Minutes of the Campus Curricula Committee Meeting

September 26, 2023
8:15am, Parker Hall 203
(For Faculty Senate Meeting of October 19, 2023)

Attendees: *In Person*: Petra Dewitt, Katie Shannon, Michael Davis, Kyle Perry, Michael Gosnell, Michel Gueldry, Evie Sherlock, and Jennifer Pohlsander   *Virtual*: Cecil Eng Huang Chua

The following curriculum forms were discussed and approved:

Course Change forms:

File: 4982	COMP SCI 6606 : Advances in Cyber-Physical Systems
File: 4761.3	MATH 1211 : Calculus I-B
File: 4999	MS&E 6140 : Communication in Materials Science and Engineering
File: 4992	STAT 5290 : Computational Bayesian Methods using Python

Program Change forms:

File: 157.41	HIST-BA : History BA
File: 242.28	HISTORY-BS : Bachelor of Science in History
File: 170.4	NU ENG-MS : Nuclear Engineering MS
File: 211.1	NU ENG-PHD : Nuclear Engineering PhD
File: 401	PROPOSED : Environmental Science and Policy CTU
File: 403	PROPOSED : Human Factors Psychology CTU
File: 404	PROPOSED : Industrial/Organizational Psychology CTU
File: 406	PROPOSED : Neuroscience CTU
File: 405	PROPOSED : Psychology of Diversity and Inclusion CTU
File: 400	PROPOSED : Teacher Leadership CT

Experimental Course forms:

File: 4996	ART 1001.002 : Popular Applied Arts
File: 4995	ENV SCI 3001.001 : One Health Basics
File: 4994	MATH 5001.005 : Scientific Programming with Python
File: 4990	TCH COM 3001.003 : Video Design and Editing
File: 5000	TCH COM 5001.004 : Advanced Video Design and Editing

The meeting adjourned at 8:44 am.

Petra DeWitt

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Dr. Petra DeWitt, Chair
Missouri S&T Campus Curricula Committee

Course Change Request

New Course Proposal

Date Submitted: 07/14/23 8:47 am

Viewing: **COMP SCI 6606 : Advances in Cyber-Physical Systems**

File: 4982

Last edit: 07/26/23 3:42 pm

Changes proposed by: taylorpat

Requested Effective Change Date	Spring 2024
Department	Computer Science
Discipline	Computer Science (COMP SCI)
Course Number	6606
Title	Advances in Cyber-Physical Systems
Abbreviated Course Title	Advances in CPS

Catalog Description

This interdisciplinary course deals with advanced concepts of cyber-physical systems (CPS) with cutting-edge applications to smart environments including smart cities, smart grid, smart transportation, smart agriculture, and smart health. Students will learn core principles, models and theory behind the design and analysis of secure and trustworthy CPS that integrates cyber capabilities, such as sensing, communication, and computing, with physical capabilities.

Prerequisites

A grade of "B "or better in Comp Sci 5200.

Field Trip Statement

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

Approval Path

1. 07/26/23 1:32 pm Stephen Gao (sgao): Approved for RCOMPSCI Chair
2. 07/26/23 4:22 pm Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
3. 08/01/23 10:27 am Mark Fitch (mfitch): Approved for Engineering DSCC

Total: 3	
Required for Majors	No
Elective for Majors	No

Justification for new course:

Offering a course on CPS is timely and cutting-edge. This is an ideal course for graduate students in computer science and most other engineering disciplines, as well as for practitioners using CPS in mechanical and aerospace engineering, automotive and transportation engineering, civil and environmental engineering, mining engineering, medical technology, and large-scale infrastructure operations, etc. Thus, this course will help develop an excellent foundation for students seeking industry jobs and/or going for higher studies.

Semesters previously offered as an experimental course

Spring 2021 Enrollment: 4 , Spring 2022 Enrollment: 7

Co-Listed Courses:

Course Reviewer Comments	**jpnfd (07/26/23 3:42 pm):** Updated enrollment numbers for Spring 2021 and Spring 2022. Updated prerequisite format.

Chair

4. 09/11/23 1:58 pm Jennifer Pohlsander (jpnfd): Approved for Pending CCC Agenda post

5. 09/26/23 9:33 am Jennifer Pohlsander (jpnfd): Approved for CCC Meeting Agenda

6. 09/26/23 10:31 am Petra Dewitt (dewittp): Approved for Campus Curricula Committee Chair

Course Change Request

Date Submitted: 08/17/23 2:00 pm

Viewing: **MATH 1211 : Calculus I-B**

File: 4761.3

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

Last edit: 08/18/23 3:48 pm

Changes proposed by: prunnion

Programs referencing this course	NU ENG-BS: Nuclear Engineering BS
	PE ENG-BS: Petroleum Engineering BS
	PHYSIC-BS: Physics BS
	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-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
	EDUC-BS: Education BS
	ENV SCI-BS: Environmental Sciences 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

In The Prerequisites:

Other Courses referencing this course	CIV ENG 2401 : Fundamentals Of Surveying
	CIV ENG 2601 : Fundamentals Of Environmental Engineering And Science

[COMP SCI 1200 : Discrete Mathematics for Computer Science](#)
[COMP SCI 1972 : Introduction to MATLAB Programming](#)
[COMP SCI 2500 : Algorithms](#)
[GEOPHYS 4231 : Seismic Interpretation](#)
[GEOPHYS 5202 : Exploration and Development Seismology](#)
[MECH ENG 1761 : Introduction to Computer Aided Design](#)

Requested Effective Change Date	Fall 2024 ~~2022~~
Department	Mathematics & Statistics
Discipline	Mathematics (MATH)
Course Number	1211
Title	Calculus I-B
Abbreviated Course Title	Calculus I-B

Catalog Description

A continuation of Math 1210. Emphasizes differential and integral calculus along with exponential, logarithmic, and trigonometric functions and equations, plus trigonometric identities and solutions of general triangles. Math 1210 and 1211 combined cover the same calculus content as Math 1214.

Prerequisites

A grade of "C" or better in either Math 1210 or 1214. ~~1214, or by placement exam.~~

Field Trip Statement

Credit Hours	LEC: 3	LAB: 1	IND: 0	RSD: 0	Total: 4

Required for Majors	Yes
Elective for Majors	No

Justification for change:	We are removing "or by placement exam" from the prerequisite. Since our placement process covers a student's knowledge of algebra and trigonometry and Math 1211 requires knowledge of calculus, it is not appropriate to place students

Sciences DSCC Chair
4. 09/11/23 1:58 pm Jennifer Pohlsander (jpnfd): Approved for Pending CCC Agenda post
5. 09/26/23 9:33 am Jennifer Pohlsander (jpnfd): Approved for CCC Meeting Agenda
6. 09/26/23 10:31 am Petra Dewitt (dewittp): Approved for Campus Curricula Committee Chair

History
1. Feb 25, 2021 by Paul Runnion (prunnion)
2. Feb 21, 2022 by prunnion (4761.2)

directly into this course.

This has not been a major issue at this point - we just happened to notice it when going through the Fall 2023 PERC report for a student who was awaiting transfer credit for 1214 (and thus will meet the prerequisite). We are simply wanting to clean this up to avoid the unlikely event that it becomes an issue in the future.

If this is deemed an "affecting" CC form, please change the effective date to Fall 2024; however, since most students in Math 1211 in Spring 2024 will have just taken Math 1210 from S&T in Fall 2023 (and almost all of the rest will be retaking Math 1211), we do not anticipate this having a negative impact on any Spring 2024 students (or, realistically, any students whatsoever moving forward). We are simply wishing to clean up the prerequisite.

