

Curricular Action Workflow



Change Course Proposal Form

Submitted on 02/03/2020 by Kyoungtae Kim (Kkim@missouristate.edu).

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

BIO320 Cellular and Molecular Biology

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Current online catalog description:

BIO 320 Introduction to Cellular Biology

Prerequisite: "C-" or better in BIO 235 and BIO 236, or BMS 230 and BMS 232, or BMS 231; and "C-" or better in CHM 201 and 202, or CHM 342 and 345 (or CHM 342 taken prior to Fall 2019). Introduction to the structure and function of cells with an emphasis on eukaryotes. 4(3-2) F,S

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

← → **B** *I* ~~S~~

BIO 320 Introduction to Cellular Biology

Prerequisite: "C-" or better in BIO 235 and BIO 236, or BMS 230 and BMS 232, or BMS 231; and "C-" or better in CHM 201 and 202, or CHM 342 ~~and 345 (or CHM 342 taken prior to Fall 2019)~~. Introduction to the structure and function of cells with an emphasis on eukaryotes. 4(3-2) F,S

POWERED BY TINYMCE

What is changing? Check all boxes that apply.

- | | | | |
|---|--|--------------------------------------|--|
| <input type="checkbox"/> Course Code | <input type="checkbox"/> Course Number (<u>Check Availability</u>) | <input type="checkbox"/> Title | <input checked="" type="checkbox"/> Prerequisite |
| <input type="checkbox"/> Credit Hours/Contact Hours | <input type="checkbox"/> Periodicity | <input type="checkbox"/> Description | |

Reason for proposed change

Nearly every prospective student who are interested in registering for BIO 320 experiences the pre-requisite problem, which is caused by the Chemistry Department's changes to their organic series. Previously, CHM 342 was tied to lab sessions, but the lab is now offered separately as CHM 345. To avoid this registration problem, it is required to remove the indicated portion of the course pre-requisite description.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

- Routine or annual review/assessment of curriculum
- Faculty Input
- Student Input
- Accreditation/certification compliance
- Review of catalog information
- Other (be specific):

- Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

11/12/2019

Current Status:

College Council Review

Proposal Progress:

02/03/2020 - Submitted by Department Head (S Mathis)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Curricular Action Workflow



Change Course Proposal Form

**Submitted on 01/24/2020 by G
Schick (AlanSchick@MissouriState.edu).**

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CHM375 Inorganic Chemistry

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Enter parallel course number

nullnull null

How do these classes differ?

A new course (CHM 673) is being proposed in which graduate students will have additional course project culminating in a report based on current (and relevant) literature sources.

Current online catalog description:

CHM 375 Inorganic Chemistry

Prerequisite: "C-" grade or better in CHM 170. Atomic structure, chemical bonding, acid/base and reduction/oxidation concepts, reactivity of inorganic compounds, chemistry of main group elements, fundamentals of coordination theory. A grade of "C-" or better is required in this course in order to take CHM 575. Cannot be taken Pass/Not Pass. 3(3-0) F

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

← → **B** *I* ~~S~~

CHM 375 Inorganic Chemistry

Prerequisite: "C-" grade or better in CHM 170. Atomic structure, chemical bonding, acid/base and reduction/oxidation concepts, reactivity of inorganic compounds, chemistry of main group elements, fundamentals of coordination theory. A grade of "C-" or better is required in this course in order to take CHM 575. **May be taught concurrently with CHM 673. Cannot receive credit for both CHM 375 and CHM 673.** Cannot be taken Pass/Not Pass. 3(3-0) F

POWERED BY TINYMCE

What is changing? Check all boxes that apply.

- | | | | |
|---|--|---|---------------------------------------|
| <input type="checkbox"/> Course Code | <input type="checkbox"/> Course Number (<u>Check Availability</u>) | <input type="checkbox"/> Title | <input type="checkbox"/> Prerequisite |
| <input type="checkbox"/> Credit Hours/Contact Hours | <input type="checkbox"/> Periodicity | <input checked="" type="checkbox"/> Description | |

Reason for proposed change

Description changed to include mention of proposed parallel course (CHM 673).

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

- Routine or annual review/assessment of curriculum
- Faculty Input
- Student Input
- Accreditation/certification compliance
- Review of catalog information
- Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

08/15/2019

Current Status:

College Council Review

Proposal Progress:

02/04/2020 - Submitted by Department Head (Bryan Breyfogle)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Curricular Action Workflow



New Course Proposal Form

Submitted on 02/04/2020 by Ajay Katangur (AjayKatangur@MissouriState.edu).

***All fields require input**

- New COURSE
- New REGULAR PERMANENT SECTION of an existing variable content course. If a new regular section of an existing variable topics course, enter the existing course number below

Course Code:

CSC

Course Number: ([Check Availability](#))

244

Course Title:

Computer Architecture

Will this course become part of a program? No Yes (A corresponding program change form must be submitted)

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Prerequisite/Co-requisite or enter 'None':

CSC 131

Catalog Course Description: (Include any Pass/Not Pass grading restrictions, repeatable limits, limitation on course applicability, UG/GR parallel course, etc.)

An overview of computer architecture, which stresses the underlying design principles and the impact of these principles on computer performance. General topics include digital logic circuits, digital components, data representation, basic computer organization, processor design, control design, pipelining, vector processing, input-output organization, and memory organization.

379/30000 character limit.

Credit Hours:

3 ▼

Lecture Contact Hours:

3 ▼

Lab Contact Hours:

0 ▼

Note: If variable credit, enter the highest number and add to end of course description. (e.g. "Variable credit, may be taken 1-3 hours.")

Periodicity. Check all that apply.

- Fall Fall (even-numbered years only) Fall (odd-numbered years only)
- Spring Spring (even-numbered years only) Spring (odd-numbered years only)
- Summer On Demand only

Complete Catalog Description:

CSC 244 Computer Architecture

Prerequisite: CSC 131

An overview of computer architecture, which stresses the underlying design principles and the impact of these principles on computer performance. General topics include digital logic circuits, digital components, data representation, basic computer organization, processor design, control design, pipelining, vector processing, input-output organization, and memory organization.

Credit hours: 3 Lecture contact hours: 3 Lab contact hours: 0

Typically offered: Fall, Spring

Include sample syllabus (list topics, course goals.) Use text box OR upload only file types of PDF, DOC or DOCX.

[Empty text box for sample syllabus]

0/30000 character limit.

Attached [View Attachment](#)

Purpose of Course

It is a core course which will be required by all students.

59/30000 character limit.

Relationship to Other Departments

None

4/30000 character limit.

Is there a graduate/undergraduate parallel course to this one? No Yes

Enter parallel course number

nullnull null

How do these classes differ?

[Empty text box for describing differences between classes]

0/30000 character limit.

New Course Resource Information

Anticipated Average Enrollment per section:

Maximum Enrollment Limit per section:

Anticipated Average Enrollment per semester:

Maximum Enrollment Limit per semester:

Anticipated Average Enrollment per year:

Maximum Enrollment Limit per year:

Faculty Load Assignment (equated hours):

Is another course being deleted? No Yes

Select course number and title being deleted.

nullnull null

What will this course require in the way of:

Additional library Holdings

Textbook: Computer System Architecture (3rd Edition) by M. Morris Mano, Prentice-Hall, Inc. (ISBN: 0131755633)

110/30000 character limit.

Additional computer resources

None

4/30000 character limit.

Additional or remodeled facilities

None

4/30000 character limit.

Additional equipment or supplies

None

4/30000 character limit.

Additional travel funds

None

4/30000 character limit.

Additional faculty; general vs specialized

None

4/30000 character limit.

Additional faculty; regular vs per-course

None

4/30000 character limit.

Other additional expenses

None

4/30000 character limit.

If additional faculty are not required, how will faculty be made available to teach this course?

We are making a new hire in Fall 2020 which enables us to cover this course without any additional faculty.

107/30000 character limit.

List names of current faculty qualified and available to teach this course

Siming Liu
Hui Liu
Ajay Katangur

32/30000 character limit.

What is the anticipated source of students for this course?

Undergraduate Students

22/30000 character limit.

If from within the department, will students be taking this course in addition to or in place of other courses?

This will be a core class. Since our science requirement is going down (ABET only requires 6 hours of science courses instead of 15 hours), students will not have a problem taking this course.

193/30000 character limit.

If from outside the department, which courses in other departments would most likely be affected?)

None

4/30000 character limit.

Other comments:

None

4/30000 character limit.

What is the date that this new course was approved by departmental or program faculty? (MM/DD/YYYY)

01/28/2020

Current Status:

College Council Review

Proposal Progress:

02/04/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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CSC 244.001 Computer Architecture
Computer Science Department
Fall 2020

A. COURSE INFORMATION

Course number/section: CSC 244.001
Class meeting time: TBD
Class location: TBD
Course Website: <https://blackboard.missouristate.edu>

B. INSTRUCTOR INFORMATION

Instructor: Dr. Ajay K Katangur
Office location: Cheek Hall 203B
Office hours: TBD
Telephone: 417-836-6646
E-mail: ajaykatangur at missouristate dot edu
Appointments: By e-mail

C. COURSE DESCRIPTION**Catalog Course Description**

An overview of computer architecture, which stresses the underlying design principles and the impact of these principles on computer performance. General topics include digital logic circuits, digital components, data representation, basic computer organization, processor design, control design, pipelining, vector processing, input-output organization, and memory organization.

D. PREREQUISITES AND COREQUISITES**Prerequisites**

CSC 131 (Computational Thinking). If you do not have the prerequisites (or equivalents from another university) shown on your records, you may be dropped from class at any time.

Corequisites

None

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES**Required Textbook(s)**

- Computer System Architecture (3rd Edition) by M. Morris Mano, Prentice-Hall, Inc. (ISBN: 0131755633)

Optional Textbook(s) or Other References

None

F. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Assessment is a process used by instructors to help improve learning. Assessment is essential for effective learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course's student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are

listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

By the end of this course, students should be able to:

1. Describe how data is represented internally in different computer platforms
2. Explain functions of various logic gates and flip-flops that are used in the design of digital components
3. Apply K-maps and Boolean Algebraic techniques in designing simplified digital circuits.
4. Explain functions and usages of various digital components such as decoders, encoders, multiplexers, adders, flip-flops, registers, etc and use them in design.
5. Explain the design of ALUs using components such as adders, multiplexers, etc.
6. Explain and use processor design techniques that include control unit design.
7. Explain various computer systems including accumulator machines, stack machines and general-purpose register machines, instruction types, instruction formats, and addressing modes.
8. Explain techniques of pipelining used in computer architecture.
9. Explain memory system and performance improvement using cache memory.

Assessment of objectives will be conducted through quizzes, exams, and homework assignments.

G. MAJOR COURSE REQUIREMENTS AND GRADING

This is a core course. This is a difficult course that demands all students attend all classes! Regular completion of all reading, homework, and other outside assignments, are absolutely essential for success in this course.

Your course grade will be decided on your performance in the homework assignments, quizzes, and three exams. The distribution of points is as follows:

ACTIVITY	% of FINAL GRADE
Exams	60
Quizzes	10
Homework Assignments	30

Grading scale: A: 100-90, B: 89-80, C: 79-70, D: 69-60, and F: 59-0.

Homework Assignments: Approximately 8-10 homework assignments will be given. No late homework assignments will be accepted. Partial credit will be given for incomplete assignments.

Quizzes: There will be pop quizzes from time-to-time.

Exams: The first exam will be given on September 22, 2020, the second exam will be given on October 29, 2020 during the scheduled class time, and the final exam will be given on December 8, 2020 from 11:00 am – 1:00 pm.

H. COURSE CONTENT/SCHEDULE

Week 1:	Course Overview
---------	-----------------

	Chapter 1: Digital Logic Circuits
Week 2:	Chapter 1: Digital Logic Circuits, HW1 Chapter 2: Digital Components
Week 3:	Chapter 2: Digital Components, HW2
Week 4:	Chapter 3: Data Representation, HW3
Week 5:	Chapter 4: Register Transfer and Microoperations
Week 6:	Exam 1 Chapter 5: Basic Computer Organization and Design
Week 7:	Chapter 5: Basic Computer Organization and Design
Week 8:	Chapter 5: Basic Computer Organization and Design, HW4 Fall Holiday, No class
Week 9:	Chapter 6: Programming the Basic Computer
Week 10:	Chapter 7: Microprogrammed Control, HW5
Week 11:	Chapter 8: Central Processing Unit Exam 2
Week 12:	Chapter 8: Central Processing Unit, HW6
Week 13:	Chapter 9: Pipeline and Vector Processing, HW7
Week 14:	Chapter 11: Input-Output Organization, HW8
Week 15:	Chapter 12: Memory Organization Thanksgiving Break, No class
Week 16:	Chapter 12: Memory Organization, HW9
Final Exam on Monday, December 11, 2020 from 11:00 AM - 1:00 PM.	

I. IMPORTANT DATES

Sep 7	Labor Day holiday (no classes)
Sep 22	Exam 1
Oct 8-9	Fall Holiday (no classes)
Oct 29	Exam 2
Nov 6	Last day to drop or withdraw from classes

Nov 26	Exam 3
Nov 25-Nov 29	Thanksgiving Holiday (no classes)
Dec 3	Last day of classes
Dec 11	Final Exam , 11:00 am – 1:00 pm

J. COURSE POLICIES

This course will be governed by all policies described in the Faculty Handbook and the Student Guidebook of Missouri State University.

Course Syllabus: We will meet for lecture on Tuesdays and Thursdays, when new material will be presented. We will follow the text generally, but non-text material may also be included in the lectures. The quizzes and exams will be given during the class hours. You are responsible for all the material presented during the lecture.

