

Minutes of the Campus Curricula Committee Meeting

September 22, 2026

8:14 am, Parker Hall 203

(For Faculty Senate Meeting of October 22, 2026)

Attendees: Cecil Eng Huang Chua, Michael Davis, Hannah Johnson, Kyle Perry, Paul Runnion, Katie Shannon, Alejandra Sobrado, Theresa Swift, Crystal Wilson, and Jade Winzer.

The following curriculum forms were discussed and approved:

Course Change forms:

File: 5610 BIO SCI 3783 : Biological Design and Innovation I
File: 10485 EDUC 5060 : Advanced STEM Teaching Methods
File: 10486 EDUC 5070 : AI and Computer Science for Educators
File: 10357 ENV SCI 5779 : Environmental Safety
File: 10356 ENV SCI 6560 : Environmental Ecology and Management
File: 10355 ENV SCI 6667 : Disaster Management in Changing Climates
File: 10546 KC 5910 : Team Innovation Projects I
File: 10547 KC 5920 : Team Innovation Projects II
File: 974 MATH 5483 : Operational Calculus
File: 8798 MATH 5512 : Introduction To Differential Geometry

Program Change forms:

File: 25 CP ENG-MI : Computer Engineering Minor
File: 441 PROPOSED : STEM Education
File: 133 TCH CM-MIG : Technical Communication Minor

Experimental Course forms:

File: 571 PHYSICS 4001.006 : Introduction to Quantum Science and Technology

New Business:

- Consideration of a proposal for graduate-level adaptations of undergraduate courses, including discussion of the proposed approach and a vote on CCC support.
- Review and discussion of the committee bylaws.

The meeting adjourned at 8:55 am.



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

Course Change Request

Date Submitted: 07/22/26 9:49 am

Viewing: **BIO SCI 3783 : Biological Design and Innovation I**

Last edit: 08/04/26 1:09 pm

Changes proposed by: Gina Yosten (gyxmr)

Programs
referencing this
course

- [BIOINV-CTU : BioInnovation CTU](#)
- [BIOMED-BS: Biomedical Engineering BS](#)

Requested Effective Fall 2027
Date

Department Biological Sciences (RBIOLSCI)

Discipline Biological Sciences (BIO SCI)

Course Number 3783

Title
 Biological Design and Innovation I

Abbreviated Course BioDesign I
Title

Co-Listed Course

Catalog Description

In Workflow

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

Approval Path

1. 07/22/26 9:49 am
Gina Yosten (gyxmr): Approved for RBIOLSCI Chair
2. 08/04/26 1:10 pm
Hannah Johnson (hjh9x): Approved for CCC Secretary
3. 09/04/26 10:06 am
Katie Shannon (shannonk): Approved for Sciences DSCC Chair
4. 09/08/26 8:20 am
Hannah Johnson (hjh9x): Approved for Pending CCC Agenda post

5. 09/22/26 9:50 am
Hannah Johnson
(hjh9x): Approved
for CCC Meeting
Agenda
6. 09/22/26 9:52 am
Cecil Eng Huang
Chua (cchua):
Approved for
Campus Curricula
Committee Chair

Students identify significant problems in biological/biomedical sciences, and then design and implement innovative solutions using advanced techniques. Students present and defend proposals and results.

Prerequisite(s):

At least two 2000 level or higher Biology courses.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
<u>Lecture</u> Laboratory	3

Total: 3

Required for Majors No

Elective for Majors Yes

Communication No

Intensive

Communication No

Emphasized

Grading Basis Graded

Repeatable No

Justification

This course was previously listed as a lab-based course, which was inaccurate.

Semesters Previously Offered

Term(s) Offered as
experimental

Is this a MOTR
Course?

Reviewer

Comments

Hannah Johnson (hjh9x) (07/22/26 9:54 am): Selected yes for required for majors, selected no for elective for majors. Selected no for CI and CE.

Hannah Johnson (hjh9x) (08/04/26 11:31 am): Corrected required for majors to no, and elective for majors to yes due to this course not being listed as a required course on the BIO SCI BS.

Hannah Johnson (hjh9x) (08/04/26 1:09 pm): Changed effective date to Fall 2027 per CCC deadlines.

Key: 5610

[Preview Bridge](#)

Course Change Request

New Course Proposal

Date Submitted: 06/05/26 2:08 pm

Viewing: **EDUC 5060 : Advanced STEM Teaching Methods**

Last edit: 06/08/26 9:44 am

Changes proposed by: Beth Kania-Gosche (bakm75)

Programs
referencing this
course

PROPOSED: STEM Education

Requested Effective Date	Fall 2027
Department	Education (REDUCATION)
Discipline	Education (EDUC)
Course Number	5060
Title	Advanced STEM Teaching Methods
Abbreviated Course Title	Adv STEM Methods
Co-Listed Course	

Catalog Description

In Workflow

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

Approval Path

1. 06/05/26 2:27 pm
Beth Kania-Gosche (bakm75):
Approved for REDUCATION Chair
2. 07/24/26 8:53 am
Crystal Wilson (wilsoncry):
Approved for CCC Secretary
3. 08/06/26 12:28 pm
Cecil Eng Huang Chua (cchua):
Approved for Social Sciences DSCC Chair
4. 09/08/26 8:21 am
Hannah Johnson

(hjh9x): Approved
for Pending CCC
Agenda post

5. 09/22/26 9:50 am
Hannah Johnson
(hjh9x): Approved
for CCC Meeting
Agenda

6. 09/22/26 9:52 am
Cecil Eng Huang
Chua (cchua):
Approved for
Campus Curricula
Committee Chair

Learners will examine the theoretical foundations of STEM learning and apply these frameworks to the design and implementation of effective instructional practices. The course also emphasizes situating learning in meaningful contexts that promote engagement, collaboration, and real-world problem solving. By the end of the course, learners will be able to critically evaluate and implement research-informed STEM teaching methods, bridging theory and practice to enhance learning outcomes across diverse educational settings.

Prerequisite(s):

Graduate standing.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Communication No

Intensive

Communication Emphasized	No
Grading Basis	Graded
Repeatable	No

Justification

This course is part of the STEM Education graduate certificate being proposed.

Semesters Previously Offered

Term(s) Offered as
experimental

Previous Course
Code

Is this a MOTR
Course?

Reviewer

Comments

Hannah Johnson (hjh9x) (06/08/26 9:43 am): Added a period after the prereq. Selected graded for grading basis.

Hannah Johnson (hjh9x) (06/08/26 9:44 am): Selected no for required for majors, and yes for elective for majors.