Semesters previously offered as an experimental course

Co-Listed Courses:

| Course Reviewer Comments | **jpnfd (08/18/23 3:48 pm):** Affecting change to prerequisite - updated term to Fall 2024 |

Course Change Request

Date Submitted: 08/28/23 4:34 pm

Viewing: **MS&E 6140 : Communication in Materials Science and Engineering**

File: 4999

Last edit: 09/26/23 9:20 am

Changes proposed by: lipked

Requested Effective Change Date	Fall 2024
Department	Materials Science & Engineering
Discipline	Materials Science & Eng (MS&E)
Course Number	6140
Title	Communication in Materials Science and Engineering
Abbreviated Course Title	Communication in MSE

Catalog Description

This project-based class will focus on written and oral communication skills needed for researchers in materials science and engineering. Students will prepare conference-style technical presentations, critically review scientific manuscripts, and draft a research proposal.

Prerequisites

Graduate standing in MSE or instructor permission.

Field Trip Statement

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

Required for	No

Majors	
Elective for Majors	No

Justification for new course:

This class will help strengthen the communications skills of graduate students in the MSE program. It will cover topics that are not covered in any other classes on campus in terms of having the students draft papers that will be suitable for publication and work with a faculty member who was the Editor-in-Chief of a technical journal. This class will also give the MSE students another choice for a 6000 level class in the department, which is a need for the department.

Semesters previously offered as an experimental course

FS 2021 - Enrollment 11, FS 2022- Enrollment 11, and FS 2023- Enrollment 7

Co-Listed Courses:

Chair

4. 09/11/23 1:58 pm Jennifer Pohlsander (jpnfd): Approved for Pending CCC Agenda post
5. 09/26/23 9:33 am Jennifer Pohlsander (jpnfd): Approved for CCC Meeting Agenda
6. 09/26/23 10:31 am Petra Dewitt (dewittp): Approved for Campus Curricula Committee Chair

Course Reviewer Comments	**jpnfd (08/29/23 12:22 pm):** Added enrollment numbers : FS 2021 - Enrollment 11, FS 2022- Enrollment 11, and FS 2023- Enrollment 7. **jpnfd (08/31/23 8:53 am):** Per department email 8/31/23, changed from required for majors to elective for majors. **jpnfd (08/31/23 9:58 am):** Updated catalog description format. **jpnfd (09/26/23 9:20 am):** Updated: Elective for Majors- No.

Course Change Request

Viewing: **STAT 5290 : Computational Bayesian Methods using Python**

File: 4992

Last edit: 08/30/23 11:17 am

Changes proposed by: paigero

Requested Effective Change Date	Spring 2024
Department	Mathematics & Statistics
Discipline	Statistics (STAT)
Course Number	5290

Title
  Computational Bayesian Methods using Python

Abbreviated Course Title	Computational Bayes

Catalog
Description
  An introduction to Bayesian data analytic tools implemented in the Python
  programming language and their appropriate and effective use. The focus of the
  course is on the computational strategies and algorithms for Bayesian models and a
  discussion of theoretical underpinnings of the methods implemented.

Prerequisites
  One of Stat 3113 or Stat 3115 or Stat 3117 or Stat 5643; and one of Stat 5346 or Stat
  5353 or Stat 6841 or Stat 6343 or Stat 6344 or Stat 6545.

Field Trip
Statement

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

Approval Path

1. 08/23/23 10:54 pm
   Xiaoming Wang (xwx4z):
   Approved for RMATHEMA Chair
2. 08/30/23 12:34 pm
   Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
3. 09/07/23 4:07 pm
   Katie Shannon (shannonk):

Required for Majors	No
Elective for Majors	Yes

Justification for new course:

Bayesian methods have become increasingly relied upon by statisticians and data scientists in industry. This course provides useful statistical background for our students as they prepare for either the workforce or for more advanced study in statistics and data science while also exposing them to specific implementations in the widely used Python programming language. It also provides a useful elective option for students pursuing our undergraduate Data Science and Statistics emphasis area and for our MS and PhD students.

Semesters previously offered as an experimental course

Spring 2021- enrollment 10, Spring 2023- enrollment 12

Co-Listed Courses:

Approved for Sciences DSCC Chair

4. 09/11/23 1:58 pm Jennifer Pohlsander (jpnfd): Approved for Pending CCC Agenda post

5. 09/26/23 9:33 am Jennifer Pohlsander (jpnfd): Approved for CCC Meeting Agenda

6. 09/26/23 10:32 am Petra Dewitt (dewittp): Approved for Campus Curricula Committee Chair

Course Reviewer Comments	**jpnfd (08/28/23 10:26 am):** Spring 2021 - Enrollment 10 Spring 2023 - Enrollment 12 Updated prerequisite format. **jpnfd (08/29/23 12:04 pm):** **jpnfd (08/30/23 11:17 am):** Updated course description and justification per department email 8/30/23.

Key: 4992

Preview Bridge

Program Change Request

Date Submitted: 08/23/23 4:10 pm

Viewing: **HIST-BA : History BA**

File: 157.41

Last approved: 11/15/21 8:56 am

Last edit: 09/26/23 9:10 am

Changes proposed by: dewittp

Catalog Pages Using this Program

[History](#)

Start Term
Fall 2024 ~~2022~~
Program Code
HIST-BA
Department
History and Political Science
Title
History BA

Program Requirements and Description

Approval Path

1. 09/05/23 8:12 am Shannon Fogg (sfogg): Approved for RHISTORY Chair
2. 09/06/23 9:57 am Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
3. 09/06/23 10:24 am Petra Dewitt (dewittp): Approved for Arts & Humanities DSCC Chair
4. 09/11/23 1:58 pm Jennifer Pohlsander (jpnfd): Approved for Pending CCC Agenda post
5. 09/26/23 9:33 am Jennifer Pohlsander (jpnfd): Approved for CCC Meeting Agenda
6. 09/26/23 10:31 am Petra Dewitt (dewittp): Approved for Campus Curricula Committee Chair

History

1. Aug 6, 2014 by Lahne Black (lahne)

Bachelor of Arts
History

(In addition to general requirements for bachelor of arts degree.)

HISTORY 1790	Introduction to History	1
HISTORY 1300	American History To 1877	3
HISTORY 1310	American History Since 1877	3
HISTORY 4790	Historiography	3
HISTORY 2791	Historical Research Methods	3
2 American History Electives		6
2 European History Electives		6
2 History Electives		6
3 hours of Electives must come from a non-western, marginalized or minority focused course, such as		
HISTORY 2430	History of the American Pacific	
HISTORY 3241	World War I A Global Perspective	
HISTORY 3600	World History	
HISTORY 3625	Slavery and Abolition in Atlantic World	
HISTORY 3660	Modern East Asia	
HISTORY 3665	History of Japan	
HISTORY 4245	Nazi Germany and the Holocaust	
HISTORY 4246	War and Society in Twentieth-Century Europe	
Total Credits		31

Note: History majors are also required to complete HISTORY 1100 and HISTORY 1200 as part of the general education requirements for the B.A. In addition, 9 hours of the 31 30 major hours must be taken at the 3000 or 4000 level.

Note: History majors interested in graduate or professional school should take HISTORY 4097 as independent research under the guidance of a faculty member in a short period (one semester).

Note: History majors must complete an experiential learning requirement. They can meet this requirement by taking HISTORY 4085 or HISTORY 4097 or study abroad, among other options, in consultation with their advisor.

Note: Entering students will normally take ENGLISH 1120 either semester of the first year.

Secondary Education Emphasis Area

You may earn a B.A. degree in history from Missouri S&T and certification to teach in the schools of Missouri. This program may be completed in four academic years and student teaching is arranged with public schools anywhere in the state.

Students interested in the certification program should consult with the advisor for history/education majors in the department of history and political science for requirements particular to those interested in this degree. Students should process a change of major form to designate history with an emphasis area of secondary education.