Exams: Exams will cover all lecture and reading material discussed in the class. Exams must be taken on the hour they are scheduled.

Missed Exam: In the event, if you cannot attend the class to take the exam due to some emergency or some unavoidable situation (such as serious illness, death in the family, participation in university sports, religious observations, and so on) you must notify me as soon as possible before the exam and also you must validate your absence by providing me a document (e.g., with a letter from your doctor). Once your cause is validated a make-up exam will be given.

Quizzes: All quizzes are pop-quizzes. A quiz can be given at any point during the scheduled class time. No makeup quizzes will be given. A total of one least score on a quiz will be dropped.

Homework Assignments: Assignments will significantly build on the material from the lectures. They will be posted on the course web page (blackboard) or hard copies are handed out in the class during the lecture sessions. Please refer to the handout on programming assignments for complete details on submission requirements. (Details decided per assignment). All the assignments are due at the beginning of the class on the due date. If the student is absent on the assignment due date, it is the student's responsibility to see to it that the assignment is submitted on the designated date. An assignment that is turned in after the class on the due date is considered one day late. There is a penalty for late submissions. Late assignments will be counted 20% off for each day after the due time. 100% penalty (i.e. no credit) if submitted after 5 days. If you have not completed your assignment by the due date, you should submit the work you have done for partial credit. No work will be accepted once the graded work has been returned or the solution has been disclosed to the class, except for unusual circumstances which the instructor feels reasonable. Note that any kind of hardware or software failure or machine unavailability in the lab does not merit an extension on the assignment. Diskettes upon which major examinations, assignments, projects or papers submitted may be retained by the instructor as a permanent record of the student's work

Grading Error: All questions concerning grading of a returned quiz, test or assignment must be resolved within one week. It is always a good idea to keep all your work until the end of the semester. In case of any recording errors or doubts, you may produce them for correction or verification.

Extra Credit: There is no EXTRA CREDIT

Academic Honesty Policy: You are expected to avoid all forms of academic dishonesty as defined in Catalog. In addition, students are expected to behave in an ethical manner in all class activities. If you feel uncertain about an activity, please speak to me BEFORE problems arise. Ethical behavior is a requirement for passing this course. All work submitted for grading must be the student's own work. Plagiarism will result in a score of 0 (zero) for the work and an academic integrity incident report will be filed (https://cm.maxient.com/reportingform.php?MissouriStateUniv&layout_id=1). No copying from another student's work, of any class, is allowed. It is the student's duty to allow no one to copy his or her work. Anyone found cheating and/or copying, in the exams or assignments, will receive an automatic F for the course.

Collaboration: If two or more people collaborate on an assignment assigned it should be notified on the assignment and each student should submit his or her solutions for grading. The grade obtained on such an assignment is the total points obtained for the assignment divided by the square of the number of people who collaborated on the assignment (e.g., if 3 people collaborate on an assignment and the grade for that assignment is 90 out of 100, then each student receives a grade of $90/3^2 = 10$). If you do not notify me of such collaboration it will be treated as copied and action will be taken as discussed under the academic honesty policy.

Attendance: While in class attendance will not directly affect the grade, you are responsible for any materials covered or handed out or announcements made for the tests and assignments in your absence. Records of your attendance will be maintained and reported to the university. Students found missing classes without the instructor's permission will be automatically withdrawn from the course.

Absence from class: Students are responsible for all materials covered in class and assigned. Should a student be absent from class, it is his/her responsibility to get the notes, etc. for that missed class. More important, should there be assignments, it is the student responsibility to obtain such assignments. No excuse will be accepted for assignments not turned in because the student was absent when it was due.

Laptop Use

Laptops, Tablets cannot be used in the class, unless used for course related content.

Food in Class

No food in the class or labs.

K. UNIVERSITY POLICIES

- **Academic Dishonesty**

Missouri State University is a community of scholars committed to developing educated persons who accept the responsibility to practice personal and academic integrity. You are responsible for knowing and following the University's academic integrity policy plus additional more-specific policies for each class. The University policy, formally known as the "Student Academic Integrity Policies and Procedures" is available online at www.missouristate.edu/policy/Op3_01_AcademicIntegrityStudents.htm and also at the Reserves Desk in Meyer Library. Any student participating in any form of academic dishonesty will be subject to sanctions as described in this policy.

- **Cell Phone Policy**

As a member of the learning community, each student has a responsibility to other students who are members of the community. When cell phones or pagers ring and students respond in class or leave class to respond, it disrupts the class. Therefore, the Office of the Provost prohibits the use by students of cell phones, pagers, PDAs, or similar communication devices during scheduled classes. All such devices must be turned off or put in a silent (vibrate) mode and ordinarily should not be taken out during class. Given the fact that these same communication devices are an integral part of the University's emergency notification system, an exception to this policy would occur when numerous devices activate simultaneously. When this occurs, students may consult their devices to determine if a university emergency exists. If that is not the case, the devices should be immediately returned to silent mode and put away. Other exceptions to this policy may be granted at the discretion of the instructor.

- **Emergency Storm Shelter and Evacuation Information**

In the event of an emergency or incident in the classroom, the faculty member is often the first university representative or authority figure recognized to be in charge until emergency first responders arrive. At the first class meeting, students should become familiar with a basic emergency response plan through a dialogue with the instructor that includes a review and awareness of exits specific to the classroom and the emergency relocation areas for the building. For your convenience, this information has been provided below by the Office of the Provost and the Office of University Safety. Students with disabilities impacting mobility should discuss with their instructor the approved accommodations for emergency situations and additional options. Faculty must include information related to emergency response in their syllabi (see <http://www.missouristate.edu/provost/syllabi.htm>). For more information contact University Safety (417-836-5509) or consult the [Emergency Quick Reference Guide](#) and [Campus Emergency Response Plan](#).

Tornado Shelter Area Information (in case of severe weather).

Building	Tornado Shelter Area
Cheek Hall	Evacuate floors 1, 2, and 3 using Center, North and West stairs Shelter in basement interior hallway.

Emergency Assembly Point Instructions (in case the building needs to be evacuated for events such as fire, gas leak, etc.)

Building	Emergency Assembly Point
Cheek Hall	West to Sicheluff Hall 1st Floor South to Ellis Hall 1st Floor Wouthwest to hill Hall 1st Floor

Areas of Rescue (in case you are unable to evacuate to the ground floor, these are areas of temporary safety until rescuers arrive)

Building	Area of Rescue
Cheek Hall	None in this facility

- **Religious accommodation**

The University may provide a reasonable accommodation based on a person's sincerely held religious belief. In making this determination, the University reviews a variety of factors, including whether the accommodation would create an undue hardship. The accommodation request imposes responsibilities and obligations on both the individual requesting the accommodation and the University. Students who expect to miss classes, examinations, or other assignments as a consequence of their sincerely held religious belief shall be provided with a reasonable alternative opportunity to complete such academic responsibilities. It is the obligation of students to provide faculty with reasonable notice of the dates of religious observances on which they will be absent by submitting a *Request for Religious Accommodation Form* to the instructor by the end of the third week of a full semester course or the end of the second week of a half semester course.

- **Nondiscrimination**

Missouri State University is an equal opportunity/affirmative action institution, and maintains a grievance procedure available to any person who believes he or she has been discriminated against. At all times, it is your right to address inquiries or concerns about possible discrimination to the Office for Institutional Equity and Compliance, Park Central Office Building, 117 Park Central Square, Suite 111, 417-836-4252. Other types of concerns (i.e., concerns of an academic nature) should be discussed directly with your instructor and can also be brought to the attention of your instructor's Department Head. Please visit the OED website at www.missouristate.edu/equity.

- **Disability Accommodation**

If you are a student with a disability and anticipate barriers related to this course, it is important to request accommodations and establish an accommodation plan with the University. Please contact the Disability Resource Center (DRC) (www.missouristate.edu/disability), Meyer Library, Suite 111, 417-836-4192, to initiate the process to establish your accommodation plan. The DRC will work with you to establish your accommodation plan, or it may refer you to other appropriate resources based on the nature of your disability. In order to prepare an accommodation plan, the University usually requires that students provide documentation relating to their disability. Please be prepared to provide such documentation if requested. Once a University accommodation plan is established, you may notify the class instructor of approved accommodations. If you wish to utilize your accommodation plan, it is suggested that you do so in a timely manner, preferably within the first two weeks of class. Early notification to the instructor allows for full benefit of the accommodations identified in the plan. Instructors will not receive the accommodation plan until you provide that plan, and are not required to apply accommodations retroactively.

- **Dropping a Class**

It is your responsibility to understand the University's procedure for dropping a class. If you stop attending this class but do not follow proper procedure for dropping the class, you will receive a failing grade and will also be financially obligated to pay for the class. For information about dropping a class or withdrawing from the university, contact the Office of the Registrar at 836-5520. Please visit <https://www.missouristate.edu/registrar/refundschedules.htm> for deadlines.

- **Audio and Video Recording Course Activity**

Students who wish to record lectures or class activities for study purposes should inform the faculty member first. Distribution or sale of recordings or other course materials is prohibited without the written permission of the instructor and other students who are recorded. Distribution without permission is a violation of copyright law and the Code of Student Rights and Responsibilities (Sections 4.6, 4.8, 4.9).

L. GENERAL DISCLAIMER

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.

Curricular Action Workflow



New Course Proposal Form

**Submitted on 02/04/2020 by Ajay
Katangur (AjayKatangur@MissouriState.edu).**

***All fields require input**

- New COURSE
- New REGULAR PERMANENT SECTION of an existing variable content course. If a new regular section of an existing variable topics course, enter the existing course number below

Course Code:

CSC

Course Number: ([Check Availability](#))

360

Course Title:

Operating Systems

Will this course become part of a program? No Yes (A corresponding program change form must be submitted)

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Prerequisite/Co-requisite or enter 'None':

'C' or better in CSC 232, CSC 244

Catalog Course Description: (Include any Pass/Not Pass grading restrictions, repeatable limits, limitation on course applicability, UG/GR parallel course, etc.)

Introduction to operating systems concepts, principles, and design. Topics include: processes, threads, CPU scheduling, mutual exclusion, process synchronization, deadlocks, memory management, file systems, i/o systems, disk management, distributed systems, security and protection. May be taught concurrently with CSC 660. Cannot receive credit for both CSC 360 and CSC 660.

375/30000 character limit.

Credit Hours:

3 ▼

Lecture Contact Hours:

3 ▼

Lab Contact Hours:

0 ▼

Note: If variable credit, enter the highest number and add to end of course description. (e.g. "Variable credit, may be taken 1-3 hours.")

Periodicity. Check all that apply.

- Fall Fall (even-numbered years only) Fall (odd-numbered years only)
- Spring Spring (even-numbered years only) Spring (odd-numbered years only)
- Summer On Demand only

Complete Catalog Description:

CSC 360 Operating Systems

Prerequisite: 'C' or better in CSC 232, CSC 244

Introduction to operating systems concepts, principles, and design. Topics include: processes, threads, CPU scheduling, mutual exclusion, process synchronization, deadlocks, memory management, file systems, i/o systems, disk management, distributed systems, security and protection. May be taught concurrently with CSC 660. Cannot receive credit for both CSC 360 and CSC 660.

Credit hours: 3 Lecture contact hours: 3 Lab contact hours: 0

Typically offered: Fall, Spring

Include sample syllabus (list topics, course goals.) Use text box OR upload only file types of PDF, DOC or DOCX.

[Empty text box for sample syllabus]

0/30000 character limit.

Attached [View Attachment](#)

Purpose of Course

It is a core course which will be required by all students.

59/30000 character limit.

Relationship to Other Departments

None

4/30000 character limit.

Is there a graduate/undergraduate parallel course to this one? No Yes

Enter parallel course number

null null null

How do these classes differ?

Empty text box for describing differences between classes.

0/30000 character limit.

New Course Resource Information

Anticipated Average Enrollment per section:

Maximum Enrollment Limit per section:

Anticipated Average Enrollment per semester:

Maximum Enrollment Limit per semester:

Anticipated Average Enrollment per year:

Maximum Enrollment Limit per year:

Faculty Load Assignment (equated hours):

Is another course being deleted? No Yes

Select course number and title being deleted.

null null null

What will this course require in the way of:

Additional library Holdings

Textbook: Operating System Concepts (10th Edition) by Silberschatz, Galvin and Gagne, John Wiley & Sons (ISBN: 978-1119456339)

126/30000 character limit.

Additional computer resources

None

4/30000 character limit.

Additional or remodeled facilities

None

4/30000 character limit.

Additional equipment or supplies

None

4/30000 character limit.

Additional travel funds

None

4/30000 character limit.

Additional faculty; general vs specialized

None

4/30000 character limit.

Additional faculty; regular vs per-course

None

4/30000 character limit.

Other additional expenses

None

4/30000 character limit.

If additional faculty are not required, how will faculty be made available to teach this course?

We are making a new hire in Fall 2020 which enables us to cover this course without any additional faculty.

107/30000 character limit.

List names of current faculty qualified and available to teach this course

Siming Liu
Hui Liu
Ajay Katangur

32/30000 character limit.

What is the anticipated source of students for this course?

Undergraduate Students

22/30000 character limit.

If from within the department, will students be taking this course in addition to or in place of other courses?

This will be a core class. Since our science requirement is going down (ABET only requires 6 hours of science courses instead of 15 hours), students will not have a problem taking this course. On top of this, students will not be needing CSC 344 after this course is approved.

276/30000 character limit.

If from outside the department, which courses in other departments would most likely be affected?)

None

4/30000 character limit.

Other comments:

None

4/30000 character limit.