Key: 10485

[Preview Bridge](#)

Course Change Request

New Course Proposal

Date Submitted: 06/05/26 2:11 pm

Viewing: **EDUC 5070 : AI and Computer Science for Educators**

Last edit: 07/24/26 8:52 am

Changes proposed by: Beth Kania-Gosche (bakm75)

Programs
referencing this
course

PROPOSED: STEM Education

Requested Effective Fall 2027
Date

Department Education (REDUCATION)

Discipline Education (EDUC)

Course Number 5070

Title
AI and Computer Science for Educators

Abbreviated Course AI for Education
Title

Co-Listed Course

Catalog Description

In Workflow

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

Approval Path

- 1. 06/05/26 2:27 pm
Beth Kania-Gosche (bakm75):
Approved for REDUCATION Chair
- 2. 07/24/26 8:53 am
Crystal Wilson (wilsoncry):
Approved for CCC Secretary
- 3. 08/06/26 12:27 pm
Cecil Eng Huang Chua (cchua):
Approved for Social Sciences DSCC Chair
- 4. 09/08/26 8:21 am
Hannah Johnson

(hjh9x): Approved
for Pending CCC
Agenda post

5. 09/22/26 9:50 am

Hannah Johnson

(hjh9x): Approved
for CCC Meeting
Agenda

6. 09/22/26 9:52 am

Cecil Eng Huang

Chua (cchua):

Approved for
Campus Curricula
Committee Chair

This course integrates core concepts in computer science and related mathematical foundations with evidence-based instructional strategies to prepare K–12 educators for effective computer science teaching and ethical use of artificial intelligence in the classroom. Key topics include computational thinking, algorithms, data structures, coding, and foundational hardware concepts. Learners will engage in the design and implementation of standards-aligned, project-based instructional models, including the development of classroom-ready lessons and laboratory experiences. The course also emphasizes responsible and appropriate uses of AI for both teachers and students, with attention to ethical considerations and classroom applications.

Prerequisite(s):

Graduate standing.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

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

Justification

This course is part of the STEM Education graduate certificate being proposed.

This course will be proposed as an approved computer science training for practicing teachers from DESE. Some of the course description language is from those requirements.

<https://dese.mo.gov/media/pdf/computer-science-approved-trainings-and-courses>

Semesters Previously Offered

Term(s) Offered as
experimental

Previous Course
Code

Is this a MOTR
Course?

Reviewer

Comments

Hannah Johnson (hjh9x) (06/08/26 9:44 am): Added a period after the prereq, selected no for required for majors and yes for elective for majors, selected graded for grading basis.

Hannah Johnson (hjh9x) (06/08/26 10:55 am): Changed course number from 50700 to 5070.

Crystal Wilson (wilsoncry) (07/24/26 8:52 am): Fixed grammar.

Key: 10486

[Preview Bridge](#)

Course Change Request

New Course Proposal

Date Submitted: 08/05/26 3:15 pm

Viewing: **ENV SCI 5779 : Environmental Safety**

Last edit: 09/21/26 2:11 pm

Changes proposed by: Robin Verble (verbler)

Programs
referencing this
course

[PROPOSED: Environmental Conservation CT
26.1307:](#)
[PROPOSED: Environmental Health & Safety CT](#)

Requested Effective Date	Spring 2027
Department	Biological Sciences (RBIOLSCI)
Discipline	Environmental Sciences (ENV SCI)
Course Number	5779
Title	Environmental Safety
Abbreviated Course Title	Environ Safety
Co-Listed Course	

Catalog Description

In Workflow

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

Approval Path

- 1. 11/17/25 10:32 am
Gina Yosten
(gyxmr): Approved for RBIOLSCI Chair
- 2. 12/03/25 12:01 pm
jm558v: Rollback to Initiator
- 3. 08/05/26 9:05 am
Gina Yosten
(gyxmr): Approved for RBIOLSCI Chair
- 4. 08/05/26 2:10 pm
Hannah Johnson
(hjh9x): Rollback to Initiator
- 5. 08/05/26 3:19 pm
Gina Yosten
(gyxmr): Approved

- for RBIOLSCI Chair
- 6. 08/06/26 9:07 am
Hannah Johnson
(hjh9x): Approved
for CCC Secretary
- 7. 09/04/26 10:06 am
Katie Shannon
(shannonk):
Approved for
Sciences DSCC Chair
- 8. 09/08/26 8:25 am
Hannah Johnson
(hjh9x): Approved
for Pending CCC
Agenda post
- 9. 09/22/26 9:50 am
Hannah Johnson
(hjh9x): Approved
for CCC Meeting
Agenda
- 10. 09/22/26 9:52 am
Cecil Eng Huang
Chua (cchua):
Approved for
Campus Curricula
Committee Chair

An in-depth examination of the principles, practices, and regulatory frameworks that govern environmental safety in industrial, commercial, and community settings. Students explore methods for identifying and controlling environmental hazards, including chemical, physical, and biological risks, with an emphasis on prevention, compliance, and sustainable management. Through case studies, applied projects, and analysis of current regulations, the course prepares learners to evaluate environmental safety challenges, develop effective mitigation strategies, and support organizational risk-management goals. Course is delivered online asynchronous annually in the spring semester.

Prerequisite(s):

Admission to the course requires graduate standing or completion of at least 60 hours of undergraduate coursework.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Communication No
Intensive

Communication No
Emphasized

Grading Basis Graded

Repeatable No

Justification

This course is being created as part of an Env Sci graduate certificate (paperwork in process) designed for working professionals and Fort Leonard Wood students.

Semesters Previously Offered

Term(s) Offered as
experimental

Previous Course
Code

Is this a MOTR
Course?

Reviewer

Comments

jm558v (12/03/25 12:01 pm): Rollback: Rollback per needs to be submitted with the DC form.

Hannah Johnson (hjh9x) (08/05/26 2:10 pm): Rollback: Correct effective term and format of prereq and co-reqs.

Hannah Johnson (hjh9x) (08/06/26 8:37 am): Selected graded for grading basis per email from Robin Verble.

Hannah Johnson (hjh9x) (08/06/26 9:02 am): Edited "Delivery: online asynchronous; Spring annually" in the catalog description to "Course is delivered online asynchronous annually in the spring semester."