History students must complete 128 127 credit hours, including requirements for teacher education listed in this catalog. A minimum grade of "C" is required by the department in all history and political science courses counted towards this degree. Students must take the following courses:

Communication Skills: 9 hours		
ENGLISH 1120	Exposition And Argumentation	3
ENGLISH 1160	Writing And Research	3
SP&M S 1185	Principles Of Speech	3
Humanities: 12 hours with at least one course from the first three areas		
Art or Music or Theater Appreciation		
Philosophy		
Literature		
Foreign Language		
ETYM 4306	Introduction To Etymology	3
Social Sciences: 18 hours		
POL SCI 1200	American Government	3
Political Science Elective Must be 2XXX or above		3
ECON 1100	Principles Of Microeconomics	3
or ECON 1200	Principles Of Macroeconomics	
PSYCH 1101	General Psychology	3
PSYCH 4600	Social Psychology	3
HISTORY 2110	World Regional Geography	3
Natural Sciences: 7 hours = 2 courses and 1 lab		
One course in Physics or Chemistry or Geology and one course in Biology		
One laboratory in any of the above science courses		
Mathematics: 3 hours		
MATH 1120	College Algebra (or higher)	3-5
or MATH 1103	Fundamentals Of Algebra	
or MATH 1140	College Algebra	
Clinical Experience: 16 hours		
EDUC 1104	Teacher Field Experience I	1
EDUC 1164	Teacher Field Experience II	2
EDUC 3298	Teacher Field Experience III	1
EDUC 4299	Student Teaching	12
Professional Requirements: 26 hours		

EDUC 1040	Perspectives In Education	2
EDUC 1174	School Organization and Administration For Teachers	2
EDUC 2310	Education Of The Exceptional Child	3
EDUC 3216	Instructional Literacy in the Content Area	3
EDUC 3280	Instructional Strategies in the Content Area	3
EDUC 3340	Assessment of Student Learning	3
EDUC 4298	Student Teaching Seminar	1
ENGLISH 3170	Teaching And Supervising Reading and Writing	3
PSYCH 2300/EDUC 2102	Educational Psychology	3
PSYCH 3310	Developmental Psychology	3
History Requirements: 37 hours		
HISTORY 1100	Early Western Civilization	3
HISTORY 1200	Modern Western Civilization	3
HISTORY 1790	Introduction to History	1
HISTORY 1300	American History To 1877	3
HISTORY 1310	American History Since 1877	3
HISTORY 2791	Historical Research Methods	3
HISTORY 4790	Historiography	3
American History Electives		6
European History Electives		6
History Electives		6

Justification for request

The History-Political Science department has decided that it is better for students to take the 1 hour Introduction course.

Supporting Documents

Course Reviewer Comments

jpnfd (09/26/23 9:10 am): Updated major hours listed in note to 31 hours.

Key: 157

Program Change Request

Date Submitted: 08/23/23 4:10 pm

Viewing: HISTORY-BS : Bachelor of Science in History

File: 242.28

Last approved: 05/18/23 3:06 pm

Last edit: 08/23/23 4:10 pm

Changes proposed by: dewittp

Catalog Pages Using this Program

[History](#)

Start Term

Fall 2024 ~~2022~~

Program Code

HISTORY-BS

Department

History and Political Science

Title

Bachelor of Science in History

Program Requirements and Description

Approval Path

1. 09/05/23 8:12 am Shannon Fogg (sfogg): Approved for RHISTORY Chair
2. 09/06/23 9:57 am Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
3. 09/06/23 10:24 am Petra Dewitt (dewittp): Approved for Arts & Humanities DSCC Chair
4. 09/11/23 1:58 pm Jennifer Pohlsander (jpnfd): Approved for Pending CCC Agenda post
5. 09/26/23 9:33 am Jennifer Pohlsander (jpnfd): Approved for CCC Meeting Agenda
6. 09/26/23 10:31 am Petra Dewitt (dewittp): Approved for Campus Curricula Committee Chair

History

1. Jun 27, 2016 by Petra Dewitt

Bachelor of Science
History

Students must take a minimum of 120 hours for a Bachelor of Science degree in history, and obtain a grade point average of 2.0. These requirements for the B.S. are in addition to credit received for basic ROTC.

The B.S. in history requires the following:

1. English composition (6 hours)

ENGLISH 1120	Exposition And Argumentation [1]	3
One other writing intensive course outside their major, such as		3
ENGLISH 1160	Writing And Research	
ENGLISH 1170	Creative Writing	
ENGLISH 3560	Technical Writing	

2. Math and Sciences (18 hours).

The general requirements for a B.S. call for at least 18 hours in biological, physical (chemistry, geology, physics), and mathematical (mathematics, statistics, computer science, and information science and technology) sciences.

1 Biological Science course	
1 Physical Science course [2]	
1 Laboratory course	
1 Math course [3]	
In addition to these requirements, students may also count toward 18 hours	
STAT 1115	Statistics For The Social Sciences I
Up to 3 hours from	
HISTORY 2510	History of Technology
HISTORY 3510	Twentieth Century Technology And Society
HISTORY 3530	History of Science
HISTORY 3534	History of Medieval and Early Modern Science

	3 hours of Psych courses not listed elsewhere, such as	
PSYCH 2200	Research Methods	

3. Humanities (12 hours).

Students must take 12 hours in humanities other than history with at least
1 Literature course
1 Philosophy course
1 Fine Arts course [4]
Students may take language course or humanities course other than history to meet 12 hours requirement.

4. Social Sciences (12 hours).

POL SCI 1200	American Government	3
At least one course in two from three areas:		
Economics		
Political Science		
Psychology		
Students may transfer up to 3 hours of Sociology to meet 12 hours requirement [5]		

5. History (37 (36 hours)

Students must take 37 hours in required history courses, including [7]		
HISTORY 1790	Introduction to History	1
HISTORY 1100	Early Western Civilization	3
HISTORY 1200	Modern Western Civilization	3
HISTORY 1300	American History To 1877	3
HISTORY 1310	American History Since 1877	3
HISTORY 2791	Historical Research Methods	3
HISTORY 4790	Historiography	3
At least 18 hours of Electives, consisting of		
2 American History Electives		6
2 European History Electives		6
1 Elective must come from a non-western, marginalized or minority focused course, such as		3
HISTORY 2430	History of the American Pacific	
HISTORY 3241	World War I A Global Perspective	
HISTORY 3600	World History	
HISTORY 3625	Slavery and Abolition in Atlantic World	
HISTORY 3660	Modern East Asia	
HISTORY 3665	History of Japan	
HISTORY 4245	Nazi Germany and the Holocaust	
HISTORY 4246	War and Society in Twentieth-Century Europe	

6. Electives Credit. Each student will elect sufficient additional courses to complete a minimum of 120 credit hours, which may include up to 12 hours in engineering courses at the discretion of the major adviser. At least 9 hours of these electives must be at the 3000 or above level, although substitutions may be permitted at the discretion of the major adviser. All electives must accumulate to at least a 2.0 grade point average.

[1]

Entering students will normally take English 1120 within their first year of study.

2

Chemistry, Physics, Geology

3

College Algebra or higher

4

Art, Music, or Theater Appreciation

5

With major advisor approval

6

9 of these 18 hours of history electives must be at or above the 3000 level.

7

The student must earn a grade of C or better in these required courses.

Justification for request

The department of History-Political Science decided that it is better for majors to take the 1 hour Introduction course.

