval list and with guidance from student's advisor.		
GEOLOGY 4630	Systematic Paleontology	3
GEOLOGY 5311	Depositional Systems	3
GEOLOGY 5513	Petroleum Geology	3
GEOLOGY 5661	Advanced Stratigraphy and Basin Evolution	3
GEOLOGY 5741	Micropaleontology	3
GEOPHYS 5202	Exploration and Development Seismology	3
PET ENG 3330	Formation Evaluation	3
GEOLOGY 4310	Remote Sensing Technology	3

Accelerated BS/MS Program Option for Geology and Geophysics Majors

Geology and Geophysics undergraduates in G&G at Missouri S&T may opt to apply for an accelerated BS/MS G&G program where a student can achieve both the BS and MS degrees in G&G faster than if pursuing the degrees

separately. The degrees awarded will be a BS & MS (non-thesis or thesis) in Geology and Geophysics.
The benefits for undergraduate students admitted to the program are:
Undergraduate and graduate courses may be chosen with greater flexibility,
Up to nine hours of 5000-level or above G&G coursework may apply to both the BS and MS requirements,
The classes taken for shared BS/MS credit may be taken at the lower undergraduate tuition rate,
The GRE is not required for admission,
Other graduate courses can be taken any time after entering the program as a dual enrolled student,
Work on a thesis project may begin before the BS requirements are completed.
To be eligible for the accelerated BS/MS G&G program, a G&G undergraduate must be at or beyond the junior level standing with a minimum of 48 credit hours. They must have successfully completed the Chemistry and Math requirements and have completed 21 credit hours of G&G courses at Missouri S&T with at least a 3.2 GPA in the G&G courses. To be admitted, the student must complete the program application and non-thesis MS students must have the recommendation of a G&G faculty member, while thesis MS students must have the recommendation of a G&G faculty member who agrees to serve as the graduate thesis advisor. All other MS degree requirements remain the same. The program may be combined with existing honors research, emphasis areas, and certificate options.
The Accelerated Program application must be completed within one semester after shared-credit courses are completed. Courses taken for shared credit will be identified on the application form. These courses will also be listed on the student's Graduate Form 1 to be submitted after the student enters the graduate program. The nine hours of shared-credit coursework, to be taken as undergraduate credit, must be approved by the academic advisor, and may not be undergraduate research, special problems, or transfer courses. An additional six credit hours of coursework for graduate credit (beyond the shared BS/MS credits) can be taken while in the undergraduate program by applying for dual undergraduate/graduate enrollment. Taking additional courses for graduate credit as a dual enrolled student will require formal application to the graduate program. Upon application, acceptance to the G&G MS degree from the Accelerated Program is automatic so long as the student remains in good standing (GPA above 3.0 and B's or better in all graduate courses) within the program. To remain in the Accelerated Program, the student must maintain good standing within the undergraduate G&G program and must maintain continuous enrollment at Missouri S&T. If the student exits the program before completion of the MS degree requirements, or fails to maintain continuous enrollment at Missouri S&T, the shared-credit courses may not apply toward graduate requirements in the event of future readmission.
It is the student's responsibility to check on how dual-enrollment status and graduate coursework affects scholarships and other financial aid. As a graduate student, you **<u>are not</u>** eligible for Federal Pell Grants. You are still eligible for Federal Financial Aid. You may be eligible for fellowships and teaching/research assistantships. It is the International student's responsibility to check with international affairs during completion of an accelerated BS/MS to ensure immigration status will be maintained throughout the program.

Justification for request

Removed stat courses the math department says is being inactivated per their email sent to departments on September 15.

Due to recent developments in the field of Geology and Geophysics, the faculty recognizes that the content covered in Physics 2135 is becoming less relevant for the vast majority of our students. To better align the curriculum with current and emerging areas of the discipline, such as applications in Artificial Intelligence and Geospatial Science, we propose replacing Physics 2135 with a Geology and Geophysics elective. This change will provide students with greater flexibility and the opportunity to gain training in both foundational and cutting-edge topics within the field.

Attach Budget

System Approval Letter

MDHE Approval

Supporting Documents

Reviewer Comments

Crystal Wilson (wilsoncry) (10/03/25 8:47 am): With department approval I removed reference of Math 1208 and 1221 from the DC form. These courses are not printed in the catalog and have not been taught since fall 2016.

Crystal Wilson (wilsoncry) (10/16/25 2:37 pm): Rollback: Rollback per Dr. Gao's request to make additional edits.

Jade McCain (jm558v) (10/17/25 12:24 pm): Changed effective requested date to Fall 2026 per ccc deadlines.

Jade McCain (jm558v) (10/24/25 12:54 pm): Corrected format in plan of study grid.

Jade McCain (jm558v) (10/31/25 2:06 pm): Corrected footnotes 4 and 5.

Program Change Request

Date Submitted: 10/02/25 9:14 am

Viewing: MC ENG-BS : Mechanical Engineering BS

Last approved: 07/14/25 4:12 pm

Last edit: 10/02/25 9:14 am

Changes proposed by: Crystal Wilson (wilsoncry)

Catalog Pages Using
this Program

Mechanical Engineering

In Workflow

1. **RMECHENG 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. 10/15/25 11:15 am David Bayless (djbkqf): Approved for RMECHENG Chair
2. 10/15/25 12:08 pm Crystal Wilson (wilsoncry): Approved for CCC Secretary
3. 10/28/25 2:59 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:37 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:13 am Jade McCain (jm558v): Approved

for CCC Meeting Agenda
6. 11/21/25 11:17 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Feb 24, 2014 by J. Keith Nisbett (nisbett)
2. Aug 6, 2014 by J. Keith Nisbett (nisbett)
3. Jul 21, 2015 by pantaleoa
4. May 3, 2018 by J. Keith Nisbett (nisbett)
5. Jun 14, 2019 by J. Keith Nisbett (nisbett)
6. Mar 3, 2020 by ershenb
7. Oct 8, 2020 by Crystal Wilson (wilsoncry)
8. May 5, 2021 by J. Keith Nisbett (nisbett)
9. Oct 28, 2021 by J. Keith Nisbett (nisbett)
10. May 2, 2022 by J. Keith Nisbett (nisbett)
11. Jun 7, 2023 by J. Keith Nisbett (nisbett)
12. Jun 14, 2024 by Nishant Kumar

Rationale for Inactivation

(nkwtb)
13. Nov 25, 2024 by Nishant Kumar (nkwtb)
14. Feb 15, 2025 by Crystal Wilson (wilsoncry)
15. Jul 1, 2025 by Nishant Kumar (nkwtb)
16. Jul 14, 2025 by Crystal Wilson (wilsoncry)

Supporting Documents

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Bachelor of Science

CIM Prospectus

Academic Level	Undergraduate
Program Code	MC ENG-BS
Department	Mechanical & Aerospace Engineering
Discipline	Mechanical Engineering

Offered by

Title	Mechanical Engineering BS
CIP Code	

Purpose

Intended Audience

Program-Specific Admission

Program Requirements and Description

Bachelor of Science
Mechanical Engineering

The mechanical engineering program at Missouri S&T is characterized by its focus on the scientific basics of engineering and its innovative application; indeed, the underlying theme of this educational program is the application of the scientific basics to engineering practice through attention to problems and needs of the public. 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.

For the bachelor of science degree in mechanical engineering a minimum of 128 credit hours is required. These requirements are in addition to credit received for algebra, trigonometry, and basic ROTC courses. An average of at least two grade points per credit hour must be attained. An average of at least two grade points per credit hour must also be attained in all courses taken in mechanical engineering.

Freshman Year

First Semester	Credits	Second Semester	Credits
FR ENG 1100	1	Gen. Ed. Elective[c]	3
CHEM 1305[a]	4	MECH ENG 1720	3
ENGLISH 1120	3	PHYSICS 1135[a]	4
HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3	MATH 1215[a]	4
CHEM 1319	1	Gen. Ed. Elective[c]	3
MATH 1214 or 1211[a]	4		
	16		17

Sophomore Year

First Semester	Credits	Second Semester	Credits
MATH 2222[a]	4	MECH ENG 2761	2
CIV ENG 2200[a]	3	MECH ENG 2519[a]	3
PHYSICS 2135[a]	4	MECH ENG 2360[a]	3
MECH ENG 2653	3	MATH 3304[a]	3
MECH ENG 1761	1	MET ENG 2110[a]	3
		Programming Elective[a, b]	3
	15		17

Junior Year

First Semester	Credits	Second Semester	Credits
MECH ENG 3313	3	MECH ENG 3411[a]	3
MECH ENG 3521	3	MECH ENG 3131	3
ELEC ENG 2800	3	MECH ENG 4840	2
CIV ENG 2210[a]	3	ENGLISH 1160, OR 3560, OR SP&M 1185	3
CIV ENG 2211	1	MECH ENG 3708	3
Elective-Advanced Math/Stat[d]	3	MECH ENG 3525	3
	16		17

Senior Year

First Semester	Credits	Second Semester	Credits
MECH ENG 4842	2	ENG MGT 1100	1
MECH ENG 4479	3	ENG MGT 1210	2
MECH ENG technical elective[f]	3	MECH ENG 4761	3
Gen. Ed. Elective[c]	3	MECH ENG 4480	1
Technical elective[g]	3	MECH ENG 5000-level technical elective[f]	3
Gen. Ed. Elective[c]	3	Breadth elective[h]	3
	17		13

Total Credits: 128

a

A grade of "C" or better is required in CHEM 1305, MATH 1214 (or MATH 1211), MATH 1215, MATH 2222, MATH 3304, PHYSICS 1135, PHYSICS 2135, programming elective, MET ENG 2110, CIV ENG 2200, CIV ENG 2210, MECH ENG 2519, MECH ENG 2360, and MECH ENG 3411, both as prerequisite for follow-up courses in the curriculum and for graduation.

b

The programming elective consists of a lecture and lab combination, and may be selected from COMP SCI 1970/COMP SCI 1980, COMP SCI 1971/COMP SCI 1981, or COMP SCI 1972/COMP SCI 1982, or COMP SCI 1570/COMP SCI 1580. Note that COMP SCI 1570/COMP SCI 1580 requires one more credit hour than the other options.

c

Gen. Ed. Elective must fulfill the Missouri S&T general education requirements applicable to the students catalog year.

d

This course must be selected from the following: MATH 3108, STAT 3113 or any 5000-level math or stat course approved by the student's advisor.

e

All mechanical engineering students must take the Fundamentals of Engineering Examination prior to graduation. A passing grade on this examination is not required to earn a B.S. degree. However, it is the first step toward becoming a registered professional engineer. This requirement is part of the Missouri S&T assessment process as described in assessment requirements found elsewhere in this catalog.

f

Six hours of technical electives, subject to approval by the student's advisor, must be in the department of mechanical and aerospace engineering. At least three of these technical elective hours must be at the 5000 level. This elective may not include co-op, special problems, or research credits, such as as 3002, 4000, or 4099. Honors students have special requirements for technical electives.

g

This elective must be a three credit hour course, subject to approval by the student's advisor, from any of the following areas: math, statistics, science, engineering, or computer science. The course must be at the 3000 or higher level, or have

a prerequisite that is part of the required mechanical engineering curriculum. Exceptions to the course level may be approved by the student's advisor. The elective may not include co-op, special problems, or research credits, such as 3002, 4000, or 4099.

h

This elective consists of three credit hours, subject to approval by the student's advisor, and may be satisfied by any of the following: (1) A three credit hour course from any of the following areas: math, statistics, science, engineering, computer science, business, or IST. The course must be at the 3000 or higher level, or have a prerequisite that is part of the required mechanical engineering curriculum. Exceptions to the course level may be approved by the student's advisor; (2) Any three credit hour course in the list of approved courses for the global studies minor; or (3) Any combination of three credit hours from co-op (3002), special problems (3000, 4000, or 5000), or research (4099).