Key: 10357

[Preview Bridge](#)

Course Change Request

New Course Proposal

Date Submitted: 08/04/26 3:24 pm

Viewing: **ENV SCI 6560 : Environmental Ecology and Management**

Last edit: 08/06/26 8:38 am

Changes proposed by: Robin Verble (verbler)

Programs
referencing this
course

[PROPOSED: Environmental Conservation CT](#)

[26.1307:](#)

[PROPOSED: Environmental Policy](#)

Requested Effective Date	Spring 2027
Department	Biological Sciences (RBIOLSCI)
Discipline	Environmental Sciences (ENV SCI)
Course Number	6560
Title	Environmental Ecology and Management
Abbreviated Course Title	Env Ecol Mgmt
Co-Listed Course	

Catalog Description

In Workflow

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

Approval Path

1. 11/17/25 10:32 am
Gina Yosten (gyxmr): Approved for RBIOLSCI Chair
2. 12/03/25 12:01 pm
jm558v: Rollback to Initiator
3. 08/04/26 12:30 pm
Hannah Johnson (hjh9x): Rollback to Initiator
4. 08/05/26 9:05 am
Gina Yosten (gyxmr): Approved for RBIOLSCI Chair
5. 08/06/26 9:07 am
Hannah Johnson (hjh9x): Approved

- for CCC Secretary
6. 09/04/26 10:06 am
Katie Shannon
(shannonk):
Approved for
Sciences DSCC Chair
7. 09/08/26 8:26 am
Hannah Johnson
(hjh9x): Approved
for Pending CCC
Agenda post
8. 09/22/26 9:50 am
Hannah Johnson
(hjh9x): Approved
for CCC Meeting
Agenda
9. 09/22/26 9:52 am
Cecil Eng Huang
Chua (cchua):
Approved for
Campus Curricula
Committee Chair

This course explores the ecological principles and management strategies essential for sustaining healthy natural systems in the face of environmental change. Students examine ecosystem structure and function, species interactions, biogeochemical cycles, and the drivers of ecological disturbance across diverse environments. Emphasis is placed on applying ecological science to real-world management challenges, including habitat conservation, invasive species control, biodiversity protection, and ecosystem restoration. Through case studies, field-based observations, and analytical projects, students learn to evaluate ecological data, assess environmental impacts, and develop evidence-based management plans. The course prepares students to integrate ecological knowledge into decision-making processes that support sustainable resource use and long-term ecosystem resilience.

Prerequisite(s):

Graduate standing or permission of instructor.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Communication Intensive No

Communication Emphasized No

Grading Basis Graded

Repeatable No

Justification

This course is part of a graduate certificate in Env Sci that was approved in Fall 2026.

Semesters Previously Offered

Term(s) Offered as
experimental

Previous Course
Code

Is this a MOTR
Course?

Reviewer

Comments

jm558v (12/03/25 12:01 pm): Rollback: Rollback per needs to be submitted with the DC form.

Hannah Johnson (hjh9x) (08/04/26 12:30 pm): Rollback: Rolling back per request.

Hannah Johnson (hjh9x) (08/06/26 8:38 am): Added a period at the end of the prereq.
Selected graded for grading basis per email from Robin Verble.

Course Change Request

New Course Proposal

Date Submitted: 08/04/26 3:25 pm

Viewing: **ENV SCI 6667 : Disaster Management in Changing Climates**

Last edit: 08/06/26 9:00 am

Changes proposed by: Robin Verble (verbler)

Programs
referencing this
course

- [PROPOSED: Environmental Conservation CT 26.1307:](#)
- [PROPOSED: Disaster Management CT](#)
- [PROPOSED: Environmental Policy](#)

Requested Effective Date	Spring 2027
Department	Biological Sciences (RBIOLSCI)
Discipline	Environmental Sciences (ENV SCI)
Course Number	6667
Title	Disaster Management in Changing Climates
Abbreviated Course Title	Disaster and Climate
Co-Listed Course	

Catalog Description

In Workflow

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

Approval Path

1. 11/17/25 10:32 am
Gina Yosten
(gyxmr): Approved for RBIOLSCI Chair
2. 12/03/25 12:02 pm
jm558v: Rollback to Initiator
3. 08/04/26 12:30 pm
Hannah Johnson
(hjh9x): Rollback to Initiator
4. 08/05/26 9:06 am
Gina Yosten
(gyxmr): Approved for RBIOLSCI Chair
5. 08/06/26 9:07 am
Hannah Johnson
(hjh9x): Approved

- for CCC Secretary
6. 09/04/26 10:07 am
Katie Shannon
(shannonk):
Approved for
Sciences DSCC Chair
7. 09/08/26 8:28 am
Hannah Johnson
(hjh9x): Approved
for Pending CCC
Agenda post
8. 09/22/26 9:50 am
Hannah Johnson
(hjh9x): Approved
for CCC Meeting
Agenda
9. 09/22/26 9:52 am
Cecil Eng Huang
Chua (cchua):
Approved for
Campus Curricula
Committee Chair

This course examines how evolving climate patterns are reshaping the frequency, intensity, and geographic distribution of disasters, and explores strategies for managing these emerging risks. Students analyze the scientific drivers of climate-related hazards—such as extreme weather events, sea-level rise, drought, and wildfires—and assess their impacts on communities, infrastructure, and public health. Emphasis is placed on integrating climate adaptation principles into emergency planning, mitigation, response, and recovery. Through case studies, scenario-based exercises, and applied research, students learn to design resilient systems, evaluate policy approaches, and develop evidence-informed strategies for managing disasters in a rapidly changing climate. Suitable for students and professionals in emergency management, public health, environmental planning, and related fields. Course is offered annually in the fall semester.

Prerequisite(s):

Graduate standing or permission of instructor.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Communication No
Intensive

Communication No
Emphasized

Grading Basis Graded

Repeatable No

Justification

This course is part of a graduate certificate that is being developed in environmental science for online and Fort Leonard Wood working professionals.

Semesters Previously Offered

Term(s) Offered as
experimental

Previous Course
Code

Is this a MOTR
Course?

Reviewer

Comments

jm558v (12/03/25 12:02 pm): Rollback: Rollback per needs to be submitted with the DC form.

Hannah Johnson (hjh9x) (08/04/26 12:30 pm): Rollback: Rolling back per request.

Hannah Johnson (hjh9x) (08/06/26 8:40 am): Capitalized G in graduate for the prereq, and

added a period. Selected graded for grading basis per email from Robin Verble.

Hannah Johnson (hjh9x) (08/06/26 9:00 am): Changed the last part of the catalog description
"; fall annually" to "Course is offered annually in the fall semester. "

Key: 10355

[Preview Bridge](#)

Course Change Request

New Course Proposal

Date Submitted: 09/22/26 2:34 pm

Viewing: **KC 5910 : Team Innovation Projects I**

Also listed as: **ENG MGT 5910 / SYS ENG 5910**

Last edit: 09/23/26 3:48 pm

Changes proposed by: David Enke (enke)

In Workflow

- 1. RKUMR Chair
- 2. CCC Secretary
- 3. Engineering DSCC Chair
- 4. Social Sciences 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. 07/30/26 12:48 pm
David Enke (enke):
Approved for
RKUMR Chair
- 2. 08/06/26 11:56 am
Hannah Johnson (hjh9x): Approved
for CCC Secretary
- 3. 08/06/26 12:28 pm
Cecil Eng Huang Chua (cchua):
Approved for Social
Sciences DSCC Chair
- 4. 09/08/26 8:28 am
Hannah Johnson

Requested Effective Date	Spring 2027		
Department	Kummer College (RKUMR)		
Discipline	Kummer College (KC)		
Course Number	5910		
Title	Team Innovation Projects I		
Abbreviated Course Title	TIP I		
Co-Listed Course	ENG MGT 5910	Department Engineering Mgt & Sys Engr (RENGMNGT)	
	SYS ENG 5910	Department Engineering Mgt & Sys Engr (RENGMNGT)	