Supporting Documents

Course Reviewer Comments

Program Change Request

Date Submitted: 04/06/23 8:42 am

Viewing: **NU ENG-MS : Nuclear Engineering MS**

File: 170.4

Last approved: 07/24/15 5:00 pm

Last edit: 07/13/23 10:40 am

Changes proposed by: schlegelj

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

Start Term
Fall 2024 08/17/2015
Program Code
NU ENG-MS
Department
Nuclear Eng Mining & Radiation Sci Nuclear Engineering
Title
Nuclear Engineering MS

Program Requirements and Description

Approval Path

1. 05/01/23 10:03 am Joseph Newkirk (jnewkirk): Approved for NUC ENG Chair
2. 07/27/23 8:27 am Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
3. 08/01/23 10:27 am Mark Fitch (mfitch): Approved for Engineering DSCC Chair
4. 09/11/23 1:58 pm Jennifer Pohlsander (jpnfd): Approved for Pending CCC Agenda post
5. 09/26/23 9:33 am Jennifer Pohlsander (jpnfd): Approved for CCC Meeting Agenda
6. 09/26/23 10:31 am Petra Dewitt (dewittp): Approved for Campus Curricula Committee Chair

History

1. Apr 17, 2014 by

The Nuclear Engineering Program offers both a thesis-based and non-thesis MS degree program. A B.S. ~~The nuclear engineering graduate program offers the master of science, the doctor of engineering, and the doctor of philosophydegrees.B.S.~~ in a related field of engineering or suitable physical science is a prerequisite for admission in to ~~into~~ the Nuclear Engineering ~~nuclear engineering~~ graduate program. The M.S. ~~program. The master's~~ degree program is designed to provide training and expertise in the design of nuclear energy systems, as well as the use ~~us~~ of nuclear technology in ~~for~~ medical and ~~as well as~~ industrial applications.

Some exposure to research is considered an essential component of the MS program, so the non-thesis option is intended for students with significant industrial experience (more than 3 years) and is not encouraged for other students. Students should plan to complete their MS program in two to four semesters. ~~Both thesis and without thesis options are available forM.S.~~A MS ~~degree~~ program requires ~~with~~ a minimum of 30 credit-hours of research and coursework. A minimum of six credits of 6000-level courses must be included (nine credits ~~credit hours required~~ for a non-thesis option), and at most three credits of 3000-level courses. Students are encouraged to take at least six credits of courses outside of their program. ~~successful completion. Research areas of specializationinclude:Reactor design and safetyThermal hydraulicsRadiation effectsRadiation dosimetry, protection and health physicsRadiation transport and shieldingSpace nuclear powerMaterials for nuclear applicationsNuclear fuel cycleRadioactive waste managementRadiation imaging and its applications in medicine and industryRadiation measurements and spectroscopy For thePh.D.program, a research project with a written dissertation of high caliber demonstrating candidate's capacity to conduct independent and original research, to critically analyze results and to infer sound conclusions isnecessary.The dissertation must produce original research results acceptable for publication in a refereedjournal.To facilitate high quality research, the nuclear engineering program has the following laboratoryfacilities:Nuclear Reactor The Missouri University of Science and Technology Nuclear Reactor (MSTR) is a Nuclear Regulatory Commission (NRC) licensed 200 kW pool-type reactor that is used to support the engineering and science activities oncampus.Using the facility, the reactor staff provides hands-on laboratory, research and development and projectopportunities.The reactor itself uses uranium fuel and is cooled by natural convection in a pool containing approximately 30,000 gallons ofwater.The open pool design allows access to the reactor core where experiments and samples to be irradiated can bepositioned.The facility is equipped with a pneumatics sample irradiation system, a neutron beam port that provides a collimated neutron beam, and a thermalcolumn.Internet-Accessible Hot Cell Facility A dual-chambered internet-accessible heavily shielded facility with pneumatic access to the Missouri S&T 200 kW Research Nuclear Reactor (MSTR) allows authorized distance users to remotely manipulate and analyze neutron irradiatedsamples.The system consists of two shielded compartments, one for multiple sample storage, and the other dedicated exclusively for radiation measurements andspectroscopy.The second chamber has multiple detector ports, with graded shielding, and has the capability to support gamma spectroscopy using radiation detectors such as an HPGedetector.Both these chambers are connected through a rapid pneumatic system with access to the MSTR nuclear reactorcore.The total transportation time between the core and the hot cell is less than 3.0seconds.Radiation Measurement and Spectroscopy Laboratory (RMSL) The Radiation Measurement and Spectroscopy Laboratory is equipped for measurement of alpha, beta and gamma particles with the help of various detectors such as Geiger-Mueller counters, NaI (TI) scintillation detectors, HPGe Semiconductor detectors, Ortec Ultra charged particle detectors, and Ortec partially depleted silicon surface barrierdetectors.Detection systems including pre-amplifiers, amplifiers, single channel analyzers, counters, timers, multi-channel analyzers are also included in thelaboratory.RMSL contains neutron and X-ray measurement modules using He-3 isotropic detectors and ion chambersrespectively.All of the detectors in RMSL are compatible with state-of-the-art software and Lynx digital data analysis systems which allows remote web-based experimentalcapability.All of these things allows the RMSL tremendous potential for collaborative experiments and discoveries with local researchers and researchers around theworld.Nuclear Materials Laboratory The facilities of the Materials Research Center, metallurgical engineering, and nuclear engineering programs are also available for nuclear materials-relatedresearch.These facilities include state of the art SEM/EDX, TEM, STEM, FIB/FESEM, andXRD.Computer Laboratory Students have the opportunity to use large computer codes commonly used in the nuclear industry for reactor core design, radiation transport, and thermal hydraulicsanalysis.The nuclear engineering program maintains an excellent laboratory with personal computers with access to a campus cluster of numerically intensive computing (NIC)systems.Two-phase Flow and Thermal-Hydraulics Laboratory (TFTL) The nuclear engineering TFTL is designed to perform both fundamental and advanced two-phase flow experiments simulating prototypic nuclear reactorconditions.The TFTL is equipped with state-of-the-art instrumentation such as a micro multi-sensor conductivity probe, a high-speed digital motion-corder, various flow measurement devices, and a data acquisition system andsoftware.Topics of research studied in the TFTL include advanced two-phase flow modeling, two-phase flow characterization in various flow channel geometries, air-water two-phase bubble jet experiment, secondary flow analysis in liquid film flow, and development of two-phase flowinstrumentation.Advanced Radiography and Tomography Lab The laboratory is designed to perform radiation imaging for medical or industrialpurpose.Students have opportunities of running Monte Carlo simulation codes for radiation imaging systems and experimenting with digital x-ray radiography, x-ray computed tomography, neutron imaging,etc.The technologies developed in the lab can be applied to either medical imaging or non-destructive inspection of various materials orobjects.Neutron Generator Laboratory The neutron generator laboratory has a D-D neutron generator that produces approximately 10 9neutrons/sec.The neutron generator is available for both graduate and undergraduate research and education at MissouriS&T.~~For

a thesis option, at least 6 credits ~~Examples~~ of graduate research and at least 18 credits ~~using the neutron generator are reactor kinetics research, the study~~ of lecture courses are required as part ~~two-phase flow, research in nuclear forensics and radiochemistry, particle tracking in complex flows, and the photon-neutron tomography for mechanical testing~~ of the 30 credit-hours. ~~structural materials.~~

The 'core' Nuclear Engineering courses are NUC ENG 5203 (Reactor Physics I), 5241 (Nuclear Materials I), 5257 (Introduction to Nuclear Thermal Hydraulics), and 5312 (Nuclear Radiation Measurements and Spectroscopy). These courses address key competencies that all Nuclear Engineers should possess. Students who completed these courses or their equivalent during an undergraduate Nuclear Engineering degree need not take the courses again, however students with undergraduate degrees from other disciplines should take NUC ENG 3205 (Fundamentals of Nuclear Engineering) in addition to these core courses. Students are also encouraged to take at least 3 credits of graduate level mathematics or computer science. A maximum ~~Nuclear ReactorThe Missouri University~~ of nine credit-hours of graduate level courses taken elsewhere as ~~Science and Technology Nuclear Reactor (MSTR) is~~ a graduate student can be transferred to the MS plan of study, provided ~~Nuclear Regulatory Commission (NRC) licensed 200 kW pool-type reactor~~ that the courses correspond to at least a 5000-level course at Missouri S&T. ~~is used to support the engineering and science activities on campus.~~

Justification for request
Updating outdated information in the catalog.
Supporting Documents
Course Reviewer Comments
jpnfd (07/06/23 9:45 am): Updated title of Nuc Eng 5312 (Nuclear Radiation Measurements and Spectroscopy.
jpnfd (07/13/23 10:40 am): Corrected typos.