What is the date that this new course was approved by departmental or program faculty? (MM/DD/YYYY)

01/28/2020

Current Status:

College Council Review

Proposal Progress:

02/04/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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**CSC 360.001 Operating Systems
Computer Science Department
Fall 2020**

A. COURSE INFORMATION

Course number/section: CSC 360.001
Class meeting time: TBD
Class location: TBD
Course Website: <https://blackboard.missouristate.edu>

B. INSTRUCTOR INFORMATION

Instructor: Dr. Ajay K Katangur
Office location: Cheek Hall 203B
Office hours: TBD
Telephone: 417-836-6646
E-mail: ajaykatangur at missouristate dot edu
Appointments: By e-mail

C. COURSE DESCRIPTION**Catalog Course Description**

Introduction to operating systems concepts, principles, and design. Topics include: processes, threads, CPU scheduling, mutual exclusion, process synchronization, deadlocks, memory management, file systems, i/o systems, disk management, distributed systems, security and protection. May be taught concurrently with CSC 660. Cannot receive credit for both CSC 360 and CSC 660.

D. PREREQUISITES AND COREQUISITES**Prerequisites**

'C' or better in CSC 232 (Data Structures) and CSC 244 (Computer Architecture). Strong knowledge of C/C++ is required. If you do not have the prerequisites (or equivalents from another university) shown on your records, you may be dropped from class at any time.

Corequisites

None

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES**Required Textbook(s)**

- Operating System Concepts (10th Edition) by Silberschatz, Galvin and Gagne, John Wiley & Sons (ISBN: 978-1119456339)

Optional Textbook(s) or Other References

- A. S. Tanenbaum, Modern Operating Systems, 4th Edition (2015), Pearson
- Stallings, W. (2009) Operating Systems: Internals and Design Principles, 6th Edition. Prentice Hall (ISBN: 0136006329). Companion site
- Molay, B. (2002) Understanding Unix/Linux Programming: A Guide to Theory and Practice (1st Edition). Prentice Hall (ISBN: 0130083968)

F. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Assessment is a process used by instructors to help improve learning. Assessment is essential for effective learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course's student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

By the end of this course, students should be able to:

1. Understand the functionality operating systems provide, basic operations and services
2. Understand the design of various operating systems, system calls, kernel and user modes, operating system structures, virtual machines, and the system boot process
3. Understand the concept of a process, process scheduling and inter-process communication
4. Understand the concept of a thread, multi-threading models and libraries
5. Understand the concepts of CPU scheduling, scheduling criteria, and scheduling algorithms
6. Understand various aspects of process synchronization including the critical section problem, Peterson's solution, synchronization hardware, and semaphores. Classic synchronization problems will also be explored.
7. Understand the system model and characteristics of deadlocks and methods of handling deadlocks (prevention, avoidance, detection, recovery)
8. Understand the structures for main memory including swapping, paging, and segmentation
9. Understand the structures for virtual memory including demand paging, page replacement algorithms, frame allocation, and thrashing
10. Understand the concepts related to the file system interface and file system implementation including free space management, efficiency and performance
11. Understand the concepts related to mass storage structures such as disk structure, attachment, and scheduling and including the various RAID architectures
12. Understand the various aspects regarding security and protection in operating systems
13. Understand distributed operating system structures, distributed file systems, and distributed coordination
14. (Time Permitting) Explore case studies using the Microsoft Windows XP and Linux operating systems

Assessment of objectives will be conducted through quizzes, exams, homework assignments, and projects.

G. MAJOR COURSE REQUIREMENTS AND GRADING

This is a high-level core course. This is a difficult course that demands all students attend all classes! Regular completion of all reading, homework, and other outside assignments, are absolutely essential for success in this course.

Your course grade will be decided on your performance in the homework assignments, quizzes, projects, and three exams. The distribution of points is as follows:

ACTIVITY	% of FINAL GRADE
----------	------------------

Exams	45
Quizzes	10
Homework Assignments	10
Projects	35

Grading scale: A: 100-90, B: 89-80, C: 79-70, D: 69-60, and F: 59-0.

Homework Assignments: Approximately 3-4 homework assignments will be given. No late homework assignments will be accepted. Partial credit will be given for incomplete assignments.

Quizzes: There will be pop quizzes from time-to-time.

Project: There will be approximately 4-5 programming projects. Unless otherwise directed, the programming projects must be written in C/C++. The projects can be submitted electronically and the details on project submission will be given to you together with the project assignment.

Exams: The first exam will be given on September 22, 2020, the second exam will be given on October 29, 2020 during the scheduled class time, and the final exam will be given on December 8, 2020 from 11:00 am – 1:00 pm.

H. COURSE CONTENT/SCHEDULE

Week 1:	Course Overview Chapter 1: Introduction
Week 2:	Chapter 2: Operating System Structures, HW1 UNIX System Calls, Signals
Week 3:	UNIX System Calls, Signals, Project 1 Chapter 3: Processes
Week 4:	Chapter 3: Processes Chapter 4: Threads
Week 5:	Chapter 5: Process Synchronization, HW2
Week 6:	Exam 1 Chapter 6: CPU Scheduling, Project 2
Week 7:	Chapter 6: CPU Scheduling
Week 8:	Chapter 7: Deadlocks, Project 3 Fall Holiday, No class
Week 9:	Chapter 7: Deadlocks Chapter 8: Main Memory

Week 10:	Chapter 8: Main Memory Chapter 9: Virtual Memory
Week 11:	Chapter 9: Virtual Memory Exam 2
Week 12:	Chapter 10: Mass-Storage Structure, Project 4 Chapter 11: File System Interface
Week 13:	Chapter 11: File System Interface Chapter 12: File-System Implementation, HW3
Week 14:	Chapter 13: I/O Systems, Project 5 Chapter 14: Protection
Week 15:	Chapter 15: Security, HW4 Thanksgiving Break, No class
Week 16:	Chapter 17: Distributed Systems
Final Exam on Monday, December 11, 2020 from 11:00 AM - 1:00 PM.	

I. IMPORTANT DATES

Sep 7	Labor Day holiday (no classes)
Sep 22	Exam 1
Oct 8-9	Fall Holiday (no classes)
Oct 29	Exam 2
Nov 6	Last day to drop or withdraw from classes
Nov 26	Exam 3
Nov 25-Nov 29	Thanksgiving Holiday (no classes)
Dec 3	Last day of classes
Dec 11	Final Exam , 11:00 am – 1:00 pm

J. COURSE POLICIES

This course will be governed by all policies described in the Faculty Handbook and the Student Guidebook of Missouri State University.

Course Syllabus: We will meet for lecture on Tuesdays and Thursdays, when new material will be presented. We will follow the text generally, but non-text material may also be included in the lectures. The quizzes and exams will be given during the class hours. You are responsible for all the material presented during the lecture.

Exams: Exams will cover all lecture and reading material discussed in the class. Exams must be

taken on the hour they are scheduled.

Missed Exam: In the event, if you cannot attend the class to take the exam due to some emergency or some unavoidable situation (such as serious illness, death in the family, participation in university sports, religious observations, and so on) you must notify me as soon as possible before the exam and also you must validate your absence by providing me a document (e.g., with a letter from your doctor). Once your cause is validated a make-up exam will be given.

Quizzes: All quizzes are pop-quizzes. A quiz can be given at any point during the scheduled class time. No makeup quizzes will be given. A total of one least score on a quiz will be dropped.

Homework Assignments: Assignments will significantly build on the material from the lectures. They will be posted on the course web page (blackboard) or hard copies are handed out in the class during the lecture sessions. Please refer to the handout on programming assignments for complete details on submission requirements. (Details decided per assignment). All the assignments are due at the beginning of the class on the due date. If the student is absent on the assignment due date, it is the student's responsibility to see to it that the assignment is submitted on the designated date. An assignment that is turned in after the class on the due date is considered one day late. There is a penalty for late submissions. Late assignments will be counted 20% off for each day after the due time. 100% penalty (i.e. no credit) if submitted after 5 days. If you have not completed your assignment by the due date, you should submit the work you have done for partial credit. No work will be accepted once the graded work has been returned or the solution has been disclosed to the class, except for unusual circumstances which the instructor feels reasonable. Note that any kind of hardware or software failure or machine unavailability in the lab does not merit an extension on the assignment. Diskettes upon which major examinations, assignments, projects or papers submitted may be retained by the instructor as a permanent record of the student's work

Grading Error: All questions concerning grading of a returned quiz, test or assignment must be resolved within one week. It is always a good idea to keep all your work until the end of the semester. In case of any recording errors or doubts, you may produce them for correction or verification.

Extra Credit: There is no EXTRA CREDIT

Academic Honesty Policy: You are expected to avoid all forms of academic dishonesty as defined in Catalog. In addition, students are expected to behave in an ethical manner in all class activities. If you feel uncertain about an activity, please speak to me BEFORE problems arise. Ethical behavior is a requirement for passing this course. All work submitted for grading must be the student's own work. Plagiarism will result in a score of 0 (zero) for the work and an academic integrity incident report will be filed (https://cm.maxient.com/reportingform.php?MissouriStateUniv&layout_id=1). No copying from another student's work, of any class, is allowed. It is the student's duty to allow no one to copy his or her work. Anyone found cheating and/or copying, in the exams or assignments, will receive an automatic F for the course.

Collaboration: If two or more people collaborate on an assignment assigned it should be notified on the assignment and each student should submit his or her solutions for grading. The grade obtained on such an assignment is the total points obtained for the assignment divided by the square of the number of people who collaborated on the assignment (e.g., if 3 people collaborate on an assignment and the

grade for that assignment is 90 out of 100, then each student receives a grade of $90/3^2 = 10$). If you do not notify me of such collaboration it will be treated as copied and action will be taken as discussed under the academic honesty policy.

Attendance: While in class attendance will not directly affect the grade, you are responsible for any materials covered or handed out or announcements made for the tests and assignments in your absence. Records of your attendance will be maintained and reported to the university. Students found missing classes without the instructor's permission will be automatically withdrawn from the course.

Absence from class: Students are responsible for all materials covered in class and assigned. Should a student be absent from class, it is his/her responsibility to get the notes, etc. for that missed class. More important, should there be assignments, it is the student responsibility to obtain such assignments. No excuse will be accepted for assignments not turned in because the student was absent when it was due.

Laptop Use

Laptops, Tablets cannot be used in the class, unless used for course related content.

Food in Class

No food in the class or labs.

K. UNIVERSITY POLICIES

- **Academic Dishonesty**

Missouri State University is a community of scholars committed to developing educated persons who accept the responsibility to practice personal and academic integrity. You are responsible for knowing and following the University's academic integrity policy plus additional more-specific policies for each class. The University policy, formally known as the "Student Academic Integrity Policies and Procedures" is available online at www.missouristate.edu/policy/Op3_01_AcademicIntegrityStudents.htm and also at the Reserves Desk in Meyer Library. Any student participating in any form of academic dishonesty will be subject to sanctions as described in this policy.

- **Cell Phone Policy**

As a member of the learning community, each student has a responsibility to other students who are members of the community. When cell phones or pagers ring and students respond in class or leave class to respond, it disrupts the class. Therefore, the Office of the Provost prohibits the use by students of cell phones, pagers, PDAs, or similar communication devices during scheduled classes. All such devices must be turned off or put in a silent (vibrate) mode and ordinarily should not be taken out during class. Given the fact that these same communication devices are an integral part of the University's emergency notification system, an exception to this policy would occur when numerous devices activate simultaneously. When this occurs, students may consult their devices to determine if a university emergency exists. If that is not the case, the devices should be immediately returned to silent mode and put away. Other exceptions to this policy may be granted at the discretion of the instructor.

- **Emergency Storm Shelter and Evacuation Information**

In the event of an emergency or incident in the classroom, the faculty member is often the

first university representative or authority figure recognized to be in charge until emergency first responders arrive. At the first class meeting, students should become familiar with a basic emergency response plan through a dialogue with the instructor that includes a review and awareness of exits specific to the classroom and the emergency relocation areas for the building. For your convenience, this information has been provided below by the Office of the Provost and the Office of University Safety. Students with disabilities impacting mobility should discuss with their instructor the approved accommodations for emergency situations and additional options. Faculty must include information related to emergency response in their syllabi (see <http://www.missouristate.edu/provost/syllabi.htm>). For more information contact University Safety (417-836-5509) or consult the [Emergency Quick Reference Guide](#) and [Campus Emergency Response Plan](#).

Tornado Shelter Area Information (in case of severe weather).

Building	Tornado Shelter Area
Cheek Hall	Evacuate floors 1, 2, and 3 using Center, North and West stairs Shelter in basement interior hallway.

Emergency Assembly Point Instructions (in case the building needs to be evacuated for events such as fire, gas leak, etc.)

Building	Emergency Assembly Point
Cheek Hall	West to Sicheluff Hall 1st Floor South to Ellis Hall 1st Floor Wouthwest to hill Hall 1st Floor

Areas of Rescue (in case you are unable to evacuate to the ground floor, these are areas of temporary safety until rescuers arrive)

Building	Area of Rescue
Cheek Hall	None in this facility

- **Religious accommodation**

The University may provide a reasonable accommodation based on a person's sincerely held religious belief. In making this determination, the University reviews a variety of factors, including whether the accommodation would create an undue hardship. The accommodation request imposes responsibilities and obligations on both the individual requesting the accommodation and the University. Students who expect to miss classes, examinations, or other assignments as a consequence of their sincerely held religious belief shall be provided with a reasonable alternative opportunity to complete such academic responsibilities. It is the obligation of students to provide faculty with reasonable notice of the dates of religious observances on which they will be absent by submitting a *Request for Religious Accommodation Form* to the instructor by the end of the third week of a full semester course or the end of the second week of a half semester course.