Catalog Description	
---------------------	--

- (hjh9x): Approved
for Pending CCC
Agenda post
5. 09/22/26 9:59 am
Hannah Johnson
(hjh9x): Rollback to
Initiator
6. 09/22/26 2:35 pm
David Enke (enke):
Approved for
RKUMR Chair
7. 09/24/26 8:46 am
Hannah Johnson
(hjh9x): Approved
for CCC Secretary
8. 09/24/26 9:38 am
Theresa Swift
(thswift): Approved
for Engineering
DSCC Chair
9. 09/24/26 11:02 am
Cecil Eng Huang
Chua (cchua):
Approved for Social
Sciences DSCC Chair
10. 09/24/26 11:05 am
Hannah Johnson
(hjh9x): Approved
for Pending CCC
Agenda post
11. 09/24/26 11:05 am
Hannah Johnson
(hjh9x): Approved
for CCC Meeting
Agenda
12. 09/24/26 11:10 am
Cecil Eng Huang
Chua (cchua):
Approved for
Campus Curricula

This course provides students with an immersive, team-based experience in cross-disciplinary innovation through industry-sponsored projects. Working in diverse, interdisciplinary teams, students collaborate with faculty advisors and industry sponsors to develop innovative solutions and translate them into actionable business or societal impact. Drawing on principles of design thinking, systems innovation, artificial intelligence, information systems, and project management, teams address real-world challenges aligned with economic development, sustainability, or emerging technologies. Depending on the project, students may conduct stakeholder engagement, market and customer research, technology and competitive assessments, solution design, prototype development, or business case analysis while initiating project implementation.

Prerequisite(s):

Instructor approval.

Corequisite(s):

Credit Hours

Credit Hours

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

This course has been taught twice as an experimental course (ENG MGT 5001 - TIP I in fall 2025 and KC 5001 - TIP I in spring 2026 after the KC designation was created for spring 2026). The KC 5001 - TIP I experimental course is scheduled to be taught again during the fall 2026 semester. Enrollments and the number of company sponsored projects are growing, necessitating the need to offer this course each fall and spring semester. A permanent number is thereby requested.

Requested added justification (Sept 22, 2026):

The Team Innovation Project (TIP) courses (I and II) have been designed to allow students to learn about proper project execution while also working on a real-world corporate sponsored project. The reason for a 3 hour course consisting of a 1 hour lecture and a 2 hour lab is so that all students can take the same 1 hour lecture (taught by one instructor for all students) as well as a 2 hour lab (taught/advised by one instructor just for those students working on a specific company project). For instance, for the 2026 fall semester we have three new paid company projects. Each student participating on one of these three TIP I projects is enrolled in the 1 hour lecture (section 101), along with being enrolled in one of the three 2 hour labs (sections 301, 303, 305), each associated with a specific/unique company project (three different companies). In most cases the lecture instructor and lab instructor are different instructors. For the 1 hour lecture section, students learn basic skills that are needed for working on company projects, such as project management, project scoping, working with clients, proper communication, etc. For each 2 hour lab section the students are working on their specific company projects, guided by both an S&T lab instructor/advisor and a company representative. So, the course is still a project-oriented course, but instead of having separate 3 hour project sections, all students attend a common 1 hour lecture section in addition to their 2 hour project-specific section. TIP II follows the same format, with students getting even more detail/depth in project management (within the lecture section), along with additional company/project experience within the 2 hour lab. TIP II is needed since some company projects extend for two semesters.

As for recent enrollment, for the fall 2026 semester the TIP I course has 15 students enrolled (all 15 enrolled in lecture 101; 6 enrolled in lab 301, 4 enrolled in lab 303, and 5 enrolled in lab 305). Since this fall there was only one follow-on project in its second semester, the TIP II course only had one project with all 3 students enrolled in both lecture 102 and lab 302). It will often be the case that more students are enrolled in TIP I instead of TIP II since not all projects will be two semester projects. Nonetheless, continued enrollment growth is expected since the TIP program is one of Dean Sterling's key strategic initiatives, which has included the hiring of a Director of Corporate Partnership for the sole purpose of getting company projects that students can work on as TIP projects. Therefore, we expect enrollments to continue to increase. Having separate TIP I and TIP II courses, with permanent numbers, not only re-enforces this strategic effort and long-term plan, but it will also help alleviate student confusion when

needing to sign up for a specific and unique section, especially for those students working on two semester projects.

Semesters Previously Offered

Term(s) Offered as

experimental

KC 5001- TIP 1 : Spring 26 - Lecture/Lab total of 9 enrolled

KC 5001- TIP 1 : Fall 26 - Lecture/Lab total of 1 enrolled

KC 5001- TIP 1 : Fall 26 Lecture/Lab total of 0 enrolled

ENG MGT 5001 – TIP 1 : Fall 2025 – Lecture/Lab total of 7 enrolled

Previous Course

Code

Is this a MOTR

Course?

Reviewer

Comments

Hannah Johnson (hjh9x) (08/04/26 1:57 pm): Removed N/A from prereq and coreq. Selected graded for grading basis.

Hannah Johnson (hjh9x) (08/05/26 12:00 pm): Entered the Semesters previously offered information. The department has offered the KC 5001 designation course once, and the ENG MGT 5001 course designation once. Totaling two times, with plans to teach the course again in the Fall 2026, and Spring 2027.

Hannah Johnson (hjh9x) (09/22/26 9:59 am): Rollback: CCC is requesting additional justification and information.

Hannah Johnson (hjh9x) (09/23/26 3:48 pm): Added prereq of 'Instructor approval'.

Key: 10546

[Preview Bridge](#)

Course Change Request

New Course Proposal

Date Submitted: 09/22/26 2:34 pm

Viewing: **KC 5920 : Team Innovation Projects II**

Also listed as: **ENG MGT 5920 / SYS ENG 5920**

Last edit: 09/23/26 3:47 pm

Changes proposed by: David Enke (enke)

In Workflow

- 1. RKUMR Chair
- 2. CCC Secretary
- 3. Engineering DSCC Chair
- 4. Social Sciences 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. 07/30/26 12:48 pm
David Enke (enke):
Approved for
RKUMR Chair
- 2. 08/06/26 12:18 pm
Hannah Johnson
(hjh9x): Approved
for CCC Secretary
- 3. 08/06/26 12:29 pm
Cecil Eng Huang
Chua (cchua):
Approved for Social
Sciences DSCC Chair
- 4. 09/08/26 8:28 am
Hannah Johnson