Key: 170

Program Change Request

Date Submitted: 07/06/23 9:30 am

Viewing: NU ENG-PHD : Nuclear Engineering PhD

File: 211.1

Last edit: 07/13/23 10:36 am

Changes proposed by: schlegelj

Start Term
Fall 2024
Program Code
NU ENG-PHD
Department
Nuclear Eng & Radiation Sci Psychological Science
Title
Nuclear Engineering PhD

Program Requirements and Description

Approval Path

1. 05/01/23 10:03 am Joseph Newkirk (jnewkirk): Approved for NUC ENG Chair
2. 07/06/23 8:21 am Jennifer Pohlsander (jpnfd): Rollback to Initiator
3. 07/06/23 10:21 am Joseph Newkirk (jnewkirk): Approved for NUC ENG Chair
4. 07/28/23 7:05 am Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
5. 08/01/23 10:27 am Mark Fitch (mfitch): Approved for Engineering DSCC Chair
6. 09/11/23 1:58 pm Jennifer Pohlsander (jpnfd): Approved for Pending CCC Agenda post
7. 09/26/23 9:33 am Jennifer Pohlsander (jpnfd): Approved for CCC Meeting Agenda
8. 09/26/23 10:31 am

The Doctor of Philosophy (PhD) program is open to students who have successfully completed their MS program or have enrolled in a direct PhD program. It is designed to provide additional training and expertise in the design of nuclear energy systems and the use of nuclear technology in medical and industrial applications, with a strong focus on engineering research.

Typically a minimum of 5 semesters (not including summer sessions) is required to complete the program for students arriving with a MS degree, and a minimum of 7 semesters for students starting a direct PhD program. The doctoral program will include at least 72 credit hours of total coursework. Students who already hold a Master's degree will receive a block of 30 credit hours that will apply toward that requirement. They must complete an additional 42 hours of graduate credit. A minimum of 12 credit hours must be lecture courses, and a minimum of 24 credit hours must be graduate research. It is recommended that nine of the 12 credit hours of lecture courses come from 6000-level lecture courses. A student who does not hold a Master's degree must complete a minimum of 30 credit hours of lecture courses and at least 24 credit hours of graduate research. At least 15 credit hours should be in 6000-level lecture courses. Students are also encouraged to enroll in at least six credits of advanced mathematics or computer science courses.

PhD candidates must also complete a qualifying examination within their first four semesters of study, comprehensive examination when at least 50% of their coursework is completed, and final examination where they will present and defend the research included in their dissertation.

There is a residency requirement for the PhD in Nuclear Engineering. Residency at Missouri S&T is defined as sustained intellectual interactions among the student and the academic community. The candidate for a Ph.D. degree will normally complete three years of residency, which is the equivalent of completing six academic semesters while enrolled as an on-campus student at Missouri S&T. Students holding a master's degree are automatically credited with two semesters of residency. Students unable to meet the residency requirement given above, such as distance students, can meet this requirement through an alternative route in consultation with their advisor.

Justification for request
Updating out of date information in the catalog.
Supporting Documents
Course Reviewer Comments
jpnfd (07/06/23 8:21 am): Rollback: Rollback for updates.
jpnfd (07/13/23 10:36 am): Corrected typo.

Key: 211

Program Change Request

Date Submitted: 09/05/23 4:33 pm

Viewing: **PROPOSED : Environmental Science and Policy CTU**

File: 401

Last edit: 09/06/23 7:07 am

Changes proposed by: nancym

Start Term
Fall 2024
Program Code
PROPOSED
Department
Biological Sciences
Title
Environmental Science and Policy CTU

Program Requirements and Description

Approval Path

1. 05/12/23 9:20 am David Duvernell (duvernelld): Approved for RBIOLSCI Chair
2. 05/22/23 10:34 am Jennifer Pohlsander (jpnfd): Rollback to Initiator
3. 08/10/23 12:17 pm David Duvernell (duvernelld): Approved for RBIOLSCI Chair
4. 08/28/23 9:48 am Jennifer Pohlsander (jpnfd): Rollback to Initiator
5. 09/05/23 5:19 pm David Duvernell (duvernelld): Approved for RBIOLSCI Chair
6. 09/06/23 9:57 am Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
7. 09/07/23 4:06 pm Katie Shannon (shannonk): Approved for Sciences DSCC Chair
8. 09/11/23 1:58 pm Jennifer Pohlsander (jpnfd): Approved

Environmental Science and Policy Undergraduate Certificate

The certificate will offer students across campus an opportunity to gain knowledge and experience in environmental science and environmental policy. This certificate is open to students from all majors, and is especially suitable for those interested in adding proficiency and literacy in current environmental issues to their current major. The certificate 1) exposes students to the Missouri S&T value of environmental sustainability, 2) promotes cross-disciplinary collaboration and thinking, and 3) expands opportunities to enhance connectivity of social and political science with traditional STEM disciplines.

To receive a Certificate in Environmental Science & Policy, the student must have an average cumulative grade point of 3.0 or better in the certificate courses. Once admitted to the program, a student will be given three years to complete the program. Students in the Environmental Science degree program will need to take 6 hours in addition to Bio Sci 1173 and Poli Sci 4320; at least one course must come from each topic area.

To be awarded a certificate in Environmental Science & Policy, a student must complete both core courses and one course from each of the two topic areas.

Required course:		
BIO SCI 1173	Introduction to Environmental Sciences	3
or ENV ENG 2601	Fundamentals Of Environmental Engineering and Science	
Required course:		
POL SCI 4320	The Politics of Innovation	3
Select one of the following courses:		
BIO SCI 4563	Global Ecology	3
or GEOLOGY 1110	Physical And Environmental Geology	
or ENV ENG 5605	Environmental Systems Modeling	
or GEO ENG 4276	Environmental Aspects Of Mining	
or GEO ENG 5233	Risk Assessment In Environmental Studies	
or BIO SCI 4383	Toxicology	
or BIO SCI 2372	Issues in Public Health	
or ENV ENG 5650	Public Health Engineering	
or BIO SCI 4313	Introduction to Environmental Microbiology	
or BIO SCI 4363	Freshwater Ecology	
Select one of the following courses:		
ENV ENG 5640	Environmental Law And Regulations	3
or ECON 4440	Environmental And Natural Resource Economics	
or ECON 4641	Foundations of Sustainability	
or ECON 4540	Energy Economics	
or PHILOS 4350	Environmental Ethics	

Justification for request

The certificate will offer students across campus an opportunity to gain knowledge and experience in environmental science and environmental policy.

Supporting Documents

[Bio Sci-Env Sci-UGCT-Environmental Science and Policy.pdf](#)

[MS&T PC April 2023.pdf](#)

[Memo to Change and Updates to Certificate.docx](#)

[Bio Sci-Env Sci-UGCT-Environmental Science and Policy2add.docx](#)

[Env Sci UG Certificate Change.pdf](#)

Course Reviewer Comments

jpnfd (05/12/23 12:09 pm): Added headers to course list. Changed term to Fall 24.

jpnfd (05/12/23 12:31 pm): Added CTU to title.

jpnfd (05/22/23 10:34 am): Rollback: For Dept. updates.

jpnfd (08/11/23 6:36 am): Updated title format.

jpnfd (08/28/23 9:48 am): Rollback: Course revisions and clarification needed. Please address course discrepancies on MDHE form.

jpnfd (09/06/23 6:30 am): Attached Bio Sci-Env Sci-UGCT-Environmental Science and Policy2 doc.

jpnfd (09/06/23 6:59 am): Attached email thread showing changes approved.

jpnfd (09/06/23 7:07 am): Updated course list.