- **Nondiscrimination**

Missouri State University is an equal opportunity/affirmative action institution, and maintains a

grievance procedure available to any person who believes he or she has been discriminated against. At all times, it is your right to address inquiries or concerns about possible discrimination to the Office for Institutional Equity and Compliance, Park Central Office Building, 117 Park Central Square, Suite 111, 417-836-4252. Other types of concerns (i.e., concerns of an academic nature) should be discussed directly with your instructor and can also be brought to the attention of your instructor's Department Head. Please visit the OED website at www.missouristate.edu/equity.

- **Disability Accommodation**

If you are a student with a disability and anticipate barriers related to this course, it is important to request accommodations and establish an accommodation plan with the University. Please contact the Disability Resource Center (DRC) (www.missouristate.edu/disability), Meyer Library, Suite 111, 417-836-4192, to initiate the process to establish your accommodation plan. The DRC will work with you to establish your accommodation plan, or it may refer you to other appropriate resources based on the nature of your disability. In order to prepare an accommodation plan, the University usually requires that students provide documentation relating to their disability. Please be prepared to provide such documentation if requested. Once a University accommodation plan is established, you may notify the class instructor of approved accommodations. If you wish to utilize your accommodation plan, it is suggested that you do so in a timely manner, preferably within the first two weeks of class. Early notification to the instructor allows for full benefit of the accommodations identified in the plan. Instructors will not receive the accommodation plan until you provide that plan, and are not required to apply accommodations retroactively.

- **Dropping a Class**

It is your responsibility to understand the University's procedure for dropping a class. If you stop attending this class but do not follow proper procedure for dropping the class, you will receive a failing grade and will also be financially obligated to pay for the class. For information about dropping a class or withdrawing from the university, contact the Office of the Registrar at 836-5520. Please visit <https://www.missouristate.edu/registrar/refundschedules.htm> for deadlines.

- **Audio and Video Recording Course Activity**

Students who wish to record lectures or class activities for study purposes should inform the faculty member first. Distribution or sale of recordings or other course materials is prohibited without the written permission of the instructor and other students who are recorded. Distribution without permission is a violation of copyright law and the Code of Student Rights and Responsibilities (Sections 4.6, 4.8, 4.9).

L. GENERAL DISCLAIMER

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.

Curricular Action Workflow



Change Course Proposal Form

Submitted on 02/04/2020 by Ajay Katangur (AjayKatangur@MissouriState.edu).

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC111 Introduction to Computing

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Current online catalog description:

CSC 111 Introduction to Computing

Prerequisite: eligible for MTH 261. An introduction to computer hardware, software, and network resources. Spreadsheets and computer-based mathematical software will be emphasized. Students will write programs and create computational models to analyze data and make written and oral presentations describing conclusions drawn from their analyses. 3(3-0) F,S

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

← → **B** *I* ~~S~~

CSC 111 Introduction to Computing

Prerequisite: eligible for MTH 261. An introduction to computer hardware, software, and network resources. Spreadsheets and computer-based mathematical software will be emphasized. Students will write programs and create computational models to analyze data and make written and oral presentations describing conclusions drawn from their analyses. 3(3-0) **F,S**

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What is changing? Check all boxes that apply.

- Course Code
- Course Number (Check Availability)
- Title
- Prerequisite
- Credit Hours/Contact Hours
- Periodicity
- Description

Reason for proposed change

Course is not offered on a regular basis, hence changing to on-demand.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

- Routine or annual review/assessment of curriculum
- Faculty Input
- Student Input
- Accreditation/certification compliance
- Review of catalog information

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/04/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Curricular Action Workflow



Change Course Proposal Form

Submitted on 02/04/2020 by Ajay Katangur (AjayKatangur@MissouriState.edu).

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC121 Introduction to BASIC Programming

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Current online catalog description:

CSC 121 Introduction to BASIC Programming

Problem solving with computers, analysis of computational problems and development of algorithms for their solution. Algorithms will be implemented in the BASIC language utilizing personal computers. 3(3-0) S

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

↶ ↷ **B** *I* ~~S~~

CSC 121 Introduction to BASIC Programming

Problem solving with computers, analysis of computational problems and development of algorithms for their solution. Algorithms will be implemented in the BASIC language utilizing personal computers. 3(3-0) **DS**

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What is changing? Check all boxes that apply.

- | | | | |
|---|--|--------------------------------------|---------------------------------------|
| <input type="checkbox"/> Course Code | <input type="checkbox"/> Course Number (<u>Check Availability</u>) | <input type="checkbox"/> Title | <input type="checkbox"/> Prerequisite |
| <input type="checkbox"/> Credit Hours/Contact Hours | <input checked="" type="checkbox"/> Periodicity | <input type="checkbox"/> Description | |

Reason for proposed change

Course is not offered on a regular basis, hence changing to on-demand.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

- Routine or annual review/assessment of curriculum
- Faculty Input
- Student Input
- Accreditation/certification compliance
- Review of catalog information

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/04/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Change Course Proposal Form

Submitted on 02/03/2020 by Ajay Katangur (AjayKatangur@MissouriState.edu).

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC125 Introduction to C++ Programming

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Current online catalog description:

CSC 125 Introduction to C++ Programming

Programming and problem-solving using C++. Language constructs for assignment, flow control, input/output and functions are studied and applied. Techniques of object-oriented programming are introduced. 4(3-2) F

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)



CSC 125 Introduction to C++ Programming

Programming and problem-solving using C++. **Topics will include data representation and data types, logic and control flow, selection, loops, and functions, etc.** ~~Language constructs for assignment, flow control, input/output and functions are studied and applied.~~ Techniques of object-oriented programming are introduced. **Concurrent enrollment in MTH 136 or MTH 137 or MTH 138 is strongly suggested for CS majors or minors.** 4(3-2) F,S

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What is changing? Check all boxes that apply.

- Course Code
- Course Number ([Check Availability](#))
- Title
- Prerequisite
- Credit Hours/Contact Hours
- Periodicity
- Description

Reason for proposed change

The catalog course description is modified to accurately reflect the content taught in the course. Students will be able to plan their schedule accordingly if the expectations are known ahead of time. This will help with clarity.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

- Routine or annual review/assessment of curriculum
 Faculty Input
 Student Input
- Accreditation/certification compliance
 Review of catalog information

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/03/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Curricular Action Workflow



Change Course Proposal Form

**Submitted on 02/03/2020 by Ajay
Katangur (AjayKatangur@MissouriState.edu).**

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC130 The World of Computer Science

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Current online catalog description:

CSC 130 The World of Computer Science

A broad overview of computer science, with topics ranging from the basic structure of a computer to artificial intelligence. Students will use a high-level language to investigate and implement solutions to problems in a range of fields. Suitable for non-majors who want to learn more about computer science. 3(3-0) F,S

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

← → B I S

CSC 130 The World of Computer Science

~~A broad overview of computer science, with topics ranging from the basic structure of a computer to artificial intelligence. Students will use a high level language to investigate and implement solutions to problems in a range of fields. Suitable for non majors who want to learn more about computer science.~~ **An introduction to programming and computer science. Topics will include data representation, algorithm design, and software development. Students will learn a high level language and use it to write programs. Suitable for non-majors who want to learn about programming and computer science. Concurrent enrolling in MTH 136 or MTH 137 or MTH 138 is strongly suggested for CS majors or minors.** 3(3-0) F,S

POWERED BY TINYMCE

What is changing? Check all boxes that apply.

- Course Code
- Course Number ([Check Availability](#))
- Title
- Prerequisite
- Credit Hours/Contact Hours
- Periodicity
- Description

Reason for proposed change

The catalog course description is modified to accurately reflect the content taught in the course. Adding a note about Math courses will help keep students on track for their CS courses.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

Routine or annual review/assessment of curriculum Faculty Input Student Input

Accreditation/certification compliance Review of catalog information

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

10/24/2019

Current Status:

College Council Review

Proposal Progress:

02/03/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Curricular Action Workflow



Change Course Proposal Form

**Submitted on 02/03/2020 by Ajay
Katangur (AjayKatangur@MissouriState.edu).**

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC131 Computational Thinking

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Current online catalog description:

CSC 131 Computational Thinking

Prerequisite: "C" or better in CSC 130 and eligible for MTH 261. Solving problems using computation and implementing solutions in a high-level programming language. Introduction to problem analysis, solution design, data structures, and algorithms. 4(3-2) F,S

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

← → **B** *I* ~~S~~

CSC 131 Computational Thinking

Prerequisite: "C" or better in CSC 130; **and MTH 137 or MTH 138, or concurrent enrollment.** ~~and eligible for MTH 261.~~ **Solving problems using computation and implementing solutions in a high-level programming language with emphasis on higher order functions, recursion, object-oriented programming and GUI development. The course continues with Python from CSC 130 before transitioning to C++. The basic constructs of C++ including data types, I/O, control statements, arrays, and pointers are covered.** ~~Solving problems using computation and implementing solutions in a high-level programming language. Introduction to problem analysis, solution design, data structures, and algorithms.~~ 4(3-2) F,S

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What is changing? Check all boxes that apply.

- Course Code
- Course Number ([Check Availability](#))
- Title
- Prerequisite
- Credit Hours/Contact Hours
- Periodicity
- Description

Reason for proposed change

The catalog course description is modified to accurately reflect the content taught in the course. Modify CSC 131 math prerequisite to add concurrent enrollment in MTH 137 or 138. Adding MTH 137 or 138 will give students more flexibility when scheduling their CS courses.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

- Routine or annual review/assessment of curriculum
- Faculty Input
- Student Input
- Accreditation/certification compliance
- Review of catalog information

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/03/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Curricular Action Workflow



Change Course Proposal Form

**Submitted on 02/04/2020 by Ajay
Katangur (AjayKatangur@MissouriState.edu).**

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC210 Public Affairs Issues in Computing

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Current online catalog description:

CSC 210 Public Affairs Issues in Computing

Prerequisite: 12 hours. General Education Course (Focus on Public Issues). An introduction to public affairs issues in computing. Topics include civic applications, public sources of data, data and computer system security, opportunities and dangers of artificial intelligence and data mining, social media and computer mediated collaboration, and cultural factors in the internationalization of software. Student will design a civic application or system intended to serve the public good. 3(3-0) F,S

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

← → **B** *I* ~~S~~

CSC 210 Public Affairs Issues in Computing

Prerequisite: 12 hours. General Education Course (Focus on Public Issues). An introduction to public affairs issues in computing. Topics include civic applications, public sources of data, data and computer system security, opportunities and dangers of artificial intelligence and data mining, social media and computer mediated collaboration, and cultural factors in the internationalization of software. Student will design a civic application or system intended to serve the public good. 3(3-0) **DF,S**

POWERED BY TINYMCE

What is changing? Check all boxes that apply.

- Course Code
- Course Number (Check Availability)
- Title
- Prerequisite
- Credit Hours/Contact Hours
- Periodicity
- Description

Reason for proposed change

Course is not offered on a regular basis, hence changing to on-demand.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

- Routine or annual review/assessment of curriculum
- Faculty Input
- Student Input
- Accreditation/certification compliance
- Review of catalog information

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/04/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Change Course Proposal Form

**Submitted on 02/04/2020 by Ajay
Katangur (AjayKatangur@MissouriState.edu).**

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC300 Service Learning in Computer Science

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Current online catalog description:

CSC 300 Service Learning in Computer Science

Prerequisite: 30 hours and concurrent registration in a Computer Science course designated as a service learning offering. This service component for an existing course incorporates community service with classroom instruction in Computer Science to provide an integrative learning experience that addresses the practice of citizenship and promotes an awareness of and participation in public affairs. Includes 40 hours of service that benefits an external community organization, agency, or public service provider. Approved service placements and assignments will vary depending on the specific course topic and learning objectives; a list of approved placements and assignments is available from the instructor and the Citizenship and Service Learning Office. May be repeated. 1 F,S

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

← → **B** *I* ~~S~~

CSC 300 Service Learning in Computer Science

Prerequisite: 30 hours and concurrent registration in a Computer Science course designated as a service learning offering. This service component for an existing course incorporates community service with classroom instruction in Computer Science to provide an integrative learning experience that addresses the practice of citizenship and promotes an awareness of and participation in public affairs. Includes 40 hours of service that benefits an external community organization, agency, or public service provider. Approved service placements and assignments will vary depending on the specific course topic and learning objectives; a list of approved placements and assignments is available from the instructor and the Citizenship and Service Learning Office. May be repeated. 1 **DF,S**

POWERED BY TINYMCE

What is changing? Check all boxes that apply.

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|---|--|--------------------------------------|---------------------------------------|
| <input type="checkbox"/> Course Code | <input type="checkbox"/> Course Number (<u>Check Availability</u>) | <input type="checkbox"/> Title | <input type="checkbox"/> Prerequisite |
| <input type="checkbox"/> Credit Hours/Contact Hours | <input checked="" type="checkbox"/> Periodicity | <input type="checkbox"/> Description | |

Reason for proposed change

Course is not offered on a regular basis, hence changing to on-demand.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

- Routine or annual review/assessment of curriculum
- Faculty Input
- Student Input
- Accreditation/certification compliance
- Review of catalog information

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/04/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Curricular Action Workflow



Change Course Proposal Form

Submitted on 02/03/2020 by Ajay Katangur (AjayKatangur@MissouriState.edu).

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC325 Algorithms and Advanced Data Structures

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Enter parallel course number

CSC611 Algorithms and Advanced Data Structures

How do these classes differ?

Graduate students are expected to complete an extra project.