Energy Conversion Emphasis Area for Mechanical Engineering

Students desiring to obtain a bachelor of science degree in mechanical engineering with an emphasis area in energy conversion must satisfy all the requirements of the bachelor of science degree in mechanical engineering, with the additional stipulation that four courses must be taken as follows:

a. Two courses from the following list:		6
MECH ENG 5527	Combustion Processes	3
or AERO ENG 5527	Combustion Processes	
MECH ENG 5533	Internal Combustion Engines	3
MECH ENG 5566	Solar Energy Technology	3
MECH ENG 5567	Heat Pump And Refrigeration Systems	3
MECH ENG 5571	Environmental Controls	3
MECH ENG 5575	Mechanical Systems For Environmental Control	3
AERO ENG 5169	Introduction to Hypersonic Flow	3
AERO ENG 5535	Aerospace Propulsion Systems	3
b. One course from the following list:		3
MECH ENG 5519	Advanced Thermodynamics	3
or AERO ENG 5519	Advanced Thermodynamics	
MECH ENG 5525	Intermediate Heat Transfer	3
or AERO ENG 5525	Intermediate Heat Transfer	
MECH ENG 5131	Intermediate Thermofluid Mechanics	3
or AERO ENG 5131	Intermediate Thermofluid Mechanics	
MECH ENG 5139	Computational Fluid Dynamics	3
or AERO ENG 5139	Computational Fluid Dynamics	
c. One additional course from either list “a” or list “b”, or from the following list:		3

ECON 4540	Energy Economics	3
ELEC ENG 5150	Photovoltaic Systems Engineering	3
ENV ENG 5660	Introduction To Air Pollution	3
NUC ENG 5257	Introduction to Nuclear Thermal Hydraulics	3

Note: By using the breadth elective and technical electives to satisfy the above requirements, this emphasis area requires the same total number of credit hours as the BSME degree. A change of major form should be submitted to designate the energy conversion emphasis area.

Manufacturing Processes Emphasis Area for Mechanical Engineering

Students desiring to obtain a bachelor of science in mechanical engineering with an emphasis area in manufacturing processes must satisfy all requirements of the bachelor of science in mechanical engineering with the additional stipulation that four courses must be taken as follows:

a. The following course:		3
MECH ENG 3653	Manufacturing	3
b. Three of the following courses:		3
MECH ENG 3001	Special Topics	3
MECH ENG 5282	Introduction to Composite Materials & Structures	3
MECH ENG 5449	Robotic Manipulators and Mechanisms	3
MECH ENG 5479	Machine Learning for Manufacturing Automation	3
MECH ENG 5653	Computer Numerical Control of Manufacturing Processes	3
MECH ENG 5655	Manufacturing Equipment Automation	3
MECH ENG 5656	Design For Manufacture	3
MECH ENG 5708	Rapid Product Design And Optimization	3
MECH ENG 5763	Computer Aided Design: Theory and Practice	3
c. The Math/Stat elective must be the following course:		3
STAT 3113	Applied Engineering Statistics	3
~~STAT 3115~~	~~Engineering Statistics~~	~~3~~

A suggested sequence for the junior and senior years is given below. Note that by using the breadth elective and technical electives to satisfy the above requirements, this emphasis area requires the same total number of credit hours as the BSME degree. A change of major form should be submitted to designate the manufacturing processes emphasis area.

Junior Year

First Semester	Credits	Second Semester	Credits
MECH ENG 3313	3	MECH ENG 3411[a]	3

ELEC ENG 2800	3	MECH ENG 3131	3
MECH ENG 3521	3	MECH ENG 3525	3
CIV ENG 2210[a]	3	MECH ENG 4840	2
CIV ENG 2211	1	MECH ENG 3653	3
STAT 3113	3	Elective-Communications[c]	3
	16		17

Senior Year

First Semester	Credits	Second Semester	Credits
MECH ENG 4842	2	ENG MGT 1100	1
MECH ENG 4479	3	ENG MGT 1210	2
MECH ENG 3708	3	MECH ENG 4761	3
Manufacturing Technical Elective	3	MECH ENG 4480	1
Manufacturing Technical Elective	3	Manufacturing Technical Elective	3
Elective Literature[d]	3	Electives-Hum or Soc Sci[d]	3
	17		13

Total Credits: 63

a

A grade of “C” or better is required in CHEM 1305, MATH 1214 (or MATH 1211), MATH 1215, MATH 2222, MATH 3304, PHYSICS 1135, PHYSICS 2135, programming elective, MET ENG 2110, CIV ENG 2200, CIV ENG 2210, MECH ENG 2519, MECH ENG 2360 and MECH ENG 3411, both as prerequisite for follow-up courses in the curriculum and for graduation.

b

The programming elective consists of a lecture and lab combination, and may be selected from COMP SCI 1970/COMP SCI 1980, COMP SCI 1971/COMP SCI 1981, COMP SCI 1972/COMP SCI 1982, or COMP SCI 1570/COMP SCI 1580. Note that COMP SCI 1570/COMP SCI 1580 requires one more credit hour than the other options.

c

This course must be selected from the following: ENGLISH 1160, ENGLISH 3560 or SP&M S 1185, or the complete four course sequence in Advanced ROTC (MIL ARMY 3250, MIL ARMY 3500, MIL ARMY 4250, and MIL ARMY 4500; or MIL AIR 3110, MIL AIR 3120, MIL AIR 4110 and MIL AIR 4120).

d

All electives must be approved by the student’s advisor. Humanity and social science electives must be at least 3 credit hours of lecture designation, and also meet requirements as specified under "Engineering Degree Requirements" published in the current undergraduate catalog.

e

All mechanical engineering students must take the Fundamentals of Engineering Examination prior to graduation. A passing grade on this examination is not required to earn a B.S. degree, however, it is the first step toward becoming a registered professional engineer. This requirement is part of the Missouri S&T assessment process as described in Assessment Requirements found elsewhere in this catalog.

Mechanical Design and Analysis Emphasis Area

Students desiring to obtain a bachelor of science in mechanical engineering with an emphasis area in mechanical design and analysis must satisfy all requirements of the bachelor of science in mechanical engineering, with the additional stipulation that four courses must be taken as follows:

a. One design course from the following list:	3

MECH ENG 5709	Machine Design II	3
MECH ENG 5702	Synthesis Of Mechanisms	3
MECH ENG 5704	Compliant Mechanism Design	3
MECH ENG 5708	Rapid Product Design And Optimization	3
MECH ENG 5715	Concurrent Engineering	3
MECH ENG 5656	Design For Manufacture	3
MECH ENG 5757	Integrated Product And Process Design	3
MECH ENG 5760	Probabilistic Engineering Design	3
MECH ENG 5763	Computer Aided Design: Theory and Practice	3
MECH ENG 5761	Engineering Design Methodology	3
b. One analysis course from the following list:		3
MECH ENG 5307	Vibrations I	3
MECH ENG 5211	Introduction To Continuum Mechanics	3
MECH ENG 5212	Introduction to Finite Element Analysis	3
MECH ENG 5234	Stability of Engineering Structures	3
MECH ENG 5236	Fracture Mechanics	3
MECH ENG 5313	Intermediate Dynamics Of Mechanical And Aerospace Systems	3
MECH ENG 5222	Introduction To Solid Mechanics	3
MECH ENG 5238	Fatigue Analysis	3
MECH ENG 5449	Robotic Manipulators and Mechanisms	3
MECH ENG 5478	Mechatronics	3
c. Two additional courses from either of the previous lists.		6

Note that by using the breadth elective and technical electives to satisfy the above requirements, this emphasis area requires the same total number of credit hours as the BSME degree A change of major form should be submitted to designate the mechanical design and analysis emphasis area.

Systems Integration Emphasis Area

The Systems Integration emphasis area is required and available only for students pursuing a bachelor of science in mechanical engineering in the cooperative program delivered at Missouri State University. This emphasis area includes all requirements of the bachelor of science in mechanical engineering, except for the substitutions stipulated below.

The following requirements in the mechanical engineering curriculum are removed (16 credit hours):		
ELEC ENG 2800	Electrical Circuits	3

ENG MGT 1100	Practical Concepts for Technical Managers	1
Elective-Advanced Math/Stat		3
MECH ENG 5000-level technical elective		3
Technical elective		3
Breadth elective		3
The following requirements are added (16 credit hours):		
ELEC ENG 2100	Circuits I	3
ELEC ENG 2101	Circuit Analysis Laboratory I	1
ELEC ENG 2120	Circuits II	3
Systems Management elective. One of the following:		
MECH ENG 5715	Concurrent Engineering	3
MECH ENG 5757	Integrated Product And Process Design	3
MECH ENG 5758	Integrated Product Development	3
ENG MGT 3320	Introduction to Project Management	3
ENG MGT 4710	Quality	3
Systems Integration technical elective. One of the following:		3
MECH ENG 5307	Vibrations I	3
MECH ENG 5478	Mechatronics	3
MECH ENG 5481	Mechanical And Aerospace Control Systems	3
MECH ENG 5533	Internal Combustion Engines	3
MECH ENG 5571	Environmental Controls	3
MECH ENG 5575	Mechanical Systems For Environmental Control	3
MECH ENG 5656	Design For Manufacture	3
MECH ENG 5704	Compliant Mechanism Design	3
MECH ENG 5708	Rapid Product Design And Optimization	3
MECH ENG 5709	Machine Design II	3
MECH ENG 5715	Concurrent Engineering	3
MECH ENG 5757	Integrated Product And Process Design	3
MECH ENG 5760	Probabilistic Engineering Design	3
MECH ENG 5763	Computer Aided Design: Theory and Practice	3
One of the following:		

STAT 3113	Applied Engineering Statistics	3
~~STAT 3115~~	~~Engineering Statistics~~	~~3~~
STAT 3117	Introduction To Probability And Statistics	3

All of the substitutions for this emphasis area appear in the junior and senior years. A suggested sequence for the junior and senior years is given below.