Key: 401

Program Change Request

Date Submitted: 07/28/23 2:19 pm

Viewing: PROPOSED : Human Factors Psychology CTU

File: 403

Last edit: 08/02/23 12:36 pm

Changes proposed by: burnsde

Start Term
Fall 2024
Program Code
PROPOSED
Department
Psychological Science
Title
Human Factors Psychology CTU

Program Requirements and Description

In Workflow

1. **RPSYCHOL 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. 07/31/23 11:47 am Clair Kueny (reynoldscla): Approved for RPSYCHOL Chair
2. 08/03/23 11:04 am Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
3. 08/03/23 11:05 am Cecil Eng Huang Chua (cchua): Approved for Social Sciences DSCC Chair
4. 09/11/23 1:58 pm Jennifer Pohlsander (jpnfd): Approved for Pending CCC Agenda post
5. 09/26/23 9:33 am Jennifer Pohlsander (jpnfd): Approved for CCC Meeting Agenda
6. 09/26/23 10:31 am Petra Dewitt (dewittp): Approved for Campus Curricula Committee Chair

Human Factors Psychology Undergraduate Certificate

Students will gain an understanding of how human abilities and characteristics influence everyday interactions with technologies and technological systems. The undergraduate certificate in Human Factors Psychology is designed to give students a deeper understanding of the human factors that affect and are affected by technology design. Students will gain foundational knowledge required to engage in human-centered design and will learn skills needed to critically evaluate and predict interactions between human abilities and characteristics and technology design. These skills are critical to understanding things such as human error, accessibility, user-satisfaction, equitable design, and much more. The certificate is highly diverse in its potential application in the real-world and will be useful to students pursuing multiple career paths. For example, careers that use technology for communication, that adhere to (or develop) occupational health and safety standards, that use or develop information systems, or that delivery services, knowledge, or experiences to people.

To be admitted to S&T's undergraduate certificate program in Human Factors Psychology, a student must meet Missouri S&T regular undergraduate admission requirements. In order to receive an undergraduate certificate, the student must have an average cumulative grade point of 2.0 or better in the certificate courses. The certificate credits taken by the students will count towards their bachelor's degree.

Students must complete the following coursework:

PSYCH 4400	Cognitive Psychology	3
PSYCH 4710	Human Factors	3
And 2 of the following 3 courses:		
PSYCH 4411	Sensation and Perception	3
PSYCH 4700	Industrial Psychology	3
PSYCH 4720	Psychology of Social Technology	3

Justification for request
New certificate options for undergrads.
Supporting Documents
MS&T PC April 2023.pdf
Psych-New UGCT-Human Factors Psych.pdf
Course Reviewer Comments
jpnfd (08/01/23 3:20 pm): Updated title format
jpnfd (08/02/23 12:36 pm): Updated title format

Key: 403

Program Change Request

New Program Proposal

Viewing: **PROPOSED : Industrial/Organizational Psychology CTU**

File: 404

Last edit: 08/02/23 12:38 pm

Changes proposed by: burnsde

Start Term
Fall 2024
Program Code
PROPOSED
Department
Psychological Science
Title
Industrial/Organizational Psychology CTU

Program Requirements and Description

In Workflow

Approval Path

Industrial/Organizational Psychology Undergraduate Certificate

The psychological science department will offer an undergraduate certificate in Industrial-Organizational psychology. This certificate will provide students with a foundation in how our understanding of people can improve how we understand organizations and workplaces.

Most of the adult population spends the majority of their time at work, and all students who graduate from S&T are in the market for gainful employment. Thus, understanding how organizations work, the role of individuals in the success of organizations, and the intersection of employee experiences and well-being with organizational effectiveness and strategy is directly relevant for anyone who wants to find success in their day-to-day employment. The courses in this certificate will help students understand organizational processes, employee-centered processes, and leadership, as well as foundational understanding of group and individual differences that influence all levels of employee-organization interaction.

To be admitted to S&T's undergraduate certificate program in Industrial/Organizational Psychology, a student must meet Missouri S&T regular undergraduate admission requirements.In order to receive an undergraduate certificate, the student must have an average cumulative grade point of 2.0 or better in the certificate courses.The certificate credits taken by the students will count towards their bachelor's degree.

Students must complete the following coursework:

PSYCH 4700	Industrial Psychology	3
PSYCH 4602	Organizational Psychology	3
And 2 of the following 4 courses:		
PSYCH 4500	Personality Theory	3
PSYCH 4600	Social Psychology	3
PSYCH 4601	Group Dynamics	3
PSYCH 4610	Psychology of Leadership in Organizations	3

Justification for request

More certificate options for undergraduates.

Supporting Documents

MS&T PC April 2023.pdf

Psych-New UGCT-IO Psych.pdf

Course Reviewer Comments

jpnfd (08/02/23 12:38 pm): Updated title format.

Key: 404

Program Change Request

Date Submitted: 08/16/23 9:14 am

Viewing: PROPOSED : Neuroscience CTU

File: 406

Last edit: 09/26/23 6:38 am

Changes proposed by: burnsde

Start Term
Fall 2024
Program Code
PROPOSED
Department
Psychological Science
Title
Neuroscience CTU

Program Requirements and Description

Neuroscience Undergraduate Certificate

The psychological science and biological sciences departments will offer an undergraduate certificate in Neuroscience. Students will take one required course in neuroscience, as well as a selection of additional courses relevant to neuroscience from a broad array of departments.

Neuroscience is a highly interdisciplinary field, and adequate training in neuroscience therefore requires coursework beyond a single discipline. The Undergraduate Certificate in Neuroscience is designed to address the interdisciplinary nature of the field, in order to provide students with a more comprehensive background in neuroscience. This certificate program will provide students the opportunity to take courses across the spectrum of neuroscience, ranging from behavioral and cognitive to cellular and molecular approaches. Additionally, elective courses allow students to see the breadth of possibilities in neuroscience – ranging from applications in computer science and engineering to philosophy of mind. This program is targeted towards students in a wide variety of majors who are interested in neuroscience.

To be admitted to S&T's undergraduate certificate program in Neuroscience, a student must meet Missouri S&T regular undergraduate admission requirements. In order to receive an undergraduate certificate, the student must have an average cumulative grade point of 3.0 or better in the certificate courses. The certificate credits taken by the students will count towards their bachelor's degree.

Students must take 12 total credit hours, as follows, to complete the requirements of the certificate. At least one course must come from the biological sciences department (i.e., students cannot take all four courses from the psychological science department).

Required course:		
PSYCH 4410	Neuroscience	3
Choose 2 of the following 5:		
BIO SCI 4533	Neurobiology	3
Neurobiology is strongly recommended, but not offered every year, so if necessary students can choose two other courses		
BIO SCI 4663	Animal Behavior	3
PSYCH 3501	Drugs and Behavior	3
PSYCH 4400	Cognitive Psychology	3
PSYCH 4411	Sensation and Perception	3
And one more class from the previous list or these additional options:		
BIO SCI 2223	General Genetics	3
BIO SCI 2243	Sleep: Function and Dysfunction	3
BIO SCI 3333	Human Anatomy and Physiology I	3
BIO SCI 5353	Developmental Biology	3
BIO SCI 5533	Pharmacology	3
CHEM 5650	Introduction to Medicinal Chemistry	3
COMP ENG 5310	Computational Intelligence	3
COMP SCI 5401	Evolutionary Computing	3
COMP SCI 5404	Introduction to Computer Vision	3
COMP SCI 5700	Bioinformatics	3
ELEC ENG 5320	Neural Networks Control and Applications	3
IS&T 5885	Human-Computer Interaction and User Experience	3
PSYCH 4501	Abnormal Psychology	3
PSYCH 4590	Health Psychology	3
PHILOS 4320	Minds And Machines	3

Justification for request
New multidisciplinary certificate option for undergrads.