Current online catalog description:

CSC 325 Algorithms and Advanced Data Structures

Prerequisite: "C" or better in CSC 232; and either MTH 314 or MTH 315. This course should be taken as soon as possible after CSC 232. Algorithms and advanced data structures, including graphs, heaps, self-adjusting data structures, set representations and dynamic programming. Sample applications, including memory management and data compression. Introduction to NP-complete problems. Correctness proofs and efficiency analysis are stressed. May be taught concurrently with CSC 611. Cannot receive credit for both CSC 611 and CSC 325. 3(3-0) F,S

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

↶ ↷ **B** *I* ~~S~~

CSC 325 Algorithms and Advanced Data Structures

Prerequisite: "C" or better in CSC 232; and either MTH 314 or MTH 315. This course should be taken as soon as possible after CSC 232. ~~Algorithms and advanced data structures, including graphs, heaps, self-adjusting data structures, set representations and dynamic programming. Sample applications, including memory management and data compression. Introduction to NP-complete problems. Correctness proofs and efficiency analysis are stressed.~~ **A study of algorithms and advanced data structures including graphs, heaps, hashing, self-adjusting data structures, set representations, greedy algorithms, dynamic programming and introduction to NP-complete problems. The course emphasizes on the study of efficiency and algorithm analysis.** May be taught concurrently with CSC 611. Cannot receive credit for both ~~CSC 611~~ and CSC 325 **and CSC 611**. 3(3-0) F,S

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What is changing? Check all boxes that apply.

- | | | | |
|---|--|---|---------------------------------------|
| <input type="checkbox"/> Course Code | <input type="checkbox"/> Course Number (<u>Check Availability</u>) | <input type="checkbox"/> Title | <input type="checkbox"/> Prerequisite |
| <input type="checkbox"/> Credit Hours/Contact Hours | <input type="checkbox"/> Periodicity | <input checked="" type="checkbox"/> Description | |

Reason for proposed change

The catalog course description is modified to accurately reflect the content taught in the course.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

- Routine or annual review/assessment of curriculum Faculty Input Student Input
- Accreditation/certification compliance Review of catalog information

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/03/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Curricular Action Workflow



Change Course Proposal Form

**Submitted on 02/03/2020 by Ajay
Katangur (AjayKatangur@MissouriState.edu).**

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC333 Languages and Machines

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Current online catalog description:

CSC 333 Languages and Machines

Prerequisite: "C" or better in CSC 232; and CSC 344 or concurrent enrollment; and either MTH 314 or MTH 315. A study of two classes of languages: formal languages (regular, context-free, and computable) and their associated machines (finite automata, pushdown automata, and Turing machines); and programming languages, including the essential features of imperative, functional, object-oriented, and logic programming languages, together with their design and implementation on modern computers and virtual machines. 2(2-0) F,S

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)



CSC 333 Languages and Machines

Prerequisite: "C" or better in CSC 232; ~~and CSC 344 or concurrent enrollment;~~ and either MTH 314 or MTH 315. A study of two classes of languages: formal languages (regular, context-free, and computable) and their associated machines (finite automata, pushdown automata, and Turing machines). **Other topics include programming languages, focusing on the essential features of imperative, functional, object-oriented, and logic programming languages, together with their design and implementation on modern computers.** ~~and programming languages, including the essential features of imperative, functional, object-oriented, and logic programming languages, together with their design and implementation on modern computers and virtual machines.~~ 2(2-0) F,S

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What is changing? Check all boxes that apply.

- | | | | |
|---|---|---|--|
| <input type="checkbox"/> Course Code | <input type="checkbox"/> Course Number (Check Availability) | <input type="checkbox"/> Title | <input checked="" type="checkbox"/> Prerequisite |
| <input type="checkbox"/> Credit Hours/Contact Hours | <input type="checkbox"/> Periodicity | <input checked="" type="checkbox"/> Description | |

Reason for proposed change

The catalog course description is modified to accurately reflect the content taught in the course. CSC 344 content is not needed for this course; moreover two new courses are created to replace CSC 344 (CSC 244 Computer Architecture and CSC 360 Operating Systems)

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

- Routine or annual review/assessment of curriculum
- Faculty Input
- Student Input
- Accreditation/certification compliance
- Review of catalog information

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/03/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Curricular Action Workflow



Change Course Proposal Form

Submitted on 02/07/2020 by Ajay Katangur (AjayKatangur@MissouriState.edu).

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC335 Database System Concepts

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Enter parallel course number

CSC612 Advanced Database System Concepts

How do these classes differ?

Graduate students are expected to complete an extra project.

Current online catalog description:

CSC 335 Database System Concepts

Prerequisite: "C" or better in CSC 121 or CSC 125 or CSC 131. A study of modern database systems and their underlying concepts. Core topics include the relational model, SQL, database design theory, query processing, file structures, transactions, and concurrency. Programming projects provide practical experience in developing GUI database applications. Public Affairs Capstone Experience course. May be taught concurrently with CSC 612. Cannot receive credit for both CSC 612 and CSC 335. 3(3-0) S

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

↶ ↷ **B** *I* 🔗

CSC 335 Database System Concepts

Prerequisite: "C" or better in CSC 121 or CSC 125 or CSC 131; **and MTH 314 or MTH 315**. A study of modern database systems and their underlying concepts. Core topics include the relational model, SQL, database design theory, query processing, file structures, transactions, and concurrency. Programming projects provide practical experience in developing GUI database applications. Public Affairs Capstone Experience course. May be taught concurrently with CSC 612. Cannot receive credit for both CSC ~~335612~~ and CSC ~~612335~~. 3(3-0) **F,S**

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What is changing? Check all boxes that apply.

- | | | | |
|---|--|--------------------------------------|--|
| <input type="checkbox"/> Course Code | <input type="checkbox"/> Course Number (<u>Check Availability</u>) | <input type="checkbox"/> Title | <input checked="" type="checkbox"/> Prerequisite |
| <input type="checkbox"/> Credit Hours/Contact Hours | <input checked="" type="checkbox"/> Periodicity | <input type="checkbox"/> Description | |

Reason for proposed change

Students need knowledge of MTH 314 Discrete Mathematics or MTH 315 Algebraic Structures. This is a core course which is offered both in Fall and Spring.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

- | | | |
|---|--|--|
| <input checked="" type="checkbox"/> Routine or annual review/assessment of curriculum | <input checked="" type="checkbox"/> Faculty Input | <input type="checkbox"/> Student Input |
| <input type="checkbox"/> Accreditation/certification compliance | <input type="checkbox"/> Review of catalog information | |
| <input type="checkbox"/> Other (be specific): | | |

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

11/14/2019

Current Status:

College Council Review

Proposal Progress:

02/07/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Curricular Action Workflow



Change Course Proposal Form

**Submitted on 02/04/2020 by Ajay
Katangur (AjayKatangur@MissouriState.edu).**

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC338 Parallel and Distributed Computing

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Current online catalog description:

CSC 338 Parallel and Distributed Computing

Prerequisite: "C" or better in CSC 232; and CSC 344 or concurrent enrollment. Introduction to parallel and distributed computing through algorithms, strategies for problem decomposition, system architecture, implementation strategies, and performance analysis. 2(2-0) F,S

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

↶ ↷ **B** *I* ~~S~~

CSC ~~35~~38 Parallel and Distributed Computing

Prerequisite: **CSC 360.**~~"C" or better in CSC 232; and CSC 344 or concurrent enrollment.~~ Introduction to parallel and distributed computing through algorithms, strategies for problem decomposition, system architecture, implementation strategies, and performance analysis. **In this course, students will have the opportunity to write parallel or distributed programs and applications in several contexts such as multithreaded programming, general purpose computing on a graphics processing unit, and MPI programming.** ~~32(32-0) DF,S~~

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What is changing? Check all boxes that apply.

- | | | | |
|--|--|---|--|
| <input type="checkbox"/> Course Code | <input checked="" type="checkbox"/> Course Number (Check Availability) | <input type="checkbox"/> Title | <input checked="" type="checkbox"/> Prerequisite |
| <input checked="" type="checkbox"/> Credit Hours/Contact Hours | <input checked="" type="checkbox"/> Periodicity | <input checked="" type="checkbox"/> Description | |

Reason for proposed change

We are making it a three credit hour elective course from a required course as the material covered in the course is not core material which is required of our students. The material covered in this class is more suitable as a three credit hour 500 level course.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

Routine or annual review/assessment of curriculum Faculty Input Student Input

Accreditation/certification compliance Review of catalog information

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/04/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Curricular Action Workflow



Change Course Proposal Form

**Submitted on 02/04/2020 by Ajay
Katangur (AjayKatangur@MissouriState.edu).**

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC344 Computer Systems Fundamentals

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Enter parallel course number

CSC613 Computer Systems Fundamentals

How do these classes differ?

Graduate students are expected to complete an extra project.

Current online catalog description:

CSC 344 Computer Systems Fundamentals

Prerequisite CSC 232. An integrated introduction to computer systems fundamentals. Topics include computer architecture and major components, operating system concepts and implementation techniques (processes, threads, memory management, and distributed systems), and network theory, concepts and techniques. May be taught concurrently with CSC 613. Cannot receive credit for both CSC 613 and CSC 344. 3(3-0) F,S

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

↶ ↷ **B** *I* ~~S~~

CSC 344 Computer Systems Fundamentals

Prerequisite CSC 232. An integrated introduction to computer systems fundamentals. Topics include computer architecture and major components, operating system concepts and implementation techniques (processes, threads, memory management, and distributed systems), and network theory, concepts and techniques. May be taught concurrently with CSC 613. Cannot receive credit for both CSC 613 and CSC 344. 3(3-0) **DF,S**

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What is changing? Check all boxes that apply.

- | | | | |
|---|--|--------------------------------------|---------------------------------------|
| <input type="checkbox"/> Course Code | <input type="checkbox"/> Course Number (<u>Check Availability</u>) | <input type="checkbox"/> Title | <input type="checkbox"/> Prerequisite |
| <input type="checkbox"/> Credit Hours/Contact Hours | <input checked="" type="checkbox"/> Periodicity | <input type="checkbox"/> Description | |

Reason for proposed change

Two new courses are created CSC 244 and CSC 360. This course will be deleted after a couple of years. Course will not be offered on a regular basis, hence changing to on-demand.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

Routine or annual review/assessment of curriculum Faculty Input Student Input

Accreditation/certification compliance Review of catalog information

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/04/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Curricular Action Workflow



Change Course Proposal Form

**Submitted on 02/04/2020 by Ajay
Katangur (AjayKatangur@MissouriState.edu).**

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC365 Internet Programming

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Current online catalog description:

CSC 365 Internet Programming

Prerequisite: "C" or better in CSC 121 or CSC 125 or CSC 131. An introduction to paradigms and languages used in internet and World Wide Web programming. These include modern tools for client-side and server-side programming and dynamic Web page generation. Advanced topics, such as security and XML, will be covered as time allows. Public Affairs Capstone Experience course. 3(3-0) F

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

↶ ↷ **B** *I* ☒

CSC 365 Internet Programming

Prerequisite: "C" or better in CSC 121 or CSC 125 or CSC 131. An introduction to paradigms and languages used in internet and World Wide Web programming. These include modern tools for client-side and server-side programming and dynamic Web page generation. Advanced topics, such as security and XML, will be covered as time allows. Public Affairs Capstone Experience course. 3(3-0) F,**S**

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What is changing? Check all boxes that apply.

- | | | | |
|---|--|--------------------------------------|---------------------------------------|
| <input type="checkbox"/> Course Code | <input type="checkbox"/> Course Number (<u>Check Availability</u>) | <input type="checkbox"/> Title | <input type="checkbox"/> Prerequisite |
| <input type="checkbox"/> Credit Hours/Contact Hours | <input checked="" type="checkbox"/> Periodicity | <input type="checkbox"/> Description | |

Reason for proposed change

Course is a required and is offered both in Fall and Spring.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

- Routine or annual review/assessment of curriculum
- Faculty Input
- Student Input
- Accreditation/certification compliance
- Review of catalog information

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/04/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Curricular Action Workflow



Change Course Proposal Form

**Submitted on 02/03/2020 by Ajay
Katangur (AjayKatangur@MissouriState.edu).**

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC388 Introduction to Secure Computing

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Current online catalog description:

CSC 388 Introduction to Secure Computing

Prerequisite: CSC 232. This course will provide an introduction to the general principles of secure computing and computer security. Students will learn about common threat types and cyber attacks including malware, denial-of-service, spoofing, and phishing as well as fundamental building blocks of secure computing systems such as authentication, encryption, and digital signatures. This course will also cover selective topics in computer forensics. 2(2-0) F,S

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)



CSC 388 Introduction to Secure Computing

Prerequisite: CSC 232. This course ~~will provides~~ **provides** an introduction to the general principles of secure computing and computer security. Students will learn about common threat types and cyber-attacks including malware, denial-of-service, spoofing, and phishing as well as fundamental building blocks of secure computing systems such as authentication, encryption, and digital signatures. ~~This course will also cover selective topics in computer forensics. 2(2-0)~~ **3(3-0)** F,S

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What is changing? Check all boxes that apply.

- Course Code
- Course Number ([Check Availability](#))
- Title
- Prerequisite
- Credit Hours/Contact Hours
- Periodicity
- Description

Reason for proposed change

It has been a challenging task to cover all the material that needs to be covered as per ABET's requirements with a 2 credit hour course. Students feel overburdened with the amount of material for a 2-credit class. A 3-credit hour class is justified for the amount of material covered. The course description is modified to accurately reflect the content taught in the course.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

- Routine or annual review/assessment of curriculum
- Faculty Input
- Student Input
- Accreditation/certification compliance
- Review of catalog information

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/03/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Curricular Action Workflow



Change Course Proposal Form

**Submitted on 02/03/2020 by Ajay
Katangur (AjayKatangur@MissouriState.edu).**

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC399 Cooperative Education in Computer Science

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Current online catalog description:

CSC 399 Cooperative Education in Computer Science

Prerequisite: permission of department head. The opportunity to earn academic credit in a planned learning process that integrates academic training with a supervised work experience. This is a variable content course that may be repeated to a total of 6 semester hours. Does not count toward any Computer Science minor. 1-3 D

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

← → **B** *I* ~~S~~

CSC 399 Cooperative Education in Computer Science

Prerequisite: permission of department head. The opportunity to earn academic credit in a planned learning process that integrates academic training with a supervised work experience. ~~This is a variable content course that may be repeated to a total of 6 semester hours.~~ Does not count toward any Computer Science minor. 1-3 D

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What is changing? Check all boxes that apply.