Junior Year

First Semester	Credits	Second Semester	Credits
MECH ENG 3313	3	MECH ENG 3411[a]	3
MECH ENG 3521	3	MECH ENG 3131	3
ELEC ENG 2100	3	MECH ENG 3525	3
ELEC ENG 2101	1	MECH ENG 3708	3
CIV ENG 2210[a]	3	MECH ENG 4840	2
CIV ENG 2211	1	ELEC ENG 2120	3
STAT 3113 or 3117	3		
	17		17

Senior Year

First Semester	Credits	Second Semester	Credits
MECH ENG 4842	2	MECH ENG 4761	3
MECH ENG 4479	3	Systems Integration technical elective[f]	3
MECH ENG 4480	1	Systems Management elective[g]	3
MECH ENG technical elective[e]	3	Literature elective[d]	3
Elective - Communications[c]	3	Elective - Advanced Hum or Soc Sci[d]	3
ENG MGT 1210	2		
	14		15

Total Credits: 63

a

A grade of “C” or better is required in CHEM 1305, MATH 1214 (or MATH 1211), MATH 1215, MATH 2222, MATH 3304, PHYSICS 1135, PHYSICS 2135, programming elective, MET ENG 2110, CIV ENG 2200, CIV ENG 2210, MECH ENG 2519, MECH ENG 2360 and MECH ENG 3411, both as prerequisite for follow-up courses in the curriculum and for graduation.

b

The programming elective consists of a lecture and lab combination, and may be selected from COMP SCI 1970/ COMP SCI 1980, COMP SCI 1971/COMP SCI 1981, or COMP SCI 1972/COMP SCI 1982, or COMP SCI 1570/COMP SCI 1580. Note that COMP SCI 1570/COMP SCI 1580 requires one more credit hour than the other options.

c

This course must be selected from the following: ENGLISH 1160, ENGLISH 3560 or SP&M S 1185, or the complete four course sequence in Advanced ROTC (MIL ARMY 3250, MIL ARMY 3500, MIL ARMY 4250, and MIL ARMY 4500; or MIL AIR 3110, MIL AIR 3120, MIL AIR 4110 and MIL AIR 4120).

d

All electives must be approved by the student's advisor.

Humanity and Social Science electives must be at least 3 credit hours of lecture designation, and also meet requirements as specified under “Engineering Degree Requirements” published in the current undergraduate catalog.

e

The mechanical engineering technical elective is subject to approval by the student's advisor, and must be in the

department of mechanical and aerospace engineering. This elective may not include co-op, special problems, or research credits, such as 3002, 4000, or 4099. Honors students have special requirements for technical electives.

f

The systems integration technical elective must be selected from the following list: MECH ENG 5307, MECH ENG 5478, MECH ENG 5481, MECH ENG 5533, MECH ENG 5571, MECH ENG 5575, MECH ENG 5656, MECH ENG 5704, MECH ENG 5708, MECH ENG 5709, MECH ENG 5715, MECH ENG 5757, MECH ENG 5760, MECH ENG 5763.

g

The systems management elective must be selected from the following list: MECH ENG 5715, MECH ENG 5757, MECH ENG 5758, ENG MGT 3320, ENG MGT 4710.

h

All mechanical engineering students must take the Fundamentals of Engineering Examination prior to graduation. A passing grade on this examination is not required to earn a B.S. degree. However, it is the first step toward becoming a registered professional engineer. This requirement is part of the Missouri S&T assessment process as described in assessment requirements found elsewhere in this catalog.

Justification for request	Removed Stat courses the math department says are being inactivated per the email sent to departments on September 15.
Attach Budget	
System Approval Letter	
MDHE Approval	
Supporting Documents	
Reviewer Comments	

Program Change Request

Date Submitted: 10/08/25 4:20 pm

Viewing: MGMT-MI : Management Minor

Last approved: 04/30/24 10:17 am

Last edit: 10/09/25 10:17 am

Changes proposed by: Cecil Eng Huang Chua (cecq8z)

Catalog Pages Using this Program

Business and Management Systems

Information Science and Technology

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Minor
Academic Level	Undergraduate
Program Code	MGMT-MI
Department	Business Administration
Discipline	Business
Title	

In Workflow

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

Approval Path

1. 10/08/25 4:21 pm Cassie Elrod (cassa): Approved for RBUSADMN Chair
2. 10/09/25 10:17 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/09/25 10:40 am Cecil Eng Huang Chua (cchua): Approved for Social Sciences DSCC Chair
4. 11/03/25 3:37 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:13 am Jade McCain

(jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:17 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Aug 5, 2014 by pantaleoa
2. Jun 17, 2015 by pantaleoa
3. Jun 17, 2015 by pantaleoa
4. Jul 14, 2015 by pantaleoa
5. Jun 27, 2016 by barryf
6. Oct 28, 2020 by Marita Raper (tibbettsmg)
7. Jun 10, 2021 by Cecil Eng Huang Chua (cchua)
8. Apr 30, 2024 by Cecil Eng Huang Chua (cchua)

Management Minor

CIP Code

Program Requirements and Description

Minor in Management

The minor in management requires the following 15 hours of coursework:

BUS 1110	Introduction to Management and Entrepreneurship	3
Four courses from the following list:		12
BUS 2910	Business Law	
BUS 5111	Business Negotiations	
BUS 5150	Customer Focus and Satisfaction	
BUS 5360	Business Operations	
BUS 5470	Human Resource Management	
~~BUS 5580~~	~~Strategic Management~~	
BUS 5910	Privacy and Information Security	
BUS 5510	Corporate Entrepreneurship and Ecosystem Strategy	
IS&T 4261	Information Systems Project Management	
ENG MGT 3320	Introduction to Project Management	

Justification for request

Updating curriculum to reflect current business topics and also the mission of the Kummer College (entrepreneurship).

Attach Budget

System Approval Letter

MDHE Approval

Supporting Documents

Reviewer Comments

Jade McCain (jm558v) (10/09/25 10:17 am): Changed requested effective date to Fall 2026 per CCC deadlines.

Key: 138

Program Change Request

Date Submitted: 09/30/25 2:28 pm

Viewing: MI ENG-BS : Mining Engineering BS

Last approved: 07/01/25 11:13 am

Last edit: 10/22/25 8:44 am

Changes proposed by: Crystal Wilson (wilsoncry)

Catalog Pages Using this Program

Mining Engineering

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
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. 10/09/25 8:32 am Kwame Awuah-Offei (kabp3): Approved for RMINENG Chair
2. 10/09/25 9:30 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/17/25 2:15 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:37 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:13 am Jade McCain

(jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:17 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

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)

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
MATH 1214 or 1211	4	MATH 1215	4
CHEM 1310	4	PHYSICS 1135	4
CHEM 1319	1	MECH ENG 1720	3
CHEM 1100	1	GEO ENG 1150	3
MIN ENG 1912	2	HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3
FR ENG 1100	1		
ENGLISH 1120	3		
	16		17

Sophomore Year

First Semester	Credits	Second Semester	Credits

MIN ENG 2925	2	MIN ENG 2412	3
MIN ENG 3912	2	MATH 3304	3
MATH 2222	4	MECH ENG 2527	3
MIN ENG 3913	3	MECH ENG 2350	2
CIV ENG 2200	3	PHYSICS 2135	4
General Education Elective[1]	3		
	17		15

Junior Year

First Semester	Credits	Second Semester	Credits
STAT 3113	3	MIN ENG 4512	3
NUC ENG 3221 or CIV ENG 3330	3	MIN ENG 5522	3
MIN ENG 5932	3	MIN ENG 5823	3
CIV ENG 2210	3	MIN ENG 5933	3
ECON 3512[2]	3	ENGLISH 1160, or 3560, or SPM S 1185	3
GEOLOGY 3310	3		
	18		15

Senior Year

First Semester	Credits	Second Semester	Credits
MIN ENG 5612 or EXP ENG 5612	3	MIN ENG 5742	3
MIN ENG 5912	3	MIN ENG 4097	3
MIN ENG 4096	3	Technical Elective[3,4,5,6,7,8]	3
General Education Elective[1]	3	General Education Elective[1]	3
MIN ENG 5113	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

Explosives Engineering Emphasis: EXP ENG 5622 (Blasting Design and Technology) and MIN ENG 5823 (Rock Mechanics) or EXP ENG 5922 (Tunneling & Underground Construction Techniques) have to be taken as Technical Electives.

4

Quarrying Emphasis: Two of CIV ENG 3116 (Construction Materials, Properties and Testing); MIN ENG 5212 (Aggregates and Quarrying); and MIN ENG 5412 (Aggregates Materials Sizing and Characterization) have to be taken as Technical Electives.

5

Coal Emphasis: MIN ENG 5322 (Coal Mining Methods), MIN ENG 4414 (Mine Plant Management) or an approved substitute course must be taken as Technical Electives.

6

Mining and the Environment Emphasis: GEO ENG 5235 (Environmental Geological Engineering) and GEO ENG 5233 (Risk Assessment in Environmental Studies), or approved substitute courses have to be taken as Technical Electives.

7

Mining Health and Safety Emphasis: MIN ENG 3002 (Mine Rescue), ENG MGT 4330 (Human Factors), or other approved substitute courses must be taken as Technical Electives.

8

Sustainable Development Emphasis: POL SCI 3310 (Public Policy Analysis), ECON 4440 (Environmental and Natural Resource Economics), 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.

Mining Health and Safety Emphasis

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

Sustainable Development Emphasis

Senior Year		
~~POL SCI 3300~~	~~Principles Of Public Policy (or approved substitute course in lieu of Technical Elective.)~~	~~3~~
POL SCI 3310	Public Policy Analysis (or approved substitute course.)	3
ECON 4440	Environmental And Natural Resource Economics (or approved substitute course.)	3

Quarrying Engineering Emphasis

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

MIN ENG 5412	Aggregates Materials Sizing and Characterization	3

Explosives Engineering Emphasis

Senior Year		
Courses have to be taken as technical electives.		
~~A three-credit hour explosives engineering (EXP ENG) course~~		
~~EXP ENG 5922~~	~~Tunneling & Underground Construction Techniques~~	~~3~~
~~GEO ENG 5471~~	~~Rock Engineering~~	
~~In lieu of Technical Elective in Senior Year:~~		
EXP ENG 5622	Blasting Design And Technology	3
MIN ENG 5823	Rock Mechanics	3
or EXP ENG 5922	Tunneling & Underground Construction Techniques	

Coal Emphasis

Senior Year		
MIN ENG 5322	Coal Mining Methods	3
MIN ENG 4414	Mine Plant Management (or approved substitute course.)	2

Mining and the Environment Emphasis

Senior Year		
~~ENV ENG 5640~~	~~Environmental Law And Regulations~~	~~3~~
GEO ENG 5233	Risk Assessment In Environmental Studies (or approved substitute course.)	3
GEO ENG 5235	Environmental Geological Engineering (or approved substitute course.)	3

Justification for request

Removed Stat 3115 from Junior Year, First Semester. Per email received from the math/stat department, “Stat 3115: will no longer be offered. The statistics faculty group believes the redesigned Stat 3113 provides stronger, broader preparation for students in majors that previously required 3115.”