Supporting Documents

[MST PC March 2023.pdf](#)

[Psych-UGCT-Neuroscience.pdf](#)

Course Reviewer Comments

reynoldscla (08/16/23 9:18 am): Minor grammar correction

jpnfd (08/16/23 2:36 pm): Updated title format.

jpnfd (09/26/23 6:38 am): Edited word spacing.

Program Change Request

New Program Proposal

Date Submitted: 07/28/23 2:33 pm

Viewing: PROPOSED : Psychology of Diversity and Inclusion CTU

File: 405

Last edit: 08/02/23 12:41 pm

Changes proposed by: burnsde

Start Term
Fall 2024
Program Code
PROPOSED
Department
Psychological Science
Title
Psychology of Diversity and Inclusion CTU

Program Requirements and Description

In Workflow

1. **RPSYCHOL 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. 07/31/23 11:49 am Clair Kueny (reynoldscla): Approved for RPSYCHOL Chair
2. 08/03/23 11:35 am Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
3. 08/03/23 2:35 pm Cecil Eng Huang Chua (cchua): Approved for Social Sciences DSCC Chair
4. 09/11/23 1:58 pm Jennifer Pohlsander (jpnfd): Approved for Pending CCC Agenda post
5. 09/26/23 9:33 am Jennifer Pohlsander (jpnfd): Approved for CCC Meeting Agenda
6. 09/26/23 10:32 am Petra Dewitt (dewittp): Approved for Campus Curricula Committee Chair

Psychology of Diversity and Inclusion Undergraduate Certificate

The Department of Psychological Science will offer an undergraduate certificate in Psychology of Diversity and Inclusion. Students will explore how diversity and inclusion shape and are shaped by psychological and sociocultural processes. The undergraduate certificate in Psychology of Diversity and Inclusion will help students develop the knowledge, skills, and aptitudes necessary to successfully work and lead in an increasingly diverse society. This certificate will help prepare students to take on leadership roles, work in diverse organizations, and serve diverse clientele by providing important contextual, cultural, and interpersonal skills, including empathy, perspective-taking, and critical thinking around issues of diversity and inclusion. Students will learn how to work more effectively with people from different backgrounds, make environments more welcoming and inclusive for everyone, and be leaders around diversity and inclusion issues. This certificate allows students – both majors and nonmajors – to formally recognize a concentration within their degree plan that signals to employers a commitment to fostering diversity and inclusion in the workplace and community.

To be admitted to S&T's undergraduate certificate program in Psychology of Diversity and Inclusion, a student must meet Missouri S&T regular undergraduate admission requirements. In order to receive an undergraduate certificate, the student must have an average cumulative grade point of 2.0 or better in the certificate courses. The certificate credits taken by the students will count towards their bachelor's degree.

Students must complete the following coursework:

PSYCH 4600	Social Psychology	3
And 3 of the following 4 courses:		
PSYCH 4310	Psychology Of The Exceptional Child	3
PSYCH 4500	Personality Theory	3
PSYCH 4992	Cross-Cultural Psychology	3
PSYCH 4993	Psychology of Gender	3

Justification for request
More certificate options for undergraduates.
Supporting Documents
MS&T PC April 2023.pdf
Psych-New UGCT-Psych of Diversity and Inclusion.pdf
Course Reviewer Comments
jpnfd (08/02/23 12:41 pm): Updated title format.

Key: 405

Program Change Request

New Program Proposal

Date Submitted: 04/13/23 1:24 pm

Viewing: PROPOSED : Teacher Leadership CT

File: 400

Last edit: 07/26/23 10:38 am

Changes proposed by: bakm75

Start Term
Spring 2024
Program Code
PROPOSED
Department
Department of Education
Title
Teacher Leadership CT

Program Requirements and 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. 07/25/23 3:40 pm Beth Kania-Gosche (bakm75): Approved for REDUCATION Chair
2. 07/26/23 10:39 am Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
3. 07/26/23 10:40 am Cecil Eng Huang Chua (cchua): Approved for Social Sciences DSCC Chair
4. 09/11/23 1:58 pm Jennifer Pohlsander (jpnfd): Approved for Pending CCC Agenda post
5. 09/26/23 9:33 am Jennifer Pohlsander (jpnfd): Approved for CCC Meeting Agenda
6. 09/26/23 10:32 am Petra Dewitt (dewittp): Approved for Campus Curricula Committee Chair

Teacher Leadership Certificate

This certificate is designed for practicing teachers who want a research-based approach to facilitating instructional improvement within a department, grade level, or school.

Strengthening teacher leaders within a school increases the capacity of the entire staff to facilitate change for improvement and collaborate with stakeholders. Teachers will enhance their skills in mentoring, curriculum development, and assessment through theory and reflective practice. This program focuses on local context, using the Teacher Leadership Competencies as a framework.

The graduate certificate in teacher leadership will provide practicing educators with the skills to lead teams to improve teaching and learning; however, this certificate does not result in Missouri educator licensure. The courses in this graduate certificate may be applied to the non-thesis Master of Science in Biology and the Master of Science for Teachers. Other programs may accept these courses according to their guidelines.

The following courses are required:

EDUC 5150	Teacher Leadership within Educational System	3
EDUC 5220	Instructional Coaching and Mentoring	3
EDUC 5225	Curriculum Development and Assessment	3
EDUC 5330	Community-Based Participatory Action Research	3

Students may transfer one equivalent graduate course into the certificate. Students may substitute EDUC 5330 with another research course with advisor approval.

Admission Criteria

1. Currently teaching or two years of experience teaching (evaluated through resume)
2. 3.0 GPA in undergraduate or previous graduate coursework
3. Statement of purpose with a focus on how this program will impact their teaching and learning community

No GRE is required.

Justification for request
This proposal has been approved by the MDHEWD. This certificate will help us recruit practicing teachers into non-thesis master's programs in departments such as biological sciences. This is the first step toward Teacher Education having a graduate degree.
Supporting Documents
MST PC February 2023.pdf
Teacher Edu and Cert -Teacher Leadership GRCT.pdf
Course Reviewer Comments
jpnfd (07/26/23 10:22 am): Updated to Spring 2024. Updated title and course list format.
jpnfd (07/26/23 10:29 am): Edited paragraph spacing.
jpnfd (07/26/23 10:38 am): Effective date updated to Spring 2024 per department and Interim Assoc Provost for Acad Operations request as an exception.

Key: 400

Course Change Request

New Experimental Course Proposal

Date Submitted: 08/25/23 2:18 pm

Viewing: **ART 1001.002 : Popular Applied Arts**

File: 4996

Last edit: 09/26/23 11:15 am

Changes proposed by: cht3m

Requested Effective Change Date	Spring 2024
Department	Arts, Languages, & Philosophy
Discipline	Art (ART)
Course Number	1001
Topic ID	002
Experimental Title	
Popular Applied Arts	
Experimental Abbreviated Course Title	Popular Applied Arts
Instructors	Connie Shoemaker

Experimental Catalog Description

This fine arts course focuses on utilitarian art, its folk traditions, and its contemporary uses. Time will be spent learning and perfecting techniques, experimenting with materials, developing artistic vision, and practicing Studio Habits of Mind.

Prerequisites
  None.

Field Trip Statement

Approval Path

1. 08/25/23 2:37 pm Irina Ivliyeva (ivliyeva): Approved for RPHILOSO Chair
2. 08/28/23 8:17 am Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
3. 08/28/23 8:46 am Petra Dewitt (dewittp): Approved for Arts & Humanities DSCC Chair
4. 09/11/23 1:57 pm Jennifer Pohlsander (jpnfd): Approved

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

Total: 3

Justification for
new course:

While teaching Art 1140 and Art 1164 during the Fall 22 and Spring 23 semesters, an informal survey of students indicated that a course focusing on various arts and crafts would be a popular fine arts course option. Many students talked about how arts and crafts are a way for them to relieve stress and / or how much they would enjoy learning something they remember a family member doing. This generation has a newfound appreciation for hand-made objects that are not only aesthetically pleasing but uesful.