Requested Effective Date	Spring 2027		
Department	Kummer College (RKUMR)		
Discipline	Kummer College (KC)		
Course Number	5920		
Title	Team Innovation Projects II		
Abbreviated Course Title	TIP II		
Co-Listed Course	ENG MGT 5920	Department Engineering Mgt & Sys Engr (RENGMNGT)	
	SYS ENG 5920	Department Engineering Mgt & Sys Engr (RENGMNGT)	

Catalog Description	
---------------------	--

- (hjh9x): Approved
for Pending CCC
Agenda post
5. 09/22/26 9:59 am
Hannah Johnson
(hjh9x): Rollback to
Initiator
6. 09/22/26 2:35 pm
David Enke (enke):
Approved for
RKUMR Chair
7. 09/24/26 8:46 am
Hannah Johnson
(hjh9x): Approved
for CCC Secretary
8. 09/24/26 9:38 am
Theresa Swift
(thswift): Approved
for Engineering
DSCC Chair
9. 09/24/26 11:02 am
Cecil Eng Huang
Chua (cchua):
Approved for Social
Sciences DSCC Chair
10. 09/24/26 11:05 am
Hannah Johnson
(hjh9x): Approved
for Pending CCC
Agenda post
11. 09/24/26 11:05 am
Hannah Johnson
(hjh9x): Approved
for CCC Meeting
Agenda
12. 09/24/26 11:10 am
Cecil Eng Huang
Chua (cchua):
Approved for
Campus Curricula

This course continues the interdisciplinary innovation experience through the execution and completion of industry-sponsored projects. Student teams refine, implement, validate, and communicate innovative solutions while translating technical, operational, or business outcomes into actionable organizational and societal impact. Building upon principles of design thinking, systems innovation, artificial intelligence, information systems, and project management, teams collaborate with industry sponsors to advance technical implementation, validate project outcomes, conduct market or operational analyses as appropriate, and develop recommendations for organizational adoption, commercialization, or future implementation.

Prerequisite(s):

Eng Mgt 5910, KC 5910, or Sys Eng 5910 and instructor approval.

Corequisite(s):**Credit Hours****Credit Hours**

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

This course has been taught once as an experimental course, KC 5001 - TIP II in spring 2026, and is scheduled to be taught again during the fall 2026 semester. Enrollments and the number

of company sponsored projects are growing, including the number of projects that stretch over two semesters, necessitating the need to offer this follow-on course each fall and spring semester. A permanent number is thereby requested.

Requested added justification (Sept 22, 2026):

The Team Innovation Project (TIP) courses (I and II) have been designed to allow students to learn about proper project execution while also working on a real-world corporate sponsored project. The reason for a 3 hour course consisting of a 1 hour lecture and a 2 hour lab is so that all students can take the same 1 hour lecture (taught by one instructor for all students) as well as a 2 hour lab (taught/advised by one instructor just for those students working on a specific company project). For instance, for the 2026 fall semester we have three new paid company projects. Each student participating on one of these three TIP I projects is enrolled in the 1 hour lecture (section 101), along with being enrolled in one of the three 2 hour labs (sections 301, 303, 305), each associated with a specific/unique company project (three different companies). In most cases the lecture instructor and lab instructor are different instructors. For the 1 hour lecture section, students learn basic skills that are needed for working on company projects, such as project management, project scoping, working with clients, proper communication, etc. For each 2 hour lab section the students are working on their specific company projects, guided by both an S&T lab instructor/advisor and a company representative. So, the course is still a project-oriented course, but instead of having separate 3 hour project sections, all students attend a common 1 hour lecture section in addition to their 2 hour project-specific section. TIP II follows the same format, with students getting even more detail/depth in project management (within the lecture section), along with additional company/project experience within the 2 hour lab. TIP II is needed since some company projects extend for two semesters.

As for recent enrollment, for the fall 2026 semester the TIP I course has 15 students enrolled (all 15 enrolled in lecture 101; 6 enrolled in lab 301, 4 enrolled in lab 303, and 5 enrolled in lab 305). Since this fall there was only one follow-on project in its second semester, the TIP II course only had one project with all 3 students enrolled in both lecture 102 and lab 302). It will often be the case that more students are enrolled in TIP I instead of TIP II since not all projects will be two semester projects. Nonetheless, continued enrollment growth is expected since the TIP program is one of Dean Sterling's key strategic initiatives, which has included the hiring of a Director of Corporate Partnership for the sole purpose of getting company projects that students can work on as TIP projects. Therefore, we expect enrollments to continue to increase. Having separate TIP I and TIP II courses, with permanent numbers, not only re-enforces this strategic effort and long-term plan, but it will also help alleviate student confusion when needing to sign up for a specific and unique section, especially for those students working on two semester projects.

Semesters Previously Offered

Term(s) Offered as

experimental

KC 5001- TIP 2 : Spring 26 - Lecture/Lab total of 6 enrolled

KC 5001- TIP 2 : Fall 26 - Lecture/Lab total of 2 enrolled

Previous Course

Code

Is this a MOTR

Course?

Reviewer

Comments

Hannah Johnson (hjh9x) (08/04/26 1:54 pm): Selected Graded for grading basis, alphabetized the prereq list and corrected formatting. Added a period to the end of the prereq, and removed N/A from the coreq.

Hannah Johnson (hjh9x) (08/05/26 12:03 pm): Entered information into the semesters previously offered box. This course was taught once as an EC, and is planned to be taught for Fall 2026, and Spring 2027.

Crystal Wilson (wilsoncry) (09/21/26 2:52 pm): Capitalized C in KC.

Hannah Johnson (hjh9x) (09/22/26 9:59 am): Rollback: CCC is requesting additional justification and information.

Hannah Johnson (hjh9x) (09/23/26 3:47 pm): Added "and instructor approval" with approval from David Enke.

Key: 10547

[Preview Bridge](#)

Course Change Request

A deleted record cannot be edited

Course Inactivation Proposal

Date Submitted: 07/16/26 2:38 pm

Viewing: **MATH 5483 : Operational Calculus**

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

Last edit: 07/16/26 2:38 pm

Changes proposed by: John Singler (singlerj)

Justification for this
inactivation request

In Workflow

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

Approval Path

1. 07/16/26 2:43 pm
John Singler
(singlerj): Approved
for RMATHEMA
Chair
2. 08/21/26 9:23 am
Hannah Johnson
(hjh9x): Approved
for CCC Secretary
3. 09/04/26 10:07 am
Katie Shannon
(shannonk):
Approved for
Sciences DSCC Chair
4. 09/08/26 8:30 am
Hannah Johnson
(hjh9x): Approved

for Pending CCC

Agenda post

5. 09/22/26 9:50 am

Hannah Johnson

(hjh9x): Approved

for CCC Meeting

Agenda

6. 09/22/26 9:52 am

Cecil Eng Huang

Chua (cchua):

Approved for

Campus Curricula

Committee Chair

History

1. Feb 21, 2022 by

Paul Runnion

(prunnion)

2. Jul 31, 2024 by

esdk3

We have not offered this course in a long time. Due to faculty changes - and substantial reductions to our faculty - we do not plan to offer this course again.