Attach Budget

System Approval Letter

MDHE Approval

Supporting Documents FS 2024 Course Change Requests.pdf

Reviewer Comments

Crystal Wilson (wilsoncry) (10/21/25 3:26 pm): Fixed formatting for GEO ENG 5235 in footnote 6 and POL SCI 3310 in footnote 8. They were in bold and the rest of the courses were not. Fixed listing of courses in emphasis areas to match courses listed in the footnotes.

Key: 95

Program Change Request

Date Submitted: 10/02/25 12:16 pm

Viewing: MT ENG-BS : Metallurgical Engineering BS

Last approved: 07/01/25 11:14 am

Last edit: 10/27/25 10:35 am

Changes proposed by: Crystal Wilson (wilsoncry)

Catalog Pages Using this Program

Metallurgical Engineering

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Bachelor of Science
Academic Level	Undergraduate
Program Code	MT ENG-BS
Department	Materials Science & Engineering
Discipline	Metallurgical Engineering
Title	

In Workflow

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

Approval Path

1. 10/04/25 7:50 am Michael Moats (moatsm): Approved for RMATSENG Chair
2. 10/06/25 3:37 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/17/25 2:15 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:38 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:13 am

Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:17 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Oct 8, 2013 by Lahne Black (lahne)
2. Apr 28, 2014 by Lahne Black (lahne)
3. Aug 14, 2014 by Lahne Black (lahne)
4. Aug 20, 2014 by pantaleoa
5. Aug 20, 2014 by pantaleoa
6. Aug 20, 2014 by pantaleoa
7. Jul 21, 2015 by pantaleoa
8. Mar 7, 2016 by F. Scott Miller (smiller)
9. Mar 27, 2017 by F. Scott Miller (smiller)
10. Jun 28, 2017 by F. Scott Miller (smiller)
11. Mar 3, 2020 by ershenb
12. Sep 15, 2020 by Crystal Wilson (wilsoncry)
13. Apr 6, 2022 by F. Scott Miller (smiller)
14. Jun 14, 2024 by

David Lipke (lipke)

15. Dec 20, 2024 by Jade McCain (jm558v)
16. Jul 1, 2025 by David Lipke (lipke)

Metallurgical Engineering BS

CIP Code

Program Requirements and Description

Bachelor of Science
Metallurgical Engineering

For the Bachelor of Science degree in Metallurgical Engineering a minimum of 128 credit hours is required. A cumulative grade point average of at least 2.0 is required for all courses applied toward the degree, as well as for all required courses in the major field of study.

Freshman Year

First Semester	Credits	Second Semester	Credits
FR ENG 1100	1	CHEM 1320[1]	3
CHEM 1310[1]	4	MATH 1215[1]	4
CHEM 1319	1	MECH ENG 1720	3
MATH 1214 or 1211	4	MET ENG 2110[1]	3
ENGLISH 1120	3	PHYSICS 1135	4
HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3		
	16		17

Sophomore Year

First Semester	Credits	Second Semester	Credits
MET ENG 3130[1]	3	MET ENG 3420 or MECH ENG 2653[1]	3
MET ENG 2125[1]	2	MET ENG 3425	1
MET ENG 3230[1]	3	PHYSICS 2135	4
CIV ENG 2200[1]	3	CIV ENG 2210[1]	3
MATH 2222	4	ENGLISH 1160, or 3560, or SPM S 1185[7]	3
		General Education Elective[2]	3
	15		17

Junior Year

First Semester	Credits	Second Semester	Credits

MET ENG 3120	3	MET ENG 3220	3
MET ENG 3125[1]	2	MET ENG 3225	1
MATH 3304	3	MET ENG 3320	3
Out of Program Technical Elective[3]	3	CER ENG 3410	3
General Education Elective[2]	3	STAT 3113	3
Free Elective	3	General Education Elective[2]	3
	17		16

Senior Year

First Semester	Credits	Second Semester	Credits
MET ENG 4096[1]	3	MET ENG 4097	3
MET ENG 4350	3	MET ENG 4637	3
MET ENG 4420	3	Out of Department Technical Elective[5]	3
Steel Elective[4]	3	Met Technical Elective[6]	3
General Education Elective[2]	3	Met Technical Elective[6]	3
	15		15

Total Credits: 128

1

A grade of "C" or better is required in the following courses to satisfy prerequisite requirements for subsequent coursework and to meet graduation criteria: CHEM 1310, CHEM 1320, CIV ENG 2200, CIV ENG 2210, MATH 1215, MET ENG 2110, MET ENG 2125, MET ENG 3125, MET ENG 3130, MET ENG 3230, MET ENG 3420 or MECH ENG 2653, MET ENG 4096.

2

Gen. Ed. electives must fulfill the Missouri S&T general education requirements applicable to the student's catalog year.

3

Any approved course listed under Out of Department Technical Elective (see footnote 5) **or** any CER ENG, MS&E, or SEMI ENG course at 2000-level with pre-requisite **or** at 3000-level or higher.

4

Steelmaking (MET ENG 4450) or Steels And Their Treatment (MET ENG 4320)

5

CHEM ENG 5320, CHEM 2210 or CHEM 3310 or CHEM 4810, ELEC ENG 2100 & ELEC ENG 2101 or ELEC ENG 2800, GEOLOGY 2610, MATH 5603 or MATH 5325, MECH ENG 5212 or MECH ENG 5220 or MECH ENG 5236 or MECH ENG 5238 or MECH ENG 5282, MIN ENG 2412, PHYSICS 2305 or PHYSICS 2311, STAT 5346 or STAT 5353.

6

Any other 3000-level or higher MET ENG course.

7

Students may replace SP&M S 1185 with the ROTC sequence of MIL ARMY 4250 and MIL ARMY 4500 or MIL AIR 4110 andMIL AIR 4120

Justification for request

Removed stat courses the math department says is being inactivated per their email sent to departments on September 15. Removed math 1221 as this course is not listed in the catalog and has not been offered since fall 2016. Fixed formatting of footnote 1.

Attach Budget

System Approval Letter

MDHE Approval

Supporting Documents

Reviewer Comments

Crystal Wilson (wilsoncry) (10/16/25 2:01 pm): Removed the footnote number from math 3304 as it should not have a footnote.

Program Change Request

Date Submitted: 10/02/25 9:21 am

Viewing: NU ENG-BS : Nuclear Engineering BS

Last approved: 07/01/25 11:14 am

Last edit: 10/31/25 10:55 am

Changes proposed by: Crystal Wilson (wilsoncry)

Catalog Pages Using this Program

Nuclear Engineering

In Workflow

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

Approval Path

1. 10/09/25 10:56 am Joseph Newkirk (jnewkirk): Approved for NUC ENG Chair
2. 10/09/25 3:31 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/17/25 2:14 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:38 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:13 am Jade McCain

Final Catalog FS2026-SP2027

(jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:17 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Aug 6, 2014 by Lahne Black (lahne)
2. Jul 21, 2015 by pantaleoa
3. Mar 27, 2017 by Hyoung-Koo Lee (leehk)
4. Jul 6, 2020 by ershenb
5. Jun 11, 2021 by Joshua Schlegel (schlegelj)
6. Nov 18, 2021 by Joshua Schlegel (schlegelj)
7. May 2, 2022 by Joshua Schlegel (schlegelj)
8. Feb 6, 2025 by Joshua Schlegel (schlegelj)
9. Mar 18, 2025 by Jade McCain (jm558v)
10. Jul 1, 2025 by Joshua Schlegel (schlegelj)

Rationale for Inactivation

Supporting

Documents

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Bachelor of Science

CIM Prospectus

Academic Level	Undergraduate
Program Code	NU ENG-BS
Department	Nuclear Eng & Radiation Sci
Discipline	Nuclear Engineering

Offered by

Title

Nuclear Engineering BS

CIP Code

Purpose

Intended Audience

Program-Specific Admission

Program Requirements and Description

Bachelor of Science

Nuclear Engineering

The nuclear engineering program at Missouri S&T is characterized by its focus on the scientific basics of engineering and its innovative application. 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. For the bachelor of science degree in nuclear engineering a minimum of 129 credit hours is required. These requirements are in addition to credit received for algebra, trigonometry, and basic ROTC courses. A student must maintain an average of at least two grade points overall and for all courses taken in nuclear engineering. All Nuclear Engineering students must meet the Missouri S&T general education requirements as stated in the catalog.

Freshman Year

First Semester	Credits	Second Semester	Credits
ENGLISH 1120	3	HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3
FR ENG 1100	1	MATH 1215	4
MATH 1214 or 1211	4	MECH ENG 1720	3
NUC ENG 1105[2]	1	PHYSICS 1135	4
CHEM 1100	1	General Education Elective[1]	3
CHEM 1310	4		
CHEM 1319	1		
	15		17

Sophomore Year

First Semester	Credits	Second Semester	Credits
CIV ENG 2200	3	CIV ENG 2210	3
COMP SCI 1972, or 1970, or 1971	2	ECON 1100 or 1200	3
COMP SCI 1982, or 1980, or 1981	1	MATH 3304	3
MATH 2222	4	MECH ENG 2519	3
NUC ENG 2105	2	NUC ENG 2406	1
PHYSICS 2135	4	NUC ENG 3103, or PHYSICS 2305, or PHYSICS 2311	3
	16		16

Junior Year

First Semester	Credits	Second Semester	Credits
ELEC ENG 2800	3	ENGLISH 1160, or 3560, or SPM S 1185	3
MET ENG 2110	3	NUC ENG 4312 or 5312	3
NUC ENG 3205	3	NUC ENG 3223	3
NUC ENG 3221	3	NUC ENG 4203 or 5203	3
COMP SCI 3200 (OR 3000 Level MATH, 5000 Level STAT)	3	~~STAT 3115, or 3111, or 3113, or 3117~~	~~3~~
		NUC ENG 5010	0.5
		STAT 3113 or 3117	3
	15		15.5

Senior Year

First Semester	Credits	Second Semester	Credits
NUC ENG 4207 or 5207	3	NUC ENG 4438 or 5438	2
NUC ENG 4241 or 5241	3	NUC ENG 4497	3
NUC ENG 4428 or 5428	3	Nuclear Engineering Elective[3]	3
NUC ENG 4496	2	Technical Elective[4]	3
Nuclear Engineering Elective	3	Technical Elective[4]	3
General Education Elective[1]	3	General Education Elective[1]	3
NUC ENG 5010	0.5		
	17.5		17

Total Credits: 129

Note: Minimum credit hours for graduation is 129.