- Course Code
- Course Number (Check Availability)
- Title
- Prerequisite
- Credit Hours/Contact Hours
- Periodicity
- Description

Reason for proposed change

Both the Computer Science-Computer Science and Computer Science-Software Development options do not allow for more than three credit hours of CSC 399. This description has resulted in confusion for students. To correctly reflect the program requirements, the catalog description is modified.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

- Routine or annual review/assessment of curriculum
 Faculty Input
 Student Input
- Accreditation/certification compliance
 Review of catalog information

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/03/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Change Course Proposal Form

**Submitted on 02/07/2020 by Ajay
Katangur (AjayKatangur@MissouriState.edu).**

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC450 Introduction to Software Engineering

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Current online catalog description:

CSC 450 Introduction to Software Engineering

Prerequisite: CSC 344. Principles, techniques and tools used to effect the orderly production of medium and large scale computer programs will be studied. These techniques will be applied to programming projects with students working in teams and managing all phases of a programming project. 4(4-0) F

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

← → **B** *I* ~~S~~

CSC 450 Introduction to Software Engineering

Prerequisite: **Any two courses from CSC 325, CSC 335, and CSC 360.**~~CSC 344.~~ **This course provides students with a capstone project experience. Focus will be on the software engineering concepts including requirements gathering and analysis, software architecture and design, testing, and basic project management. A semester-long group project will require application of the software engineering concepts from requirements gathering to deployment and evaluation. Successful completion of the computer science major field test (MFT) with at least a score of 50th percentile is required.** ~~Principles, techniques and tools used to effect the orderly production of medium and large scale computer programs will be studied. These techniques will be applied to programming projects with students working in teams and managing all phases of a programming project.~~ 4(4-0) F,**S**

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What is changing? Check all boxes that apply.

- | | | | |
|---|--|---|--|
| <input type="checkbox"/> Course Code | <input type="checkbox"/> Course Number (<u>Check Availability</u>) | <input type="checkbox"/> Title | <input checked="" type="checkbox"/> Prerequisite |
| <input type="checkbox"/> Credit Hours/Contact Hours | <input checked="" type="checkbox"/> Periodicity | <input checked="" type="checkbox"/> Description | |

Reason for proposed change

Having thorough knowledge of subject material from other courses is critical to complete this course as the course gives students capstone project experience. Hence the prerequisite requirements are changed. The catalog course description is modified to accurately reflect the content taught in the course. The MFT requirement is also added to the course description so that the students will know that they have to take the MFT exam while enrolled in this course.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

- | | | |
|---|--|--|
| <input checked="" type="checkbox"/> Routine or annual review/assessment of curriculum | <input checked="" type="checkbox"/> Faculty Input | <input type="checkbox"/> Student Input |
| <input checked="" type="checkbox"/> Accreditation/certification compliance | <input type="checkbox"/> Review of catalog information | |

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/07/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Change Course Proposal Form

**Submitted on 02/03/2020 by Ajay
Katangur (AjayKatangur@MissouriState.edu).**

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC482 Seminar in Computer Science

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Current online catalog description:

CSC 482 Seminar in Computer Science

Prerequisite: 60 hours. Current trends and ethics in computer science with consideration given to future opportunities in the field. A written report and successful completion of the computer science assessment test will be required. Public Affairs Capstone Experience course. 1(1-0) F,S

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

↶ ↷ **B** *I* 🔗

CSC 482 Seminar in Computer Science

Prerequisite: 60 hours. ~~Current trends and ethics in computer science with consideration given to future opportunities in the field. A written report and successful completion of the computer science assessment test will be required.~~ **This course focuses on professional development skills, including resume development, interviewing, and presentations. Case studies in ethics and steps for ethical decision making will be introduced.** Public Affairs Capstone Experience course. 1(1-0) F,S

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What is changing? Check all boxes that apply.

- | | | | |
|---|---|---|---------------------------------------|
| <input type="checkbox"/> Course Code | <input type="checkbox"/> Course Number (Check Availability) | <input type="checkbox"/> Title | <input type="checkbox"/> Prerequisite |
| <input type="checkbox"/> Credit Hours/Contact Hours | <input type="checkbox"/> Periodicity | <input checked="" type="checkbox"/> Description | |

Reason for proposed change

The catalog course description is modified to accurately reflect the content taught in the course.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

Routine or annual review/assessment of curriculum Faculty Input Student Input

Accreditation/certification compliance Review of catalog information

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/03/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC525 Computer Graphics

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Enter parallel course number

CSC625 Computer Graphics

How do these classes differ?

Graduate students are expected to complete an extra project.

Current online catalog description:

CSC 525 Computer Graphics

Prerequisite: CSC 232 and either MTH 314 or MTH 315. Introduction to the hardware and software components of graphics systems. Development of algorithms for two-dimensional graphics including windowing, clipping, and transformations; algorithms for three dimensional graphics including viewing, transformations, and removal of hidden lines and surfaces. Data structures for graphics and interactive techniques will be stressed. May be taught concurrently with CSC 625. Cannot receive credit for both CSC 525 and CSC 625. 3(3-0) F

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

↶ ↷ **B** *I* 🔗

CSC 525 Computer Graphics

Prerequisite: CSC 232 and either MTH 314 or MTH 315. ~~Introduction to the hardware and software components of graphics systems. Development of algorithms for two dimensional graphics including windowing, clipping, and transformations; algorithms for three dimensional graphics including viewing, transformations, and removal of hidden lines and surfaces. Data structures for graphics and interactive techniques will be stressed.~~ **An introduction to two-dimensional and three-dimensional computer rendering. Topics will include computer graphics APIs, techniques and algorithms for object modeling, viewing, transformations, and event-driven programming.** May be taught concurrently with CSC 625. Cannot receive credit for both CSC 525 and CSC 625. 3(3-0) F

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What is changing? Check all boxes that apply.

- | | | | |
|---|--|---|---------------------------------------|
| <input type="checkbox"/> Course Code | <input type="checkbox"/> Course Number (<u>Check Availability</u>) | <input type="checkbox"/> Title | <input type="checkbox"/> Prerequisite |
| <input type="checkbox"/> Credit Hours/Contact Hours | <input type="checkbox"/> Periodicity | <input checked="" type="checkbox"/> Description | |

Reason for proposed change

The catalog course description is modified to accurately reflect the content taught in the course.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

Empty text box for explanation.

How did you determine the need for this change? Check all boxes that apply or specify other.

Routine or annual review/assessment of curriculum Faculty Input Student Input

Accreditation/certification compliance Review of catalog information

Other (be specific):

Empty text box for other reasons.

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/03/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Change Course Proposal Form

**Submitted on 02/03/2020 by Ajay
Katangur (AjayKatangur@MissouriState.edu).**

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC535 Data Mining

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Enter parallel course number

CSC635 Data Mining

How do these classes differ?

Graduate students are expected to complete an extra project.

Current online catalog description:

CSC 535 Data Mining

Prerequisite: CSC 232. This course studies the emerging technology of data mining--the automated extraction of patterns and information from data. The focus will be on understanding the algorithms underlying data mining and on the practical use of those algorithms. Students will use data mining software to analyze collections of data. May be taught concurrently with CSC 635. Cannot receive credit for both CSC 535 and CSC 635. 3(3-0) D

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

↶ ↷ **B** *I* ☒

CSC 535 Data Mining

Prerequisite: CSC 232. ~~This course studies the emerging technology of data mining—the automated extraction of patterns and information from data. The focus will be on understanding the algorithms underlying data mining and on the practical use of those algorithms. Students will use data mining software to analyze collections of data.~~ **Introduction to the basic concepts of data mining including data preprocessing, classification, clustering and association rules mining. The focus will be on understanding the algorithms underlying data mining and on the practical use of those algorithms.** May be taught concurrently with CSC 635. Cannot receive credit for both CSC 535 and CSC 635. 3(3-0) D

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What is changing? Check all boxes that apply.

- | | | | |
|---|--|---|---------------------------------------|
| <input type="checkbox"/> Course Code | <input type="checkbox"/> Course Number (<u>Check Availability</u>) | <input type="checkbox"/> Title | <input type="checkbox"/> Prerequisite |
| <input type="checkbox"/> Credit Hours/Contact Hours | <input type="checkbox"/> Periodicity | <input checked="" type="checkbox"/> Description | |

Reason for proposed change

The catalog course description is modified to accurately reflect the content taught in the course.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

[Empty text box for explanation]

How did you determine the need for this change? Check all boxes that apply or specify other.

Routine or annual review/assessment of curriculum Faculty Input Student Input

Accreditation/certification compliance Review of catalog information

Other (be specific):

[Empty text box for other reasons]

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/03/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Change Course Proposal Form

**Submitted on 02/03/2020 by Ajay
Katangur (AjayKatangur@MissouriState.edu).**

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC565 Computer Networks

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Enter parallel course number

CSC665 Computer Networks

How do these classes differ?

Graduate students are expected to complete an extra project.

Current online catalog description:

CSC 565 Computer Networks

Prerequisite: CSC 232. An introduction to the theory, concepts and techniques upon which modern computer networks and telecommunication systems are based. The emphasis will be on layered network architectures, the design frameworks for both local and wide area networks and communication protocols. May be taught concurrently with CSC 665. Cannot receive credit for both CSC 565 and CSC 665. 3(3-0) F

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

↶ ↷ **B** *I* ~~S~~

CSC 565 Computer Networks

Prerequisite: CSC ~~232~~**360**. An introduction to the theory, concepts and techniques upon which modern computer networks and telecommunication systems are based. The emphasis will be on layered network architectures, the design frameworks for both local and wide area networks and communication protocols. May be taught concurrently with CSC 665. Cannot receive credit for both CSC 565 and CSC 665. 3(3-0) F

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What is changing? Check all boxes that apply.

- | | | | |
|---|--|---|--|
| <input type="checkbox"/> Course Code | <input type="checkbox"/> Course Number (<u>Check Availability</u>) | <input type="checkbox"/> Title | <input checked="" type="checkbox"/> Prerequisite |
| <input type="checkbox"/> Credit Hours/Contact Hours | <input type="checkbox"/> Periodicity | <input checked="" type="checkbox"/> Description | |

Reason for proposed change

The catalog course description is modified to accurately reflect the content taught in the course. The course material covered in the new course CSC 360 Operating Systems will be needed for this course.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

- | | | |
|---|--|--|
| <input checked="" type="checkbox"/> Routine or annual review/assessment of curriculum | <input checked="" type="checkbox"/> Faculty Input | <input type="checkbox"/> Student Input |
| <input type="checkbox"/> Accreditation/certification compliance | <input type="checkbox"/> Review of catalog information | |

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/03/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Change Course Proposal Form

**Submitted on 02/03/2020 by Ajay
Katangur (AjayKatangur@MissouriState.edu).**

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC590 Advanced Topics in Computer Science

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Enter parallel course number

CSC690 Advanced Topics in Computer Science

How do these classes differ?

Graduate students are expected to complete an extra project.

Current online catalog description:

CSC 590 Advanced Topics in Computer Science

Prerequisite: CSC 232. Variable content course with advanced topics that can change from semester to semester. Topics may be identified by title in the schedule of classes. May be repeated if a different topic is offered, however, no more than six credits may count toward any degree. May be taught concurrently with CSC 690. Cannot receive credit for both CSC 590 and CSC 690. 1-4 D

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

↶ ↷ **B** *I* ~~S~~

CSC 590 Advanced Topics in Computer Science

Prerequisite: CSC 232. ~~Variable content course with advanced topics that can change from semester to semester.~~ **Variable content course with topics in the field of Computer Science.** Topics may be identified by title in the schedule of classes. May be repeated if a different topic is offered, ~~however, no more than six credits may count toward any degree.~~ May be taught concurrently with CSC 690. Cannot receive credit for both CSC 590 and CSC 690. 1-4 D

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What is changing? Check all boxes that apply.

- | | | | |
|---|--|---|---------------------------------------|
| <input type="checkbox"/> Course Code | <input type="checkbox"/> Course Number (<u>Check Availability</u>) | <input type="checkbox"/> Title | <input type="checkbox"/> Prerequisite |
| <input type="checkbox"/> Credit Hours/Contact Hours | <input type="checkbox"/> Periodicity | <input checked="" type="checkbox"/> Description | |

Reason for proposed change

Students should be able to take as many hours as long as different content is taught. Hence the restriction of six credits is deleted from the course description.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

- | | | |
|---|--|--|
| <input checked="" type="checkbox"/> Routine or annual review/assessment of curriculum | <input checked="" type="checkbox"/> Faculty Input | <input type="checkbox"/> Student Input |
| <input type="checkbox"/> Accreditation/certification compliance | <input type="checkbox"/> Review of catalog information | |

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/03/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Change Course Proposal Form

Submitted on 02/03/2020 by Ajay Katangur (AjayKatangur@MissouriState.edu).

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

CSC596 Special Readings

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Enter parallel course number

CSC696 Special Readings

How do these classes differ?

Directed independent study with an advisor. Graduate students are expected to complete an extra assignment, project or paper.