Requested Effective Date	Fall 2027
Department	Mathematics & Statistics (RMATHEMA)
Discipline	Mathematics (MATH)
Course Number	5483
Title	Operational Calculus
Abbreviated Course Title	Operational Calculus
Co-Listed Course	

Catalog Description

The Laplace transformation, properties of the transformation, various applications to ordinary

and partial differential equations, systems with step and Dirac functions as driving forces, various non-elementary functions and their transforms, problems in heat conduction and wave motion, Fourier transforms and their operational properties.

Prerequisite(s):

A grade of "C" or better in Math 2222 and Math 3304.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Communication
Intensive

Communication
Emphasized

Grading Basis Graded

Repeatable Yes

Justification

Semesters Previously Offered

Term(s) Offered as
experimental

Previous Course
Code

Is this a MOTR

Course?

Reviewer

Comments

Key: 974

[Preview Bridge](#)

Course Change Request

Date Submitted: 07/28/26 1:30 pm

Viewing: **MATH 5512 : Introduction To Differential Geometry**

Last edit: 09/21/26 2:55 pm

Changes proposed by: John Singler (singlerj)

Programs
referencing this
course

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

Requested Effective Date	Spring 2027
Department	Mathematics & Statistics (RMATHEMA)
Discipline	Mathematics (MATH)
Course Number	5512
Title	Introduction To Differential Geometry
Abbreviated Course Title	Introd To Diff Geometry
Co-Listed Course	

Catalog Description

In Workflow

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

Approval Path

- 1. 07/28/26 1:30 pm
John Singler (singlerj): Approved for RMATHEMA Chair
- 2. 07/30/26 2:00 pm
Hannah Johnson (hjh9x): Approved for CCC Secretary
- 3. 09/04/26 10:07 am
Katie Shannon (shannonk): Approved for Sciences DSCC Chair
- 4. 09/08/26 8:30 am
Hannah Johnson (hjh9x): Approved for Pending CCC

Agenda post

5. 09/22/26 9:50 am

Hannah Johnson

(hjh9x): Approved

for CCC Meeting

Agenda

6. 09/22/26 9:52 am

Cecil Eng Huang

Chua (cchua):

Approved for

Campus Curricula

Committee Chair

Elements of the geometry of curves and surfaces in Euclidean three-space using methods of advanced calculus and vectors.

Prerequisite(s):

Math 4209. ~~4209 or Math 5222~~.

Corequisite(s):

Credit Hours

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Communication No

Intensive

Communication No

Emphasized

Grading Basis Graded

Repeatable No

Justification

Based on the course description, advanced calculus (MATH 4209) is needed for this course. MATH 5222 does not provide advanced calculus background and therefore should be removed as an option for the prerequisite.

Semesters Previously Offered

Term(s) Offered as
experimental

Is this a MOTR
Course?

Reviewer
Comments

Hannah Johnson (hjh9x) (07/29/26 1:22 pm): Added a period for the prereq. Changed start term to Spring 2027, per CCC deadlines. Selected yes to elective for majors, and no for both CI and CE.

Key: 8798

[Preview Bridge](#)

Program Change Request

Date Submitted: 08/21/26 10:00 am

Viewing: **CP ENG-MI : Computer Engineering**
Minor

Last approved: 06/02/26 8:08 am

Last edit: 08/25/26 2:55 pm

Changes proposed by: R.Joe Stanley (stanleyj)

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

Effective Catalog Edition	FS2027-SP2028
Start Term	Fall 2027
Program Type	Minor
Academic Level	Undergraduate
Program Code	CP ENG-MI
Department	Electrical & Computer Engr
Discipline	Computer Engineering
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. 08/21/26 10:06 am
Jonathan Kimball (kimballjw):
Approved for RELECENG Chair
- 2. 08/25/26 2:56 pm
Crystal Wilson (wilsoncry):
Approved for CCC Secretary
- 3. 08/27/26 12:04 pm
Theresa Swift (thswift): Approved for Engineering DSCC Chair
- 4. 09/08/26 8:21 am
Hannah Johnson (hjh9x): Approved for Pending CCC Agenda post

- 5. 09/22/26 9:51 am
Hannah Johnson
(hjh9x): Approved
for CCC Meeting
Agenda
- 6. 09/22/26 9:52 am
Cecil Eng Huang
Chua (cchua):
Approved for
Campus Curricula
Committee Chair

History

- 1. Jul 23, 2014 by
watkins
- 2. Aug 13, 2014 by
pantaleoa
- 3. Jun 23, 2015 by
pantaleoa
- 4. Jul 15, 2015 by
pantaleoa
- 5. Jun 2, 2026 by R.Joe
Stanley (stanleyj)

Computer Engineering Minor

CIP Code

Program Requirements and Description

Minor Curriculum

A minor in computer engineering will require the following:

A "C" or better in the following courses:

<u>COMP ENG 2210</u>	<u>Introduction to Digital Logic</u>	<u>3</u>
<u>COMP ENG 3110</u>	Computer Organization and Design	3
<u>COMP ENG 3150</u>	Introduction to Microcontrollers and Embedded System Design	3
<u>COMP ENG 5410</u>	Introduction to Computer Communication Networks	3

or <u>COMP SCI 5600</u>	Advanced Computer Networks	
<u>ELEC ENG 2100</u>	Circuits I	3
ELEC ENG 2120	Circuits II	
Pass 3 hours of additional 4XXX-level or above COMP ENG or COMP SCI or ELEC ENG coursework with a "C" or better, excluding senior design, special problems, and undergraduate research. Transfer courses cannot be used to satisfy this requirement. The course choice for this requirement is subject to the approval of the minor advisor.		

Justification for
request

In the justification for removing the requirement that students must pass the advancement exams for Elec Eng 2100, Comp Eng 2210, Elec Eng 2120, and Elec Eng 2200 (core sophomore level courses) was changed to requiring students earn a C or better grade without the mandate of a C or better grade on the respective final exams, somehow Elec Eng 2120 replaced Comp Eng 2210 in the Cp Eng - Minor program. This was not the intended Cp Eng-Minor program change. Comp Eng 2210 needs to be re-added to the Cp Eng-Minor program and Elec Eng 2120 needs to be removed.

Attach Budget

System Approval
Letter

MDHE Approval

Supporting
Documents

Reviewer

Comments

Hannah Johnson (hjh9x) (08/21/26 11:45 am): Changed the effective date to Fall 2027 per CCC deadlines. Formatted the course listing to be the same throughout. Alphabetized the options (COMP ENG, COMP SCI, ELEC ENG) in the "Pass 3 hours..." requirement.

Crystal Wilson (wilsoncry) (08/25/26 2:55 pm): Changed start term to Fall 2027.