1

General Education Electives must satisfy Missouri S&T's general education requirements in the catalog.

2

Nuclear Engineering students are expected to take Nuclear Technology Applications (NUC ENG 1105) during their Freshman year. However, transfer students are exempt. Students who attend the Nuclear Engineering Summer Camp as high school students may have this requirement waived.

3

Any Nuclear Engineering course 4000 level or higher.

4

Technical Electives can be any Math, Science, or Engineering courses. One elective must be taken at the 3000 level or above. The other must be taken at the 4000 level or above.

Fundamentals of Engineering Exam: All nuclear engineering students must take the Fundamentals of Engineering Examination prior to graduation. A passing grade on this examination is not required to earn a B.S. degree, however, it is the first step toward becoming a registered professional engineer. This requirement is part of the Missouri S&T assessment process as described in assessment requirements found elsewhere in this catalog.

Justification for request

Removed stat courses the math department says is being inactivated per their email sent to departments on September 15.

Attach Budget

System Approval Letter

MDHE Approval

Supporting Documents

Reviewer Comments

Key: 104

Program Change Request

Date Submitted: 10/02/25 1:11 pm

Viewing: PE ENG-BS : Petroleum Engineering BS

Last approved: 07/01/25 11:14 am

Last edit: 10/16/25 2:29 pm

Changes proposed by: Crystal Wilson (wilsoncry)

Catalog Pages Using this Program

Petroleum Engineering

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Bachelor of Science
Academic Level	Undergraduate
Program Code	PE ENG-BS
Department	Earth Sciences and Engineering
Discipline	Petroleum Engineering
Title	

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

Approval Path

1. 10/02/25 2:39 pm Stephen Gao (sgao): Approved for RGEOSENG Chair
2. 10/03/25 10:13 am Jade McCain (jm558v): Approved for CCC Secretary
3. 10/09/25 7:45 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:38 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:13 am Jade McCain

(jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:17 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Sep 21, 2015 by Ralph Flori (reflori)
2. Jun 18, 2018 by Shari Dunn-Norman (caolila)
3. Jun 14, 2019 by Sharon Lauck (laucks)
4. Mar 3, 2020 by ershenb
5. Jul 1, 2020 by Sharon Lauck (laucks)
6. Jun 10, 2021 by Sharon Lauck (laucks)
7. Oct 28, 2021 by Katherine Grote (grotekr)
8. May 2, 2022 by Mingzhen Wei (weim)
9. Sep 16, 2024 by Crystal Wilson (wilsoncry)
10. Mar 17, 2025 by Jade McCain (jm558v)
11. Jul 1, 2025 by

Mingzhen Wei
(weim)

Petroleum Engineering BS

CIP Code 14.2501 - Petroleum Engineering.

Program Requirements and Description

Bachelor of Science
Petroleum Engineering

For the Bachelor of Science degree in Petroleum Engineering a minimum of 129 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 Petroleum Engineering.
The Petroleum Engineering program at Missouri S&T consists of a strong foundation in math, sciences and engineering fundamentals, plus strong content in the traditional Petroleum Engineering core areas of drilling, production and reservoir engineering. S&T Petroleum Engineering students are prepared to solve today's problems and tomorrow's. Students learn theory, have ample hands-on experiences in laboratories, and they learn many modern software packages used by the petroleum industry.

Freshman Year

First Semester	Credits	Second Semester	Credits
FR ENG 1100	1	MATH 1215	4
CHEM 1310[1]	4	PHYSICS 1135	4
CHEM 1319	1	GEO ENG 1150 or GEOLOGY 1110	3
MATH 1214 or 1211[2]	4	COMP SCI 1500	3
HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3	PET ENG 2510	3
ENGLISH 1120	3		
PET ENG 1120	1		
	17		17

Sophomore Year

First Semester	Credits	Second Semester	Credits
MATH 2222	4	MATH 3304	3
PHYSICS 2135	4	MECH ENG 2350	2
General Education Elective[3]	3	CIV ENG 2210	3
CIV ENG 2200	3	PET ENG 3520	3
PET ENG 3320	3	General Education Elective[3]	3
		PET ENG 3330	3
	17		17

Junior Year

First Semester	Credits	Second Semester	Credits
CIV ENG 3330	3	PET ENG 4410	3
PET ENG 4210	3	PET ENG 4631	3
CS Programming Elective[5]	3	MECH ENG 2527	3
GEOLOGY 3310	3	ENGLISH 1160, or 1600, or 3560	3
GEOLOGY 3319	1	General Education Elective[3]	3
GEOLOGY 5513	3		
	16		15

Senior Year

First Semester	Credits	Second Semester	Credits
PET ENG 4520	3	PET ENG 4097	3
PET ENG 5801	3	GEO ENG 4115, or STAT 3113, or STAT 3117	3
PET ENG Elective[4]	3	General Education Elective[3]	3
PET ENG 4590	3	PET ENG 4531	3
PET ENG 4720	3	PET ENG 5050	3
	15		15

Total Credits: 129

1

All freshmen Petroleum Engineering students must enroll in CHEM 1100 (Intro to Lab Safety and Haz Mat).

2

MATH 1211 may be substituted for MATH 1214.

3

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

4

Select Petroleum Engineering electives in accordance with interest and availability of courses. Courses include secondary recovery of petroleum, advanced drilling technology, well completion design and artificial lift.

5

Selection can be COMP SCI 1972 and COMP SCI 1982, or COMP SCI 2300, or be replaced by formal online program course credits.

All Petroleum Engineering students must take the Fundamentals of Engineering Examination prior to graduation. A passing grade on this examination is not required to earn a B.S. degree, however, it is the first step to becoming a registered professional engineer. This requirement is part of Missouri S&T assessment process as described in Assessment Requirements found elsewhere in this catalog. Students must sign a release form giving the University access to their Fundamentals of Engineering Examination score.

The total number of credit hours required for a degree in Petroleum Engineering is 129.

Petroleum Engineering students must earn the grade of “C” or better in all Petroleum Engineering courses to receive credit toward graduation.

Accelerated BS/MS Program Option for Petroleum

Engineering Majors

Missouri S&T Petroleum Engineering undergraduate students may opt to apply for an accelerated BS/MS program where a student can earn both the BS and MS degrees in Petroleum Engineering faster than if pursuing the degrees separately. The degrees awarded will be a BS & MS (non-thesis or thesis) in Petroleum Engineering.
The benefits for undergraduate students admitted to the program are:
Undergraduate and graduate courses may be chosen with greater flexibility,
Up to nine hours of 5000-level or above Petroleum Engineering coursework may apply to both the BS and MS requirements,
The classes taken for shared BS/MS credit may be taken at the lower undergraduate tuition rate,
The GRE is not required for admission,
Other graduate courses can be taken any time after entering the program as a dual enrolled student,
Work on a thesis project may begin before the BS requirements are completed.
To be eligible for the accelerated BS/MS Petroleum Engineering program, a Petroleum Engineering undergraduate must be at or beyond the junior level standing with a minimum of 48 credit hours. They must have successfully completed the Chemistry and Math requirements and have completed 21 credit hours of Petroleum Engineering courses at Missouri S&T with at least a 3.2 GPA in the Petroleum Engineering courses. To be admitted, the student must complete the program application and non-thesis MS students must have the recommendation of a Petroleum Engineering faculty member, while thesis MS students must have the recommendation of a Petroleum Engineering faculty member who agrees to serve as the graduate thesis advisor. All other MS degree requirements remain the same. The program may be combined with existing honors research, emphasis areas, and certificate options.
The Accelerated Program application must be completed within one semester after shared-credit courses are completed. Courses taken for shared credit will be identified on the application form. These courses will also be listed on the student's Graduate Form 1 to be submitted after the student enters the graduate program. The nine hours of shared-credit coursework, to be taken as undergraduate credit, must be approved by the academic advisor, and may not be undergraduate research, special problems, or transfer courses. An additional six credit hours of coursework for graduate credit (beyond the shared BS/MS credits) can be taken while in the undergraduate program by applying for dual undergraduate/graduate enrollment. Taking additional courses for graduate credit as a dual enrolled student will require formal application to the graduate program. Upon application, acceptance to the Petroleum Engineering MS degree from the Accelerated Program is automatic so long as the student remains in good standing (GPA above 3.0 and B's or better in all graduate courses) within the program. To remain in the Accelerated Program, the student must meet Petroleum Engineering graduate student academic performance requirements and must maintain continuous enrollment at Missouri S&T. If the student exits the program before completion of the MS degree requirements, or fails to maintain continuous enrollment at Missouri S&T, the shared-credit courses may not apply toward graduate requirements in the event of future readmission.
It is the student's responsibility to check on how dual-enrollment status and graduate coursework affects scholarships and other financial aid. As a graduate student, you **are not** eligible for Federal Pell Grants. You are still eligible for Federal Financial Aid. You may be eligible for fellowships and teaching/research assistantships. It is

the International student's responsibility to check with international affairs during completion of an accelerated BS/MS to ensure immigration status will be maintained throughout the program.

Justification for request

Added STAT 3113 and Stat 3117 as options for senior year, second semester, per department request.

Attach Budget

System Approval Letter

MDHE Approval

Supporting Documents

Reviewer Comments

Crystal Wilson (wilsoncry) (10/03/25 8:49 am): With department approval I removed reference of Math 1208 and 1221 from the DC form. These courses are not printed in the catalog and have not been taught since fall 2016.

Crystal Wilson (wilsoncry) (10/16/25 2:29 pm): Removed footnote number 3 from pet eng 4210 as it should not have a footnote. Fixed formatting for footnote 3 text.

Program Change Request

New Program Proposal

Date Submitted: 09/19/25 3:52 pm

Viewing: **PROPOSED : Applied Artificial Intelligence MS**

Last edit: 10/17/25 1:42 pm

Changes proposed by: Venkata Sriram Siddhardh Nadendla (nadendla)

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Master of Science
Academic Level	Graduate
Program Code	PROPOSED
Department	Computer Science
Discipline	Computer Science
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. FS Meeting Agenda
8. Faculty Senate Chair
9. Registrar

Approval Path

1. 09/19/25 3:55 pm Seung-Jong Park (spxzb): Approved for RCOMPSCI Chair
2. 10/17/25 1:48 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:59 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:38 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:13 am Jade McCain

(jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:17 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

Applied Artificial Intelligence MS

CIP Code 11.0102 - Artificial Intelligence.

Program Requirements and Description

Master of Science

Applied Artificial Intelligence

The Master of Science in Applied AI (informally refer to the program as 'AI+X', where the 'X' represents different technical degree areas, which includes most STEM disciplines) is a non-thesis M.S. degree program. It is designed for students who already hold an undergraduate or graduate degree in STEM fields and wish to continue advancing in their original area of study while mastering cutting-edge AI techniques and tools to make a transformative impact in their chosen domain 'X'.