Current online catalog description:

CSC 596 Special Readings

Prerequisite: permission of department head. Periodic conferences with an advisor are required. May be repeated to a total of 6 hours. May be taught concurrently with CSC 696. Cannot receive credit for both CSC 696 and CSC 596. 1-3 F,S

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

↶ ↷ **B** *I* 🔗

CSC 596 Special Readings

Prerequisite: permission of department head. **Directed study with a faculty member.** Periodic conferences with **the faculty member** ~~an advisor~~ are required. **A maximum of 3 credits may count towards any degree option.** ~~May be repeated to a total of 6 hours.~~ May be taught concurrently with CSC 696. Cannot receive credit for both ~~CSC 696~~ and CSC 596 **and CSC 696**. 1-3 ~~DF,S~~

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What is changing? Check all boxes that apply.

- | | | | |
|---|--|---|---------------------------------------|
| <input type="checkbox"/> Course Code | <input type="checkbox"/> Course Number (<u>Check Availability</u>) | <input type="checkbox"/> Title | <input type="checkbox"/> Prerequisite |
| <input type="checkbox"/> Credit Hours/Contact Hours | <input checked="" type="checkbox"/> Periodicity | <input checked="" type="checkbox"/> Description | |

Reason for proposed change

Both the Computer Science-Computer Science and Computer Science-Software Development options do not allow for more than three credit hours to be counted towards the degree. This description has resulted in confusion for students. To correctly reflect the program requirements, the catalog description is modified. Course is offered on demand.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

- Routine or annual review/assessment of curriculum
- Faculty Input
- Student Input
- Accreditation/certification compliance
- Review of catalog information
- Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/03/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Curricular Action Workflow



Change Program Proposal Form

Submitted on 02/07/2020 by Ajay Katangur (AjayKatangur@MissouriState.edu).

Department:

Computer Science

Type of Program**Choose One:**

- | | |
|--|-----------------------------------|
| <input checked="" type="radio"/> Non-Comprehensive Undergraduate Major | <input type="radio"/> Option |
| <input type="radio"/> Comprehensive Undergraduate Major | <input type="radio"/> Minor |
| <input type="radio"/> Graduate Program | <input type="radio"/> Certificate |

Does this program include any new courses?

- No Yes (A corresponding new course form must be submitted to create each new course.)

Title of Program Affected:

Computer Science/Computer Science-BS

Current Catalog Description: *(Either cut and paste present description from online catalog **OR** provide as an attachment below)*

Computer Science (Non-Comprehensive)

Bachelor of Science



A. General Education Program and Requirements

B. Major Requirements

1. CSC 130(3), 131(4), 232(4), 335(3), 338(2), 344(3), 365(3), 388(2), 450(4), 482(1)
2. Select nine additional hours from CSC 300 and CSC courses numbered higher than 303, with no more than three hours in CSC 399 and no more than three hours in CSC 596.
3. Related science requirements: select at least four hours from the following: BIO 121(4)*; BMS 110(3)* and BMS 111(1)*; CHM 116(4) and CHM 117(1); CHM 160(4) and CHM 161(1); GLG 110(4), GRY 135(4), GRY 142(4). Other science and mathematics courses may be acceptable with department approval.
4. Public Affairs Capstone Experience will be fulfilled by completion of CSC 335(3), 365(3), and 482(1).
5. Select one of the following options:
 - a. Computer Science Option
 1. CSC 325(3), 333(2)
 2. Mathematics requirements: MTH 261(5)*; 280(5); MTH 314(3) or 315(3); MTH 345(3) or 540(3). Note: These required mathematics courses automatically satisfy the requirements for a minor in Mathematics.
 3. PHY 203(5)
 4. Select five additional hours of science or mathematics from the following: BIO 121(4)*; BMS 110(3)* and BMS 111(1)*; CHM 116(4) and CHM 117(1); CHM 160(4) and CHM 161(1); GLG 110(4), GRY 135(4), GRY 142(4); PHY 204(5); and MTH courses numbered 302 or higher that count toward the Mathematics major. Other science and mathematics courses may be acceptable with department approval.

Not Attached

Complete New Catalog Description: *(Either provide the revised description in the text area below [strikethrough all deletions and insert/bold new information - any content that is copied and pasted will lose existing formatting; please review prior to submission] OR provide as an attachment below)*

 	B <i>I</i> S

Computer Science (Non-Comprehensive)

Bachelor of Science

A. General Education Program and Requirements

B. Major Requirements

1. CSC 130(3), 131(4), 232(4), **244(3)**, 335(3), ~~338(2)~~, ~~344~~**360(3)**, 365(3), 388(~~32~~), 450(4), 482(1), **565(3)**
2. Select nine additional hours from CSC 300 and CSC courses numbered higher than 303, with no more than three hours in CSC 399 and no more than three hours in CSC 596.
3. ~~Related science requirements: select at least four hours from the following: BIO 121(4)*; BMS 110(3)* and BMS 111(1)*; CHM 116(4) and CHM 117(1); CHM 160(4) and CHM 161(1); GLG 110(4), GRY 135(4), GRY 142(4). Other science and mathematics courses may be acceptable with department approval.~~
- 34.** Public Affairs Capstone Experience will be fulfilled by completion of CSC 335(3), 365(3), and 482(1).
- 45.** Select one of the following options:
 - a. Computer Science Option
 1. CSC 325(3), 333(2)
 2. Mathematics requirements: MTH 261(5)*; 280(5); MTH 314(3) or 315(3); MTH 345(3) or 540(3). Note: These required mathematics courses automatically satisfy the requirements for a minor in Mathematics.
 3. **PHY 123(4)* or** PHY 203(5)*
 4. **BIO 121(3) or BMS 110(3)*** ~~Select five additional hours of science or mathematics from the following: BIO 121(4)*; BMS 110(3)* and BMS 111(1)*; CHM 116(4) and CHM 117(1); CHM 160(4) and CHM 161(1); GLG 110(4), GRY 135(4), GRY 142(4); PHY 204(5); and MTH courses numbered 302 or higher that count toward the Mathematics major. Other science and mathematics courses may be acceptable with department approval.~~
- 5. Successful completion of the computer science major field test (MFT) with at least a score of 50th percentile is required.**

POWERED BY TINYMCE

Not Attached

Total Hours: **What is changing? Check all boxes that apply:**

- Title change
- Adding option to an existing program (major)
- Deleting option from an existing program (major)
- Adding existing course(s) totaling credits
- Adding newly created course(s) totaling credits

(Note: A new course proposal must be submitted for each new course)

- Deleting courses from the program (major)

(Note: A Delete Course Proposal form must be submitted if deleting course from catalog.)

- Changing admission requirements

Other

Reason for Proposed Change:

ABET reduced the minimum required science hours to six. Hence, we are making the program change to only require selected science courses which will also satisfy General Education requirements. The CSC 344 Computer Systems Fundamentals is not serving the needs of the students and hence we are adding two new courses CSC 244 Computer Architecture and CSC 360 Operating Systems. In addition, CSC 565 Computer Networks is now a required course as this knowledge is required of all CS majors. The MFT requirement is added to the catalog on top of the CSC 450 course where they will be taking it, so that it is clear for students.

What is the date that this new program was approved by departmental or program faculty? (MM/DD/YYYY)

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/07/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Curricular Action Workflow



Change Program Proposal Form

Submitted on 02/04/2020 by Ajay Katangur (AjayKatangur@MissouriState.edu).

Department:

Computer Science

Type of Program**Choose One:**

- | | |
|---|---|
| <input type="radio"/> Non-Comprehensive Undergraduate Major | <input checked="" type="radio"/> Option |
| <input type="radio"/> Comprehensive Undergraduate Major | <input type="radio"/> Minor |
| <input type="radio"/> Graduate Program | <input type="radio"/> Certificate |

Does this program include any new courses?

- No Yes (A corresponding new course form must be submitted to create each new course.)

Title of Program Affected:

Computer Science/Software Development-BS

Current Catalog Description:

*(Either cut and paste present description from online catalog **OR** provide as an attachment below)*

b. Software Development Option

1. CSC 455(3)

2. Select three additional hours from eligible CSC courses numbered 500 or higher excluding CSC 596.

3. ECO 165(3); PSY 121(3); ENG 321(3). Each of these courses may also count toward General Education requirements.

4. Select three additional hours in science courses from the following: BIO 121(4)*; BMS 110(3)* and BMS 111(1)*; CHM 116(4) and CHM 117(1); CHM 160(4) and CHM 161(1); GLG 110(4), GRY 135(4), GRY 142(4), PHY 203(5); and MTH courses numbered 302 or higher that count toward the Mathematics major. Other science or mathematics courses may be acceptable with department approval.

5. Select one of the following: MKT 350(3), MGT 340(3), COM 315(3), PSY 305(3), PSY 481(3). Other courses may be acceptable with department approval.

6. Mathematics requirement: MTH 261(5)* or 314(3) or 315(3)

*May also count toward General Education requirements

Not Attached

Complete New Catalog Description: *(Either provide the revised description in the text area below [strikethrough all deletions and insert/bold new information - any content that is copied and pasted will lose existing formatting; please review prior to submission] OR provide as an attachment below)*

↶	↷	B	<i>I</i>	⌂

b. Software Development Option

1. CSC 455(3)
2. Select three additional hours from eligible CSC courses numbered 500 or higher excluding CSC 596.
3. ECO 165(3); PSY 121(3); ENG 321(3). Each of these courses may also count toward General Education requirements.

4. Choose one course from each group (atleast one of the courses with a lab)

a. BIO 121(4)*, BMS 110(3)*, BMS 110/BMS 111(4)*.

b. CHM 116(4)*, CHM 116/117(5)*, CHM 160(4)*, CHM 160/161(5)*, GLG 110(4)*, GLG 171(3)*, GRY 135(4)*, GRY 142(4)*, PHY 123(4)*, PHY 203(5)*, AST 113(3)*, AST 114(4)*, and AST 115(4)*.

~~4. Select three additional hours in science courses from the following: BIO 121(4)*; BMS 110(3)* and BMS 111(1)*; CHM 116(4) and CHM 117(1); CHM 160(4) and CHM 161(1); GLG 110(4), GRY 135(4), GRY 142(4), PHY 203(5); and MTH courses numbered 302 or higher that count toward the Mathematics major. Other science or mathematics courses may be acceptable with department approval.~~

5. Select one of the following: MKT 350(3), MGT 340(3), COM 315(3), PSY 305(3), PSY 481(3). Other courses may be acceptable with department approval.

6. Mathematics requirement: ~~MTH 261(5)*~~ or **MTH 314(3)** or **MTH 315(3)**

*May also count toward General Education requirements

POWERED BY TINYMCE

Not Attached

Total Hours:

What is changing? Check all boxes that apply:

- Title change
- Adding option to an existing program (major)
- Deleting option from an existing program (major)
- Adding existing course(s) totaling credits
- Adding newly created course(s) totaling credits

(Note: A new course proposal must be submitted for each new course)

- Deleting courses from the program (major)

(Note: A Delete Course Proposal form must be submitted if deleting course from catalog.)

- Changing admission requirements
- Other

More science courses are now included towards counting for program requirements. MTH 314 is now required of the program. In the past it was either MTH 261 or MTH 314

Reason for Proposed Change:

More science courses are now included towards counting for program requirements. MTH 314 is now required of the program. In the past it was either MTH 261 or MTH 314

**What is the date that this new program was approved by departmental or program faculty?
(MM/DD/YYYY)**

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/04/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Curricular Action Workflow



Change Program Proposal Form

Submitted on 02/04/2020 by Ajay Katangur (AjayKatangur@MissouriState.edu).

Department:

Computer Science

Type of Program

Choose One:

- Non-Comprehensive Undergraduate Major
 Option
 Comprehensive Undergraduate Major
 Minor
 Graduate Program
 Certificate

Choose All That Apply:

- | | | |
|--|---|--|
| <input type="checkbox"/> Bachelor of Arts | <input type="checkbox"/> Bachelor of Music | <input type="checkbox"/> Bachelor of Science in |
| <input type="checkbox"/> Bachelor of Applied | <input checked="" type="checkbox"/> Bachelor of Science | Nursing |
| Science | <input type="checkbox"/> Bach of Science in Athl | <input type="checkbox"/> Bachelor of Social Work |
| <input type="checkbox"/> Bachelor of Fine Arts | Traing | |
| <input type="checkbox"/> Bachelor of Music | <input type="checkbox"/> Bach of Science in | |
| Education | Education | |

Does this program include any new courses?

- No
 Yes (A corresponding new course form must be submitted to create each new course.)

Title of Program Affected:

Computer Science

Current Catalog Description: (Either cut and paste present description from online catalog **OR** provide as an attachment below)

Computer Science
Bachelor of Science
A. CSC 130(3), 131(4), 232(4)
B. Six additional hours from eligible CSC courses numbered higher than 303 to bring total hours in minor to at least 17, with no more than three hours in CSC 399. Courses not eligible: CSC 500, 505, and 510.

Not

Attached

Complete New Catalog Description: (Either provide the revised description in the text area below [strikethrough all deletions and insert/bold new information - any content that is copied and pasted will lose existing formatting; please review prior to submission] **OR** provide as an attachment below)

↶ ↷ **B** *I* ~~S~~

Computer Science
Bachelor of Science
A. **CSC 125(4) or** CSC 130(3), **CSC** 131(4), **CSC** 232(4)
B. Six additional hours from eligible CSC courses numbered higher than ~~300303~~ to bring total hours in minor to at least 17, ~~with no more than three hours in CSC 399~~. Courses not eligible: CSC **301, 303, 399**, 500, 505, and 510.