Program Change Request

New Program Proposal

Date Submitted: 06/05/26 2:22 pm

Viewing: **PROPOSED : STEM Education CT**

Last edit: 09/22/26 11:41 am

Changes proposed by: Beth Kania-Gosche (bakm75)

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

In Workflow

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

Approval Path

1. 06/05/26 2:26 pm
Beth Kania-Gosche (bakm75):
Approved for REDUCATION Chair
2. 07/24/26 8:53 am
Crystal Wilson (wilsoncry):
Approved for CCC Secretary
3. 08/06/26 12:28 pm
Cecil Eng Huang Chua (cchua):
Approved for Social Sciences DSCC Chair
4. 09/08/26 8:32 am
Hannah Johnson (hjh9x): Approved for Pending CCC

Agenda post

5. 09/22/26 9:51 am

Hannah Johnson
(hjh9x): Approved
for CCC Meeting
Agenda

6. 09/22/26 9:52 am

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

STEM Education CT

CIP Code 13.1213 - Science, Technology, Engineering,
and Mathematics (STEM) Educational
Methods.

Purpose

Most STEM doctoral programs do not include coursework on effective teaching, although this is an important component of a faculty member's job. Educational research is constantly evolving as new technologies emerge. Even experienced high school teachers may desire updated knowledge on AI, STEM instruction, and research-based strategies.

Intended Audience

Distance (online) Students

Main Campus Students

Program-Specific

Admission

The STEM Education graduate certificate is open to all persons holding a bachelor's degree or are currently accepted into a graduate degree program at Missouri S&T. Once admitted to the program, the student must take the four designated courses (provided in the curriculum section). In order to receive a Graduate Certificate, the student must have an average cumulative grade point of 3.0 or better in the certificate courses. Once admitted to the program, a student will be given six years to complete the program.

Students only admitted to the STEM Education Certificate Program will have non-degree graduate status, however, they will earn graduate credit for the courses they complete.

Program Requirements and Description

STEM Education Certificate

Prepare to excel as a future faculty member or STEM educator with this certificate focused on evidence-based teaching practices for STEM disciplines. Graduate students will develop the skills to design inclusive, engaging, and effective learning experiences. Students will align assessments with learning outcomes, analyze data, and map curriculum. This program emphasizes taking educational research into practical application, preparing learners to confidently teach in universities, colleges, schools, or informal science education contexts. The certificate's curriculum is flexible, allowing students to select courses that meet their career goals. The program is designed for working professionals, practicing educators, and graduate students. Course assignments are designed using adult learning principles, so the knowledge and skills can be immediately applied in the learner's context.

By the end of this certificate program, participants will be able to:

- Create appropriate course/module learning outcomes mapped to program learning outcomes.
- Select and use effective formative and summative assessment techniques to document improvement of instruction.
- Implement evidence-based instructional strategies to improve student learning outcomes in STEM disciplines.
- Apply research-based student support practices to foster inclusive learning environments in STEM.
- Design, align, and evaluate STEM curricula for specified levels, using national standards as a guide.
- Communicate research and advocate effectively about STEM educational issues in a wide range of instructional and professional contexts.

Students must complete 12 graduate credit hours from the courses listed below. Any substitutions require advisor approval.

Choose one of the following courses (Teaching Engineering course required for Engineering PhD students):

<u>EDUC 5060</u>	Advanced STEM Teaching Methods	3
<u>ENV ENG 5070/</u> <u>CIV ENG 5070/</u> <u>COMP ENG 5070/</u> <u>ELEC ENG 5070/</u> <u>ENG MGT 5070</u>	Teaching Engineering	3

Choose three courses from the following (must not duplicate course taken above):

<u>EDUC 5060</u>	Advanced STEM Teaching Methods	3
<u>EDUC 5070</u>	AI and Computer Science for Educators	3
<u>EDUC 5225</u>	Curriculum Development and Assessment	3
<u>EDUC 5370</u>	Effective Instructional Strategies	3
<u>TCH COM 5550</u>	Advanced Proposal Writing	3

Justification for
request

See attached documentation for STEM Education graduate certificate. This is part of the stackable certificates for the proposed master's degree in education.

Attach Budget

System Approval
Letter

MDHE Approval

Supporting Documents [STEM Education Graduate Certificate.pdf](#)

Reviewer

Comments

Hannah Johnson (hjh9x) (06/08/26 9:14 am): Added a heading for the CT. Combined the two course listings into one. Edited the first paragraph in the program requirements and description to be in proper paragraph format - did not change any wording, just removed some extra spacings.

Hannah Johnson (hjh9x) (06/08/26 10:57 am): Changed course for EDUC 50700 to EDUC 5070.

Crystal Wilson (wilsoncry) (07/24/26 8:48 am): Listed out co-listed courses for Teaching Engineering 5070 course.

Crystal Wilson (wilsoncry) (09/21/26 3:03 pm): Corrected formatting.

Program Change Request

Date Submitted: 08/03/26 11:10 am

Viewing: **TCH CM-MIG : Technical Communication Minor**

Last approved: 04/24/26 4:26 pm

Last edit: 08/03/26 11:10 am

Changes proposed by: Kathryn Dolan (dolankc)

Catalog Pages Using
this Program
[Technical Communication](#)

Effective Catalog Edition	FS2027-SP2028
Start Term	Fall 2027
Program Type	Minor
Academic Level	Graduate
Program Code	TCH CM-MIG
Department	English & Tech Communication
Discipline	Technical Communication
Title	

In Workflow

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

Approval Path

1. 07/22/26 1:08 pm
Kathryn Dolan (dolankc): Approved for REGLISH Chair
2. 08/03/26 9:56 am
Crystal Wilson (wilsoncry): Rollback to Initiator
3. 08/03/26 11:11 am
Kathryn Dolan (dolankc): Approved for REGLISH Chair
4. 08/04/26 11:50 am
Hannah Johnson (hjh9x): Approved for CCC Secretary
5. 08/31/26 10:29 am
Alejandra Sobrado (asgx4): Approved for Arts &

Humanities DSCC
Chair

6. 09/08/26 8:32 am

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

7. 09/22/26 9:51 am

Hannah Johnson
(hjh9x): Approved
for CCC Meeting
Agenda

8. 09/22/26 9:52 am

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

History

1. Apr 23, 2014 by
Kristine Swenson
(kswenson)

2. Sep 5, 2014 by
pantaleoa

3. Jul 24, 2015 by
pantaleoa

4. Jun 10, 2021 by
Kristine Swenson
(kswenson)

5. Apr 24, 2026 by
Crystal Wilson
(wilsoncry)

Technical Communication Minor

CIP Code

Program Requirements and Description

Technical Communication Graduate Minor

The technical communication program offers a graduate-level minor that is open to any graduate student. The minor is designed to strengthen the written, oral, and visual communication skills of students majoring in the sciences, engineering, management, information systems, or other fields. The minor will be particularly useful for those students who will pursue the “paper option” thesis or dissertation. The minor will also be beneficial for those students who will make oral or poster presentations at technical conferences, write journal articles, prepare research proposals, design technical web pages, or prepare technical marketing information.