Program Objectives

Advance Understanding: Provide students with an advanced understanding of the foundational principles, theories, and techniques of artificial intelligence (AI), including machine learning, neural networks, and computer vision;

Develop Applied Skills: Foster practical skills through hands-on experience with AI tools, frameworks, and programming languages empowering students to design, implement, and evaluate AI solutions for real-world problems; and

Collaborate Across Disciplines: Encourage interdisciplinary collaboration by integrating AI with other STEM fields fostering innovation and addressing complex societal challenges through AI-driven solutions.

Program Outcomes

Students who complete the M.S. in AI+X program will be able to demonstrate:

Proficiency in advanced object-oriented programming techniques (e.g., C++ or Python), and in applying these skills in the development of cutting-edge AI systems.

Competence to model abstract AI challenges and the corresponding informational uncertainties into well-defined,

ethical descriptions of specific AI project requirements.
Expertise in machine learning, game theory and multi-agent decision making, natural language processing, robotics and computer vision algorithms, models and state-of- the-art system architectures.
Skill to identify well-defined performance metrics (e.g., sensitivity and specificity of the AI system), and design and run simulations/experiments to validate and enhance system/software performance.
Ability to design and develop scalable software on specialized hardware (e.g., graphic processor units) as well as application programming interfaces (APIs), to design state- of-the-art AI solutions.
Ability to work and communicate effectively in diverse teams with AI professionals, software engineers and domain experts.

Program Structure

For the M.S. degree in AI+X program, a total of **31 credit hours** will be required, of which a **minimum of 9 credit hours must come from 6000-level lecture courses**. The curriculum consists of three major parts: program core (required) courses, program elective courses, and discipline-specific elective courses.

Program-Core (Required) Courses (10 credit hours)

The following four courses (totaling to **10 credit hours**) are chosen in order to accomplish the desired Program Outcomes 1 and 2.

COMP SCI 5111	Bridge to Advanced Computing (Alternative requirement for students with B.S. degree in Comp Sci) [1]	3
COMP SCI 5206	Probability and Its Applications in Computing	3
COMP SCI 5400	Introduction To Artificial Intelligence	3
COMP SCI 6010	Seminar	1

Program-Elective Courses (9 credit hours)

In consultation with their advisor(s), students should select **9 credit hours** from the following list of AI electives currently offered by the Comp Sci department at Missouri S&T.

COMP SCI 5401	Evolutionary Computing	3
COMP SCI 5402	Introduction to Data Mining	3
COMP SCI 5403	Introduction to Robotics	3
COMP SCI 5404	Introduction to Computer Vision	3
COMP SCI 5408	Game Theory for Computing	3
COMP SCI 5411	Natural Language Processing	3
COMP SCI 5420	Introduction to Machine Learning	3
COMP SCI 5421	Reinforcement Learning	3
COMP SCI 5480	Deep Learning	3
COMP SCI 6202	Markov Decision Processes	3

COMP SCI 6400	Advanced Topics In Artificial Intelligence	3
COMP SCI 6401	Advanced Evolutionary Computing	3
COMP SCI 6402	Advanced Topics in Data Mining	3
COMP SCI 6405	Clustering Algorithms	3
COMP SCI 6406	Machine Learning in Computer Vision	3
COMP SCI 6408	Algorithmic Game Theory	3
COMP SCI 6411	Large Language Models	3

Discipline-Specific Elective Courses (12 credit hours)

Students should take at least 3 courses from the same "X" department. The discipline-specific elective courses should be at the 5000- or 6000-level lecture courses from the "X" department. Students should take at least one 6000-level lecture course from the "X" department. Students may take a fourth course from the "X" department, or any other discipline upon consulting their advisor. For example, there are existing courses in other programs, such as MATH 5762, MECH ENG 5479, SYS ENG 5212, etc.

[1]

[1] If a student has a B.S. degree of Computer Science (Comp Sci) or Computer Engineering (Comp Eng) or enrolls in Comp Sci or Comp Eng, the student can replace the core course, COMP SCI 5111, with COMP SCI 5480.

Justification for request

The proposed Applied AI program (approved by the UM Board of Curators on June 26, 2025) aims to address the growing demand for expertise in AI in Missouri and the broader Midwest region, especially in high-tech industries that are currently present in or state or companies and industries we want to attract. As modern engineered systems increasingly integrate AI technologies, graduates of the program will be uniquely equipped with the knowledge and skills to both understand and innovate within these technologies. This will enable them to develop cutting-edge solutions, enhancing products and processes that are essential for supporting high-tech industries, thereby contributing to economic growth and technological advancement in the region. Graduates of the AI+X program will be well-positioned to serve as product managers, or application developers, leveraging AI to innovate and enhance their field.

Note: This DC form is also submitted along with CC forms for the following courses: Comp Sci 5111, Comp Sci 5410, Comp Sci 5411, Comp Sci 6411.

Attach Budget	AAI Pro Forma.pdf
System Approval Letter	MDHE Receipt_MS Applied Artificial Intelligence_New Degree.pdf
MDHE Approval	MDHE Approval Letter_S&T_July 2025.pdf

Supporting Documents	ST_MS AI-X_proposal_final.docx Summary-Revision-AppliedAI.docx Courses-AAI.docx AI-full_proposal-Appendix-6-assessment.docx AI-full_proposal-Appendix-4-Lightcast.pdf AI-full_proposal-Appendix-3-Dean letter of support.pdf AI-full_proposal-Appendix-3-CCC-Chair-letter of support.docx AI-full_proposal-Appendix-2-list-of-faculty.pdf AI-full_proposal-Appendix-1-list-of-courses.docx
Reviewer Comments	

Jade McCain (jm558v) (09/22/25 2:28 pm): Changed the requested effective date to Fall 2026 per CCC deadlines and changed program code to "PROPOSED".

Jade McCain (jm558v) (09/23/25 11:11 am): Added pro forma budget spreadsheet.

Jade McCain (jm558v) (09/23/25 11:20 am): Attached UM System approval.

Crystal Wilson (wilsoncry) (10/08/25 9:22 am): Added MS to title for naming consistency.

Crystal Wilson (wilsoncry) (10/09/25 10:21 am): Added Comp Sci 6202 per department request. Course was on the proposal, but mistakenly left off of the DC form.

Jade McCain (jm558v) (10/17/25 11:21 am): Removed sentence from program structure section per department request via email on 10/17/2025.

Jade McCain (jm558v) (10/17/25 1:42 pm): Corrected course number of Comp Sci 5410 to Comp Sci 5421 for consistency with the approved degree proposal per department request via email on 10/17/2025.

Program Change Request

Date Submitted: 10/08/25 8:09 am

Viewing: SEMI EN-BS : Semiconductor Engineering BS

Last approved: 07/01/25 11:16 am

Last edit: 10/30/25 4:12 pm

Changes proposed by: Crystal Wilson (wilsoncry)

Catalog Pages Using this Program

Semiconductor Engineering

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Bachelor of Science
Academic Level	Undergraduate
Program Code	SEMI EN-BS
Department	Materials Science & Engineering
Discipline	Semiconductor Engineering
Title	

In Workflow

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

Approval Path

1. 10/08/25 9:48 am Michael Moats (moatsm): Approved for RMATSENG Chair
2. 10/08/25 1:32 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/17/25 2:13 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:38 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:13 am

Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:17 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jul 1, 2025 by David Lipke (lipke)

Semiconductor Engineering BS

CIP Code 14.9999 - Engineering, Other.

Program Requirements and Description

Bachelor of Science

Semiconductor Engineering

For the Bachelor of Science degree in Semiconductor Engineering a minimum of 127 credit hours (Semiconductor Device Engineering emphasis area) or 128 credit hours (Semiconductor Process Engineering emphasis area) is required. A cumulative grade point average of at least 2.0 is required for all courses applied toward the degree, as well as for all required courses in the major field of study, defined as SEMI ENG, ELEC ENG, COMP ENG, and/or CHEM ENG.

Semiconductor Device Engineering emphasis area

First Year

First Semester	Credits	Second Semester	Credits
ENGLISH 1120	3	MECH ENG 1720	3
CHEM 1310[1]	4	CHEM 1320[1]	3
CHEM 1319[1]	1	MATH 1215[1]	4
MATH 1214 or 1211	4	PHYSICS 1135	4
FR ENG 1100	1	SEMI ENG 1100	1

General Education Elective[2]	3		
	16		15

Second Year

First Semester	Credits	Second Semester	Credits
COMP SCI 1500 or 1972 ***and*** 1982	3	MATH 2222[1]	4
ELEC ENG 2100[1]	3	SEMI ENG 2100[1]	3
ELEC ENG 2101[1]	1	ELEC ENG 2120[1]	3
MATH 3304	3	COMP ENG 2210[1]	3
PHYSICS 2135[1]	4	COMP ENG 2211	1
SEMI ENG 3230	3	ENGLISH 1160, or 3560, or SPM S 1185[3]	3
	17		17

Third Year

First Semester	Credits	Second Semester	Credits
SEMI ENG 3019[1]	1	SEMI ENG 3101[1]	3
SEMI ENG 3100[1]	3	SEMI ENG 3410	3
ELEC ENG 3100	3	ELEC ENG 3250	3
ELEC ENG 3101	1	ELEC ENG 3600	3
~~STAT 3115 or 3117~~	~~3~~	General Education Elective[2]	3
STAT 3117	3		
HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3		
General Education Elective[2]	3		
	17		15

Fourth Year

First Semester	Credits	Second Semester	Credits
SEMI ENG 4096[1]	3	SEMI ENG 4097	3
SEMI ENG 4100	3	SEMI ENG 4200	3
SEMI ENG 4101	3	SEMI ENG 4400	3
SEMI ENG 4300	3	General Education Elective[2]	3
COMP ENG 5210	3	Free Elective	3
	15		15

Total Credits: 127

1

A grade of “C” or better is required in the following courses to satisfy prerequisite requirements for subsequent coursework and to meet graduation criteria: CHEM 1310, CHEM 1319, CHEM 1320, COMP ENG 2210, ELEC ENG 2100, ELEC ENG 2101, ELEC ENG 2120, MATH 1215, MATH 2222, PHYSICS 2135, SEMI ENG 2100, SEMI ENG 3019, SEMI ENG 3100, SEMI ENG 3101, SEMI ENG 4096.

2

Gen. Ed. electives must fulfill the Missouri S&T general education requirements applicable to the student's catalog year.

3

Students may replace SP&M S 1185 with the ROTC sequence of MIL ARMY 4250 and MIL ARMY 4500 or MIL AIR 4110 and MIL AIR 4120.