Semester(s)
previously taught

None

Co-Listed
Courses:

Course Reviewer
Comments

jpnfd (09/26/23 11:15 am): Updated grammar.

for Pending CCC Agenda post

5. 09/26/23 9:33 am Jennifer Pohlsander (jpnfd): Approved for CCC Meeting Agenda

6. 09/26/23 10:31 am Petra Dewitt (dewittp): Approved for Campus Curricula Committee Chair

Key: 4996

Preview Bridge

Course Change Request

New Experimental Course Proposal

Date Submitted: 08/25/23 11:04 am

Viewing: **ENV SCI 3001.001 : One Health Basics**

File: 4995

Last edit: 09/26/23 6:34 am

Changes proposed by: mmormile

Requested Effective Change Date	Spring 2024
Department	Biological Sciences
Discipline	Environmental Sciences (ENV SCI)
Course Number	3001
Topic ID	001
Experimental Title	
One Health Basics	
Experimental Abbreviated Course Title	One Health Basics
Instructors	Melanie Mormile

Experimental Catalog Description

One Health is based on the knowledge that the health of people is interlinked with the health of animals and the environment. In this course, we will explore these interconnections and common One Health issues such as illness spillover events, the growing problem of antibiotic resistance, and the impacts that contaminated water have on animals and people.

Prerequisites

Field Trip

Statement

Credit Hours   LEC: 3.0   LAB: 0   IND: 0   RSD: 0
   Total: 3.0

Justification for
new course:
   It has become increasingly evident that close contacts that people have with
   animals, both wild and domestic, changes in the use of environmental spaces, as
   well as changes in our climate, are having huge impacts on the health of humans.
   This course will help prepare the next generation of environmental experts, animal
   care professionals, and human health practitioners in their understanding of the
   interconnections between these three facets of life on Earth.

Semester(s)
previously taught

Co-Listed
Courses:

Course Reviewer Comments	**jpnfd (09/26/23 6:34 am):** Corrected course number to special topics number 3001.

(jpnfd): Approved
for Pending CCC
Agenda post
5. 09/26/23 9:33 am
   Jennifer
   Pohlsander
   (jpnfd): Approved
   for CCC Meeting
   Agenda
6. 09/26/23 10:31
   am
   Petra Dewitt
   (dewittp):
   Approved for
   Campus Curricula
   Committee Chair

Course Change Request

New Experimental Course Proposal

Date Submitted: 08/24/23 10:37 pm

Viewing: **MATH 5001.005 : Scientific Programming with Python**

File: 4994

Last edit: 08/28/23 9:37 am

Changes proposed by: prunnion

Requested Effective Change Date	Spring 2024
Department	Mathematics & Statistics
Discipline	Mathematics (MATH)
Course Number	5001
Topic ID	005
Experimental Title	Scientific Programming with Python
Experimental Abbreviated Course Title	Sci Programming Python
Instructors	Yanzhi Zhang

Experimental Catalog Description

This course introduces scientific programing with Python and its associated libraries. Students will learn the use of computation to define, program, and solve a variety of mathematical problems, and to create reports and plots of the results. No prior knowledge of Python is required, and the mathematical topics will be explained as presented.

Prerequisites

Math 1208 or Math 1214.

Field Trip Statement				
Credit Hours Total: 3	LEC: 3	LAB: 0	IND: 0	RSD: 0

Justification for
new course:

As our department offers more computational courses, we are finding that our students (including graduate students, particularly those who completed undergrad degrees elsewhere) often need substantial additional assistance with the programming necessary for these courses. This course is tailor-made to teach exactly what students need to be successful in a variety of our computational courses.

Semester(s)
previously taught
None

Co-Listed
Courses:

Course Reviewer Comments	**jpnfd (08/28/23 9:37 am):** Updated prerequisite format.

(jpnfd): Approved for Pending CCC Agenda post

5. 09/26/23 9:33 am
Jennifer Pohlsander
(jpnfd): Approved for CCC Meeting Agenda

6. 09/26/23 10:31 am
Petra Dewitt
(dewittp): Approved for Campus Curricula Committee Chair

Key: 4994

Preview Bridge

Course Change Request

New Experimental Course Proposal

Date Submitted: 08/08/23 2:21 pm

Viewing: **TCH COM 3001.003 : Video Design and Editing**

File: 4990

Last edit: 08/28/23 10:36 am

Changes proposed by: kswenson

Requested Effective Change Date	Spring 2024
Department	English and Technical Communication
Discipline	Technical Communication (TCH COM)
Course Number	3001
Topic ID	003
Experimental Title	Video Design and Editing
Experimental Abbreviated Course Title	Video Design and Editing
Instructors	Ryan Cheek

Experimental Catalog Description

Principles of visual design, vocal narration, and audio selection to create videos for both academic and professional purposes. Course includes extensive practice in video production.

Prerequisites

English 1600 or Tch Com 1600.

Field Trip Statement

Approval Path

1. 08/08/23 2:21 pm Kristine Swenson (kswenson): Approved for RENGLISH Chair
2. 08/09/23 1:43 pm Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
3. 08/09/23 2:45 pm Petra Dewitt (dewittp): Approved for Arts & Humanities DSCC Chair
4. 09/11/23 1:58 pm Jennifer Pohlsander (jpnfd): Approved

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

Justification for new course:

We are eliminating the lab hour in this iteration of the course because it was found to be unnecessary (and added expense and scheduling complexity for students).

Semester(s) previously taught

SP23

Co-Listed Courses:

Course Reviewer Comments

jpnfd (08/09/23 1:02 pm): This course is an existing EC. The lab component is being removed. An EC form cannot be edited in CL so this change has been submitted on this new EC form for approval of the credit hour change.

for Pending CCC Agenda post

5. 09/26/23 9:33 am Jennifer Pohlsander (jpnfd): Approved for CCC Meeting Agenda

6. 09/26/23 10:32 am Petra Dewitt (dewittp): Approved for Campus Curricula Committee Chair

Key: 4990

Preview Bridge

Course Change Request

New Experimental Course Proposal

Date Submitted: 08/29/23 10:17 am

Viewing: **TCH COM 5001.004 : Advanced Video Design and Editing**

File: 5000

Last edit: 08/30/23 8:44 am

Changes proposed by: kswenson

Requested Effective Change Date	Spring 2024
Department	English and Technical Communication
Discipline	Technical Communication (TCH COM)
Course Number	5001
Topic ID	004
Experimental Title	Advanced Video Design and Editing
Experimental Abbreviated Course Title	Adv Video Design
Instructors	Ryan Cheek

Experimental Catalog Description

Principles of visual design, vocal narration, and audio selection to create videos for both academic and professional purposes. Course includes extensive practice in video production.

Prerequisites

Field Trip Statement

Approval Path

1. 08/29/23 10:17 am
   Kristine Swenson (kswenson): Approved for RENGLISH Chair
2. 08/30/23 8:45 am
   Jennifer Pohlsander (jpnfd): Approved for CCC Secretary
3. 08/30/23 9:44 am
   Petra Dewitt (dewittp): Approved for Arts & Humanities DSCC Chair
4. 09/11/23 1:58 pm
   Jennifer Pohlsander

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

Justification for
new course:
  We need to add a graduate course in this topic for more advanced work in the
  subject.

Semester(s)
previously taught
  N/A

Co-Listed
Courses:

Course Reviewer
Comments

(jpnfd): Approved
for Pending CCC
Agenda post

5. 09/26/23 9:33 am
   Jennifer
   Pohlsander
   (jpnfd): Approved
   for CCC Meeting
   Agenda

6. 09/26/23 10:32
   am
   Petra Dewitt
   (dewittp):
   Approved for
   Campus Curricula
   Committee Chair