The program requires a minimum of 12 hours of credit (excluding all courses taken for undergraduate credit). A minimum of 6 hours of 4000-level or above courses with the TCH COM designation is required. At least 6 additional hours of technical communication intensive courses are required. The additional courses may come from courses with the TCH COM designation, the list of approved technical communication intensive courses, and/or technical communication intensive courses from any academic discipline with the approval of the minor advisor and the English and technical communication department.

Students can elect to pursue this minor at any point during their graduate studies by submitting the Application for a Designated Graduate Minor form (available at <http://registrar.mst.edu/media/administrative/registrar/documents/gradminorapp.pdf>) to the English and technical communication department. Upon application, each student will be assigned a minor advisor who will work with the student to develop a proposed list of courses to fulfill the program requirements.

Approved Technical Communication Intensive Courses

All TCH COM courses, 4000-level and above

BIO SCI 6313	Environmental Microbiology	3
BUS 5111	Business Negotiations	3
ENGLISH 2410	Theory Of Written Communication	3
ENGLISH 5571	Advanced Writing For Science & Engineering	3
IS&T 6887	Research Methods in Business and IS&T	3
MATH 3109	Foundations Of Mathematics	3
MATH 5108	Linear Algebra II	3
MATH 5154	Mathematical Logic I	3
MATH 5603	Methods of Applied Mathematics	3
MS&E 6120	Thermodynamics and Phase Equilibria	3

The technical Communication Graduate Minor Advisory Committee will evaluate other courses, upon the request of students or faculty, for inclusion on the approved list or on a case-by-case basis for individual programs.

Justification for

request

Math no longer teaching 5154 / Grad students can't take 2000 level courses for credit toward minor

Attach Budget

System Approval

Letter

MDHE Approval

Supporting

Documents

Reviewer

Comments

Hannah Johnson (hjh9x) (07/24/26 9:38 am): Changed effective date to Fall 2027.

Alphabetized course listing.

Crystal Wilson (wilsoncry) (08/03/26 9:56 am): Rollback: Graduate students cannot include 2000 level courses on their plan of study therefore a 2000 level course should not be listed for the graduate minor.

Experimental Change Request

New Proposal

Date Submitted: 08/11/26 10:04 am

Viewing: **PHYSICS 4001.006: Introduction to Quantum Science and Technology**

Last edit: 09/08/26 8:13 am

Changes proposed by: Thomas Vojta (vojtat)

Requested Effective Date	Spring 2027
Department	Physics (RPHYSICS)
Discipline	Physics (PHYSICS)
Course Number	4001
Topic ID	006
Experimental Title	

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. CAT entry
- 8. Registrar

Approval Path

- 1. 08/13/26 11:00 am
Marco Cavaglia (cavagliam):
Approved for RPHYSICS Chair
- 2. 08/18/26 3:30 pm
Hannah Johnson (hjh9x): Approved for CCC Secretary
- 3. 09/04/26 10:07 am
Katie Shannon (shannonk):
Approved for Sciences DSCC Chair
- 4. 09/08/26 8:31 am
Hannah Johnson (hjh9x): Approved for Pending CCC Agenda post
- 5. 09/22/26 9:51 am
Hannah Johnson

(hjh9x): Approved
for CCC Meeting
Agenda

6. 09/22/26 9:52 am

Cecil Eng Huang

Chua (cchua):

Approved for

Campus Curricula

Committee Chair

7. 09/24/26 11:41 am

Divina Leyba

(dlhk2): Approved

for CAT entry

Introduction to Quantum Science and Technology

Experimental Quantum Science and Tech

Abbreviated Course

Title

Co-Listed Course

Instructors

Dr. Simeon Mistakidis

Experimental

Catalog Description

This course introduces the foundations and frontiers of modern quantum science and technology. It covers core concepts of quantum mechanics such as superposition, entanglement, and measurement, as well as essential mathematical tools and key engineering challenges associated with contemporary quantum platforms. The course surveys transformative applications in areas such as quantum dynamics, quantum simulation, quantum chemistry, quantum sensing, quantum communication, and quantum computing, highlighting connections across physics, engineering, and computer science.

Prerequisite(s)

Math 3304 and Physics 2135.

Corequisite(s)

Field Trip

Statement

Credit Hours

Credit Type	Credit Hours
Lecture	3

Total: 3

Required for Majors No

Elective for Majors Yes

Grading Basis Graded

Repeatable No

Justification for
experimental
course:

This class will be a core course for the UG certificate "Quantum Science and Technology" that the Physics Department is developing.

We are currently witnessing the “second” quantum revolution: Quantum science is transforming from an area of fundamental research to the center of a technological revolution. Research firms project up to 800,000 new quantum jobs in the next ten years globally. Missouri is not currently well-positioned to take advantage of this boom due to a lack of a properly trained work--force with quantum skills. The proposed certificate aims to fill this gap. It is designed for majors in any STEM field who wish to enhance their degrees with

Reviewer

Comments

Hannah Johnson (hjh9x) (08/18/26 1:18 pm): Added 'and' and a period to the prereq. Selected graded for grading basis.

Hannah Johnson (hjh9x) (09/08/26 8:13 am): Assigned 006 to the topic ID. Alphabetized the Prereqs.

Sep 22 2026

Proposal to Allow Versions of Undergraduate/Graduate Courses to Automatically Obtain Permanent Course Numbers when an equivalent Graduate/Undergraduate Course Exists

In the current system, programs can offer graduate versions of undergraduate courses. These cover the same course content as the undergraduate course with an additional learning component (e.g., an extra project). In many cases, the graduate version is taught simultaneously with the undergraduate course.

In addition, some programs offer courses at the 5000-level that want to create parallel courses at the 4000-level.

If the proposed course is not required for a certification, such a course must currently wait until it has been offered twice before obtaining a permanent number.

The Campus Curriculum Committee proposes a rule change where any 5000-level version of an existing 4000-level course or a 4000-level version of an existing 5000-level course can be created with a permanent course number, bypassing the need to go through the experimental course stage. The new course would still need to go through the curriculum process.

The new course must be distinguished from the existing course, where the higher-level version must incorporate a significant additional learning component.

Vote:

On Sept 22, 2026 the CCC voted on the proposal. In attendance:

Cecil Chua*

Michael Davis*

Hannah Johnson

Kyle Perry*

Paul Runnion*

Katie Shannon*

Alejandra Sobrado*

Theresa Swift*

Crystal Wilson

Jade Winzer

*Voting members

The vote was 6/7 in favor.

Sincerely,

A handwritten signature in dark ink, appearing to read "Cecil Chua", with a stylized flourish at the end.

Cecil Chua

Campus Curriculum Committee Chair