Semiconductor Process Engineering emphasis area

First Year

First Semester	Credits	Second Semester	Credits
ENGLISH 1120	3	MECH ENG 1720	3
CHEM 1310[1]	4	CHEM 1320[1]	3
CHEM 1319[1]	1	MATH 1215[1]	4
MATH 1214 or 1211	4	PHYSICS 1135	4
FR ENG 1100	1	SEMI ENG 1100	1
General Education Elective[2]	3		
	16		15

Second Year

First Semester	Credits	Second Semester	Credits
COMP SCI 1500 or 1972 ***and*** 1982	3	CHEM ENG 2110[1]	3
PHYSICS 2135[1]	4	SEMI ENG 2100[1]	3
MATH 2222[1]	4	MATH 3304[1]	3
CHEM ENG 2100[1]	4	ELEC ENG 2100	3
General Education Elective[2]	3	ELEC ENG 2101[1]	1
		ENGLISH 1160, or 3560, or SPM S 1185[3]	3
	18		16

Third Year

First Semester	Credits	Second Semester	Credits
CHEM ENG 3111	3	CHEM ENG 3150	3
CHEM ENG 3101	4	ELEC ENG 2200	3
CHEM ENG 3120	3	ELEC ENG 2201	1
SEMI ENG 3019[1]	1	SEMI ENG 3101[1]	3
SEMI ENG 3100[1]	3	SEMI ENG 3410	3
HISTORY 1200, or 1300, or 1310, or POL SCI 1200	3	STAT 3113	3
	17		16

Fourth Year

First Semester	Credits	Second Semester	Credits
CHEM ENG 4110	3	SEMI ENG 4097	3
CHEM ENG 4101	3	SEMI ENG 4200	3
SEMI ENG 4096[1]	3	General Education Elective[2]	3
SEMI ENG 4101	3	General Education Elective[2]	3
SEMI ENG 4300	3	Free Elective	3
	15		15

Total Credits: 128

1

A grade of “C” or better is required in the following courses to satisfy prerequisite requirements for subsequent coursework and to meet graduation criteria: CHEM 1310, CHEM 1319, CHEM 1320, CHEM ENG 2100, CHEM ENG 2110, ELEC ENG 2101, MATH 1215, MATH 2222, MATH 3304, PHYSICS 2135, SEMI ENG 2100, SEMI ENG 3019, SEMI ENG 3100, SEMI ENG 3101, SEMI ENG 4096.

2

Gen. Ed. electives must fulfill the Missouri S&T general education requirements applicable to the student's catalog year.

3

Students may replace SP&M S 1185 with the ROTC sequence of MIL ARMY 4250 and MIL ARMY 4500 or MIL AIR 4110 and MIL AIR 4120.

Justification for request

Removed stat courses the math department says are being inactivated per their email sent to departments on September 15. Removed math 1221 as this course is not listed in the catalog and has not been offered since fall 2016. Fixed formatting of footnote 1.

Attach Budget	Semiconductor Engineering Pro Forma.pdf
System Approval Letter	0 - Board Approval_ BS Semiconductor Engineering – S&T.pdf
MDHE Approval	MDHE Approval Letter_ST_MAR 2025.pdf
Supporting Documents	ST BS Semiconductor Engineering Proposal_Final.pdf
Reviewer Comments	

Key: 424

Program Change Request

Date Submitted: 10/23/25 9:11 am

Viewing: SYS EN-PHD : Systems Engineering PhD

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

Last edit: 10/28/25 1:22 pm

Changes proposed by: Crystal Wilson (wilsoncry)

Catalog Pages Using this Program

Systems Engineering

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Doctor of Philosophy
Academic Level	Graduate
Program Code	SYS EN-PHD
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. 09/11/25 5:04 pm Amaury Lendasse (altmg): Approved for RENGMNGT Chair
2. 09/22/25 4:18 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 09/29/25 11:18 am Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 10/06/25 9:16 am Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 10/23/25 8:30 am

Crystal Wilson (wilsoncry): Rollback to Initiator
6. 10/28/25 12:56 pm Amaury Lendasse (altmg): Approved for RENGMNGT Chair
7. 10/28/25 1:22 pm Jade McCain (jm558v): Approved for CCC Secretary
8. 10/31/25 11:01 am Theresa Swift (thswift): Approved for Engineering DSCC Chair
9. 11/03/25 3:38 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
10. 11/21/25 11:14 am Jade McCain (jm558v): Approved for CCC Meeting Agenda
11. 11/21/25 11:17 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Jun 12, 2014 by pantaleoa
2. Mar 13, 2015 by pantaleoa
3. Jun 19, 2015 by

Stephen Raper (sraper)
4. Jul 24, 2015 by pantaleoa
5. Apr 19, 2016 by pantaleoa
6. Apr 19, 2016 by pantaleoa
7. Jun 18, 2018 by Sarah Johnson (johsarah)
8. Jun 14, 2019 by Sarah Johnson (johsarah)
9. Apr 19, 2021 by Crystal Wilson (wilsoncry)
10. Jun 14, 2024 by David Enke (enke)

Systems Engineering PhD

CIP Code 14.2701 - Systems Engineering.

Program Requirements and Description

A candidate for the Ph.D. in systems engineering must complete the equivalent of at least three years of full time work beyond the bachelor's degree. The content of all Ph.D. programs are individually structured by the student in consultation with and approved by the student's advisory committee. All requirements for the degree must normally be completed within an eight year period. At appropriate points in their program, Ph.D. students must pass both a Qualifying Exam and Comprehensive Exam. Off-campus students are expected to complete all requirements listed in the Missouri S&T Graduate Catalog under the section entitled Doctor of Philosophy Degree and follow all procedures listed under the Procedures for Ph.D. Candidates.
The total credit requirements for graduation are a minimum of 45 ~~54~~ credit hours after the successful completion of M.S. degree in systems engineering. Actual courses taken will be determined by the candidate's committee and his/her plan of study. The student is expected to complete all requirements.

Major Requirements

(Direct Doctorate) After B.S. degree in Engineering

Core Curriculum		**15**
SYS ENG 5101	System Engineering and Analysis	3

SYS ENG 6101	Advanced Research Methodology	3
SYS ENG 6102	Information Based Design	3
SYS ENG 6103	Systems Life Cycle Costing	3
SYS ENG 6104	Systems Architecting	3
~~SYS ENG 6110~~	~~Optimization under Uncertainty~~	~~3~~
~~SYS ENG 6239~~	~~Smart Engineering System Design~~	~~3~~
~~SYS ENG 6321~~	~~Modeling Complex Systems~~	~~3~~
~~SYS ENG 6412~~	~~Mathematical Programming~~	~~3~~
~~SYS ENG 6542~~	~~Model Based Systems Engineering~~	~~3~~
~~SYS ENG 6543~~	~~Digital Engineering~~	~~3~~
Research		**36**
~~SYS ENG 6099~~	~~Research~~	~~1-15~~
Electives		**24**
Minimum 15 credit hours of 6XXX courses. Maximum 12 credit hours outside the department.		

~~Research Specialization Areas - 24 credit hours~~

(Traditional Doctorate)

Qualifying master's degree [1]		**30**
Research		**24**
Electives		**21**
Minimum 15 credit hours of 6XXX courses. Maximum 12 credit hours outside the department.		

[1] If the qualifying master's degree did not include one or more of the core curriculum courses listed under the direct doctorate section, the student may need to complete those courses as part of the elective credits.

For Off-Campus Students

The qualifying exam must be taken within the first 5 semesters of enrollment; the student will have at minimum one virtual conference per month with his/her research advisor; the Ph.D. comprehensive exam is recommended to be taken on campus; the student has the option of conducting research that is beneficial to the student's professional work; the defense of dissertation is recommended to take place on campus.

Requirements for Dissertation

Students will conduct original research demonstrated by journal or referred proceedings, publication under the

supervision of a doctoral advisor, communicate their findings, write a dissertation on research conducted, and provide satisfactory defense of their dissertation in a final oral examination. Students are required to publish their work in approved journals and referred proceedings. A minimum of three articles is expected.

Requirements for Seminars

All graduate students are required to attend the department seminar series.

Qualifying Exam

The objective of the systems engineering Ph.D. qualifying exam is to test the knowledge and understanding of the graduate student on systems engineering fundamentals and the student's research capability. It is expected that the graduate student has a clear understanding of the research issues in the student's area of interest, as well as the possible impact of successful research contributions to systems engineering research and literature. For more information, contact the department graduate staff.

Comprehensive Exam

The student's advisory committee will administer the comprehensive examination after the student has completed seventy-five percent of the coursework for the Ph.D. program and one published refereed conference proceeding or journal paper. The examination is written and oral. Upon successful completion of the written examination, an additional oral exam might be required by the advisory committee.

Dissertation

The dissertation, embodying the results of an original investigation, must be written upon a subject mutually agreed upon between the student and the advisor.

Research Areas

Research areas include, but are not limited to: Complex Adaptive Systems Architecting, Machine ~~Cyber-Physical Systems, Modeling~~ and Deep Learning, Modeling and Simulation. ~~Simulation, Model-Based Systems Engineering, System of Systems Architecting, Complex Adaptive Systems, Human System Integration, Infrastructure Systems.~~ Model-Based Systems Engineering and Digital Twins, System of Systems Architecting, Transdisciplinary Systems Engineering Solutions with AI, Use of LLM in Engineering, Human-AI Teaming, Infrastructure Systems.

Justification for request

The change provides more flexibility to the students to align courses to take to their research topics . It also provide modulatory to their PhD program.

Attach Budget

System Approval Letter

MDHE Approval

Supporting
Documents

Reviewer
Comments

Crystal Wilson (wilsoncry) (09/17/25 6:30 pm): Updated credit hours in text per department request.

Crystal Wilson (wilsoncry) (09/18/25 7:04 pm): Added footnote 1 to traditional doctorate list of courses for clarification per department request.

Jade McCain (jm558v) (10/14/25 2:33 pm): Corrected spacing issues and added punctuation.

Crystal Wilson (wilsoncry) (10/16/25 9:25 am): Per Dr. Raper and Sharon Matson, this form does not need to go through system level and can just go through campus CCC/FS process.

Crystal Wilson (wilsoncry) (10/23/25 8:30 am): Rollback: Rollback for clarification for the traditional doctorate section.

Crystal Wilson (wilsoncry) (10/23/25 9:13 am): Updated traditional doctorate section per Dr. Dagli's approval.

Program Change Request

Date Submitted: 10/16/25 2:19 pm

Viewing: WARSOC-CTU : UCT - War and Society

Last approved: 03/02/22 8:34 am

Last edit: 10/16/25 3:32 pm

Changes proposed by: Shannon Fogg (sfogg)

Catalog Pages Using this Program

History

Effective Catalog Edition	FS2026-SP2027
Start Term	Fall 2026
Program Type	Certificate
Academic Level	Undergraduate
Program Code	WARSOC-CTU
Department	History & Political Science
Discipline	History
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. 10/16/25 2:20 pm Shannon Fogg (sfogg): Approved for RHISTORY Chair
2. 10/16/25 3:32 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/29/25 4:07 pm Alejandra Sobrado (asgx4): Approved for Arts & Humanities DSCC Chair
4. 11/03/25 3:38 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:14 am

Jade McCain (jm558v): Approved for CCC Meeting Agenda
6. 11/21/25 11:17 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair

History

1. Oct 6, 2021 by Petra Dewitt (dewittp)
2. Mar 2, 2022 by Crystal Wilson (wilsoncry)

UCT - War and Society

CIP Code

Intended Audience

Main Campus Students

Program-

Program Requirements and Description

War and Society

The undergraduate certificate in War and Society is designed to provide students with a strong understanding of the history of war and its social effects. The American Revolution, the French Revolution, and the wars of the nineteenth and twentieth centuries completely transformed politics, culture, and society. The effects of these wars continue to influence our ideas and our actions even today. Understanding this transformational role is thus essential in creating global citizens and engaging with the consequences of armed conflict.

To receive S&T's undergraduate certificate in War and Society, a student must take FOUR of the following courses

HISTORY 3230	Europe In The Age Of The French Revolution And Napoleon	3

HISTORY 3240	Contemporary Europe	3
HISTORY 3241	World War I A Global Perspective	3
HISTORY 3320	Colonial America	3
HISTORY 3325	Revolutionary America, 1754-1789	3
HISTORY 3345	Civil War And Reconstruction	3
HISTORY 3440	Grunts: 20th Century Americans In Combat	3
HISTORY 3441	The United States In World War II	3
HISTORY 3442	The United States in Vietnam	3
HISTORY 3443	The American Military Experience	3
HISTORY 4085	Internship [1]	3
HISTORY 4097	Senior Project [2]	3
HISTORY 4245	Nazi Germany and the Holocaust	3
HISTORY 4246	War and Society in Twentieth-Century Europe	3

1

In order to count towards the certificate, the History 4085 internship needs to be taken for at least 3 credit hours and with an organization related to the certificate topic, such as a military history museum. Requires certificate advisor approval.

2

In order to count towards certificate, the History 4097 senior project needs to be on topic related to the certificate. Requires certificate advisor approval.

Justification for request

Add History 3320 to the choices. Colonial America examines a significant history of colonial and imperial warfare in early America and the impact of these conflicts on early American society.

Attach Budget

System Approval Letter

MDHE Approval

Supporting Documents

Reviewer

Comments

Jade McCain (jm558v) (10/16/25 3:32 pm): This a minor change per the Office of the Provost stated on 10/16/2025 via email.

Key: 380

Experimental Change Request

New Proposal

Viewing: COMP SCI 5001.079: AI-Augmented Software Engineering

Changes proposed by: Venkata Sriram Siddhardh Nadendla (nadendla)

Requested Effective Date	Spring 2026
Department	Computer Science (RCOMPSCI)
Discipline	Computer Science (COMP SCI)
Course Number	5001
Topic ID	079
Experimental Title	

Completed 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. 10/14/25 2:44 pm Seung-Jong Park (spxzb): Approved for RCOMPSCI Chair
2. 10/15/25 3:13 pm Jade McCain (jm558v): Approved for CCC Secretary
3. 10/28/25 2:54 pm Theresa Swift (thswift): Approved for Engineering DSCC Chair
4. 11/03/25 3:34 pm Jade McCain (jm558v): Approved for Pending CCC Agenda post
5. 11/21/25 11:08 am

Jade McCain (jm558v): Approved for CCC Meeting Agenda

6. 11/21/25 11:12 am Cecil Eng Huang Chua (cchua): Approved for Campus Curricula Committee Chair
7. 11/21/25 3:03 pm Evie Sherlock (esdk3): Approved for CAT entry
8. 11/24/25 8:51 am Stephen Raper (sraper): Approved for Registrar

History

1. **Nov 24, 2025 by Venkata Sriram Siddhardh Nadendla (nadendla)**

AI-Augmented Software Engineering

Experimental Abbreviated Course Title

AI-Augmented SE

Co-Listed Course

Instructors

Md. Mia Imran

Experimental Catalog Description

Students will learn how to integrate generative AI tools into the software development lifecycle, including applications in coding, refactoring, testing, debugging, and DevOps.

Emphasis on responsible adoption, security, and ethical considerations. Hands-on in-class activities and projects provide experience with AI-assisted tools in real-world development contexts.

Prerequisite(s)

A grade of "C" or better in Comp Sci 3100, preceded or accompanied by Comp Sci 5411.

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:

Modern software engineering industry expects its workforce to apply generative AI tools in the development workflows. This course is therefore designed to impart this new skill to both undergraduate and graduate students, and it also complements existing Software Engineering (Comp Sci 3100) and Natural Language Processing (Comp Sci 5411) courses.

Reviewer Comments

Jade McCain (jm558v) (10/15/25 3:12 pm): Changed topic ID to TBD, corrected formatting, and added grading basis.

Jade McCain (jm558v) (10/29/25 3:20 pm): Added Topic ID.

Key: 546

Approval Process for Missouri S&T's General Education Curriculum

1. The one-time creation of a new general education curriculum will originate with the General Education subgroup formed by the Provost and guided by the Associate Provost for Academic Operations, Accreditation, and Assessment. This group was created to address the mandate from the Higher Learning Commission (HLC) accrediting agency to create General Education guidelines for all students seeking undergraduate degrees at Missouri S&T. The initial general education curriculum will need to be approved by Campus Curriculum Committee and Faculty Senate.
2. After the initial creation of a general education curriculum, future changes to the general education curriculum may originate from any group of ten or more regular faculty members at Missouri S&T, meeting either at their own initiative, or that of the Faculty Senate officers, or that of the Provost's office. If the originating group, officer, or administrator so desires, the group may include non-voting members who are not regular faculty members.
3. In all cases, the group making the proposal submits a cover letter and general education curriculum proposal to the Campus Curriculum Committee (CCC), by sending the relevant documents to the chair of the CCC. The sender should copy the Faculty Senate President, the Provost, the Vice Provosts and Deans of all the colleges, and the chair of the Department Chairs Committee.
4. The CCC solicits feedback on the proposal from each Discipline Specific Curriculum Committee (DSCC).
5. After considering the feedback from the DSCC, if the CCC approves the proposal, it shall present a motion for approval to the Faculty Senate. If the CCC does not approve the

proposal, it shall return the proposal to the originating group with feedback explaining why it was rejected. If the originating group so desires, it may then make changes and start the process over again.

6. The Faculty Senate votes on the CCC's motion for approval.
7. Upon approval of the Faculty Senate, the Registrar's Office adds the new/revised general education curriculum into the catalog and adds the required courses into the Degree Audit System.
8. If desired or necessary, each department shall adjust its undergraduate degree requirements in light of the new/revised general education curriculum through the normal Degree Change (DC) process. The department will not be allowed to make any adjustments to the approved general education curriculum.
9. Assessment of the General Education Program will be the responsibility of the University Assessment Committee.

(approved Faculty Senate, Feb 22, 2024)

Chair, Campus Curriculum Committee 10/22/2025

Dear Dr. Chua,

According to the “Approval Process for Missouri S&T’s General Education Curriculum” (approved by Faculty Senate February 2024), the undersigned ten faculty members met on their own initiative to discuss changes to the General Education Program.

We make the attached proposal for adding courses to the approved General Education Program (approved by Faculty Senate March 2025). The need for these courses became apparent during the updating of DC forms in April 2025 that implemented the General Education Program for catalog year 2025-2026.

In several cases, we realized that some courses listed in the approved General Education Program had not been taught in years and required additional options for students so that they could be graduating on time. Not all students attending Missouri S&T are engineers and their majors require lower-level math courses or statistics courses that are better suited for their field of study. One degree program, Architectural Engineering, requires discipline specific general education courses that needed to be added to the approved list of courses.

Please let us know whether you need additional information, or further explanation about the approval process.

Sincerely,
Dr. Stuart Baur
Dr. Michael Bruening
Dr. Petra DeWitt
Dr. Shannon Fogg
Dr. Merilee Krueger
Dr. Clair Kueny
Dr. John Singler
Dr. Daniel Shank
Dr. Katie Shannon
Dr. Kris Swenson

Cc: Dr. Paul Runnion, Faculty Senate President
Dr. John Harris, Provost and Executive Vice Chancellor for Academic Affairs
Dr. David Spivey, Vice Provost of Enrollment Management
Dr. Debra Bourdeau, Vice Provost for Online Learning & Educational Innovation
Roger Weaver, Associate Dean of Libraries
Dr. John Harris, Interim Vice Provost of Graduate Education
Dr. David Borrok, Vice Provost and Dean, CEC
Dr. Mehrzad Boroujerdi, Vice Provost and Dean, CASE
Dr. James Sterling, Vice Provost and Dean, Kummer College
Dr. Melody Lo, Chair Department Chairs Committee

Proposal to add courses to General Education Curriculum

We, the undersigned faculty, make the following proposal to add courses to the General Education Curriculum (highlighted in yellow) to offer additional choices for students, especially in circumstances when approved courses are not taught on a regular basis and could delay students from graduating.

General Education Credit Hour Requirements

Foundational Goals – (31 credit hours total, distributed in the following areas)

-Mathematical Science (3 credit hours) Choose from Math 1120, 1140, and Math 1210 or higher course number.

We propose to simplify the math section by stating: Choose from Math 1110 or higher course number or from STAT 1115 or higher course number to offer more options, especially for non-engineering majors.

-Natural Sciences (7 credit hours including a minimum 1 credit hour of lab) Choose from at least two specific disciplines: Biology 1113 or higher, Chemistry 1301 or higher, Geology 1110 or higher, Physics 1111 or higher.

-Communications (6 credit hours) English 1120 (a) and choose one course from ENGL 1160, ENGL 3560, or Speech & Media 1185.

We propose to add ENGL 1600 as a technical communication option.

-Humanities, Arts, and Social Sciences (15 credit hours) Choose courses from History, Art, Music, Theater, English and Technical Communication, Philosophy, Political Science, Psychology, Economics, Etymology, or Foreign Languages

- 6 credits in the Humanities and Fine Arts, selected from two specific disciplines: History 1300*, 1310*, Art 1180, Music 1150, Theater 1150, and English 1211, 1212, 1221, 1222, 1231 and other literature courses that require no more than ENGL 1120 as a prerequisite.

We propose to add Art 3203 and Theatre 1190, in case Art 1180 or Theater 1150 are not taught and to recognize the discipline specific general education requirement of Art 3203 for Architectural Engineering.

We also propose to add History 2510 (History of Technology), to meet the discipline specific general education requirement for Architectural Engineering.

- 6 credits in the Behavioral and Social Sciences, selected from two specific disciplines:

History 1100, 1200*, 2110, Philosophy 1105, 1115, Political Science 1200*, Psychology 1101, Econ 1100 or 1200, Foreign Languages 1101, 1102, and 1180.

- 3 additional credits from any of these Humanities, Arts, and Social Sciences disciplines.

* Fulfills Williams Law