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Not Attached

Total Hours: 17-18

What is changing? Check all boxes that apply:

- Title change
- Adding option to an existing program (major)
- Deleting option from an existing program (major)
- Adding existing course(s) totaling credits
- Adding newly created course(s) totaling credits

(Note: A new course proposal must be submitted for each new course)

- Deleting courses from the program (major)
(Note: A Delete Course Proposal form must be submitted if deleting course from catalog.)
- Changing admission requirements

Other

Minor students can now take CSC 125 or CSC 130. Apart from that CSC 301, 303, and 399 are excluded from minor as they do not really provide any advantage of minor to students.

Reason for Proposed Change:

Minor students can now take CSC 125 or CSC 130. Apart from that CSC 301, 303, and 399 are excluded from minor as they do not really provide any advantage of minor to students.

**What is the date that this new program was approved by departmental or program faculty?
(MM/DD/YYYY)**

01/10/2020

Current Status:

College Council Review

Proposal Progress:

02/04/2020 - Submitted by Department Head (Ajay Katangur)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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Curricular Action Workflow



Change Course Proposal Form

**Submitted on 02/04/2020 by Toby
Dogwiler (TDogwiler@MissouriState.edu).**

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

GEO363 Introduction to Geographic Information Science

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Current online catalog description:

GEO 363 Introduction to Geographic Information Science

Prerequisite: 30 hours. Introduction to the foundations of geographic information systems (GIS), digital cartography, global positioning systems (GPS), and remote sensing used in academia, government agencies, and private industries. Topics include maps, data collection, data processing, and data analysis and display. 4(3-4) F,S

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

← → **B** *I* ~~S~~

GEO 363 Introduction to Geographic Information Science

~~Prerequisite: 30 hours.~~ Introduction to the foundations of geographic information systems (GIS), digital cartography, global positioning systems (GPS), and remote sensing used in academia, government agencies, and private industries. Topics include maps, data collection, data processing, and data analysis and display. 4(3-4) F,S

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What is changing? Check all boxes that apply.

- Course Code
- Course Number (Check Availability)
- Title
- Prerequisite
- Credit Hours/Contact Hours
- Periodicity
- Description

Reason for proposed change

Based on a discussion at a recent curriculum meeting the Geospatial Science faculty unanimously agreed this prerequisite was not necessary.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

Routine or annual review/assessment of curriculum Faculty Input Student Input

Accreditation/certification compliance Review of catalog information

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/17/2020

Current Status:

College Council Review

Proposal Progress:

02/04/2020 - Submitted by Department Head (Toby Dogwiler)

Review Comments:

02/04/2020 - Department Head Review - Toby Dogwiler - This change proposal was submitted by the department head on behalf of the Geospatial Science faculty and the primary course instructor (Dr. Xiaomin Qiu). This program change was approved by the department faculty at a department meeting.

No review notes have been added.

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Curricular Action Workflow



Change Course Proposal Form

**Submitted on 02/04/2020 by Toby
Dogwiler (TDogwiler@MissouriState.edu).**

***All fields require input**

This proposal applies to:

- An existing COURSE
- An existing REGULAR (e.g. permanent) SECTION of a variable content course.

Existing Course:

GEO568 Thematic Cartography

Will this proposal need to be reviewed by CGEIP? No Yes

Will this proposal need to be reviewed by EPPC? No Yes

Is there a graduate/undergraduate parallel course to this one? No Yes

Enter parallel course number

null null null

How do these classes differ?

The coverage of concepts is identical but graduate students are expected to complete additional projects, assignments, and some exam questions.

Current online catalog description:

GEO 568 Thematic Cartography

Prerequisite: GEO 561. Theoretical and applied aspects of map design in thematic mapping, animated mapping, interactive and web mapping. Emphasis will be applying computer-assisted mapping techniques of the problems of effective and efficient communication of spatial data. Field trip is required. May be taught concurrently with GEO 668. Cannot receive credit for both GEO 568 and GEO 668. 3(2-2) F

Revise the current online catalog description as needed: (Strikethrough all deletions and insert/bold new information. Any content that is copied and pasted will lose existing formatting; please review prior to submission.)

↶ ↷ **B** *I* ~~S~~

GEO 568 Thematic Cartography

Prerequisite: GEO ~~561~~ **363**. Theoretical and applied aspects of map design in thematic mapping, animated mapping, interactive and web mapping. Emphasis will be applying computer-assisted mapping techniques of the problems of effective and efficient communication of spatial data. ~~Field trip is required.~~ May be taught concurrently with GEO 668. Cannot receive credit for both GEO 568 and GEO 668. 3(2-2) F

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What is changing? Check all boxes that apply.

- | | | | |
|---|--|---|--|
| <input type="checkbox"/> Course Code | <input type="checkbox"/> Course Number (<u>Check Availability</u>) | <input type="checkbox"/> Title | <input checked="" type="checkbox"/> Prerequisite |
| <input type="checkbox"/> Credit Hours/Contact Hours | <input type="checkbox"/> Periodicity | <input checked="" type="checkbox"/> Description | |

Reason for proposed change

This is part of a routine review of our Geospatial Science curriculum. The GEO 561 course, which is the current prereq, now focuses on the use of ArcGIS Pro software. GEO 568 continues to focus on ArcMap software. Thus, GEO 363 which teaches ArcMap is now the more appropriate pre-requisite for GEO 568.

(ArcGIS Pro is a relatively new software package and is the future of GIS; ArcMap is the longstanding software package, which is still being updated by the developer and is the most widely used version. We are exposing our students to both versions of GIS so that they are competitive in the current job market and ready for the future.)

The field trip for this course will no longer be offered regularly nor will it be required when it is offered.

Does this change affect course assessment (e.g. student learning evidence/outcomes)? No Yes

Explain.

How did you determine the need for this change? Check all boxes that apply or specify other.

Routine or annual review/assessment of curriculum Faculty Input Student Input

Accreditation/certification compliance Review of catalog information

Other (be specific):

Check if this is a non-substantive change.

What is the date that this course change was approved by departmental or program faculty?
(MM/DD/YYYY)

01/17/2020

Current Status:

College Council Review

Proposal Progress:

02/04/2020 - Submitted by Department Head (Toby Dogwiler)

Review Comments:

02/04/2020 - Department Head Review - Toby Dogwiler - This change proposal was submitted by the department head on behalf of the Geospatial Science faculty and the primary course instructor (Dr. Xiaomin Qiu). This program change was approved by the department faculty at a department meeting.

No review notes have been added.

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Curricular Action Workflow



Change Program Proposal Form

**Submitted on 01/27/2020 by David
Cornelison (DavidCornelison@MissouriState.edu).**

Department:

Physics, Astronomy, & Mat Sci

Type of Program**Choose One:**

- | | |
|--|-----------------------------------|
| <input type="radio"/> Non-Comprehensive Undergraduate Major | <input type="radio"/> Option |
| <input checked="" type="radio"/> Comprehensive Undergraduate Major | <input type="radio"/> Minor |
| <input type="radio"/> Graduate Program | <input type="radio"/> Certificate |

Does this program include any new courses?

- No Yes (A corresponding new course form must be submitted to create each new course.)

Title of Program Affected:

Physics/Teaching Prep Physics-BS

Current Catalog Description: *(Either cut and paste present description from online catalog **OR** provide as an attachment below)*

Attached [View Attachment](#)

Complete New Catalog Description: *(Either provide the revised description in the text area below [strikethrough all deletions and insert/bold new information - any content that is copied and pasted will lose existing formatting; please review prior to submission] OR provide as an attachment below)*

↶ ↷ **B** *I* ~~S~~

POWERED BY TINYMCE

Attached [View Attachment](#)

What is changing? Check all boxes that apply:

- Title change
- Adding option to an existing program (major)
- Deleting option from an existing program (major)
- Adding existing course(s) totaling credits
- Adding newly created course(s) totaling credits

(Note: A new course proposal must be submitted for each new course)

- Deleting courses from the program (major)

(Note: A Delete Course Proposal form must be submitted if deleting course from catalog.)

- Changing admission requirements
- Other

Reason for Proposed Change:

Replacing two courses with new courses that better meet students' needs.

**What is the date that this new program was approved by departmental or program faculty?
(MM/DD/YYYY)**

10/22/2019

Current Status:

College Council Review

Proposal Progress:

01/27/2020 - Submitted by Department Head (Robert Mayanovic)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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PHYSICS (Comprehensive)

A. General Education Program and Requirements

Specific General Education Requirements: PHY 203(5), MTH 261(5), ENG 321(3)

B. Major Requirements

1. PHY 152(3), 204(5), 291(3), 324(4), 333(3), 343(3), 353(3), 375(3), 385(2), 386(1), 391(3), 486(1)
2. Public Affairs Capstone Experience will be fulfilled by completion of PHY 385(2), 386(1) and 486(1).
3. Select one of the following option areas:
 - a. Astronomy and Astrophysics: AST 113(3), 114(4) or 115(4); and select two courses from: AST 311(3), 313(3), 315(3), 317(3)
 - b. Career Prep Physics: PHY 351(3) and one of either PHY 575(3) or MAT 540(3) and three hours of 400 or 500 level PHY, MAT, or CHM coursework.
 - c. Materials Physics: MAT 540(3), 550(3), 580(3); PHY 575(3)
 - d. Teaching Prep Physics: AST 115(4); GRY 108(3) and at least six hours from any 300 or 400 or 500 level courses from AST, MAT or PHY coursework excluding PHY 501.
4. Related Requirements: MTH 280(5), 302(3), 303(3)

C. General Baccalaureate Degree Requirements

PHYSICS (Comprehensive)

A. General Education Program and Requirements

Specific General Education Requirements: PHY 203(5), MTH 261(5), ENG 321(3)

B. Major Requirements

1. PHY **110 (2)** ~~152(3)~~, 204(5), 291(3), ~~324(4)~~ **325 (3)**, 333(3), 343(3), 353(3), 375(3), 385(2), 386(1), 391(3), 486(1)
2. Public Affairs Capstone Experience will be fulfilled by completion of PHY 385(2), 386(1) and 486(1).
3. Select one of the following option areas:
 - a. Astronomy and Astrophysics: AST 113(3), 114(4) or 115(4); and select two courses from: AST 311(3), 313(3), 315(3), 317(3)
 - b. Career Prep Physics: PHY 351(3) and one of either PHY 575(3) or MAT 540(3) and three hours of 400 or 500 level PHY, MAT, or CHM coursework.
 - c. Materials Physics: MAT 540(3), 550(3), 580(3); PHY 575(3)
 - d. Teaching Prep Physics: AST 115(4); GRY 108(3) and at least six hours from any 300 or 400 or 500 level courses from AST, MAT or PHY coursework excluding PHY 501.
4. Related Requirements: MTH 280(5), 302(3), 303(3)

C. General Baccalaureate Degree Requirements

Curricular Action Workflow



Change Program Proposal Form

**Submitted on 01/27/2020 by David
Cornelison (DavidCornelison@MissouriState.edu).**

Department:

Physics, Astronomy, & Mat Sci

Type of Program**Choose One:**

- | | |
|--|-----------------------------------|
| <input type="radio"/> Non-Comprehensive Undergraduate Major | <input type="radio"/> Option |
| <input checked="" type="radio"/> Comprehensive Undergraduate Major | <input type="radio"/> Minor |
| <input type="radio"/> Graduate Program | <input type="radio"/> Certificate |

Does this program include any new courses?

- No Yes (A corresponding new course form must be submitted to create each new course.)

Title of Program Affected:

Physics/Career Prep Physics-BS

Current Catalog Description:

*(Either cut and paste present description from online catalog **OR** provide as an attachment below)*

Attached [View Attachment](#)

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What is changing? Check all boxes that apply:

- Title change
- Adding option to an existing program (major)
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- Adding existing course(s) totaling credits
- Adding newly created course(s) totaling credits

(Note: A new course proposal must be submitted for each new course)

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(Note: A Delete Course Proposal form must be submitted if deleting course from catalog.)

- Changing admission requirements
- Other

Reason for Proposed Change:

Replacing two courses with new courses that better meet students' needs.

**What is the date that this new program was approved by departmental or program faculty?
(MM/DD/YYYY)**

10/22/2019

Current Status:

College Council Review

Proposal Progress:

01/27/2020 - Submitted by Department Head (Robert Mayanovic)

Review Comments:

No comments have been added to this proposal.

No review notes have been added.

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PHYSICS (Comprehensive)

A. General Education Program and Requirements

Specific General Education Requirements: PHY 203(5), MTH 261(5), ENG 321(3)

B. Major Requirements

1. PHY 152(3), 204(5), 291(3), 324(4), 333(3), 343(3), 353(3), 375(3), 385(2), 386(1), 391(3), 486(1)
2. Public Affairs Capstone Experience will be fulfilled by completion of PHY 385(2), 386(1) and 486(1).
3. Select one of the following option areas:
 - a. Astronomy and Astrophysics: AST 113(3), 114(4) or 115(4); and select two courses from: AST 311(3), 313(3), 315(3), 317(3)
 - b. Career Prep Physics: PHY 351(3) and one of either PHY 575(3) or MAT 540(3) and three hours of 400 or 500 level PHY, MAT, or CHM coursework.
 - c. Materials Physics: MAT 540(3), 550(3), 580(3); PHY 575(3)
 - d. Teaching Prep Physics: AST 115(4); GRY 108(3) and at least six hours from any 300 or 400 or 500 level courses from AST, MAT or PHY coursework excluding PHY 501.
4. Related Requirements: MTH 280(5), 302(3), 303(3)

C. General Baccalaureate Degree Requirements

PHYSICS (Comprehensive)

A. General Education Program and Requirements

Specific General Education Requirements: PHY 203(5), MTH 261(5), ENG 321(3)

B. Major Requirements

1. PHY **110 (2)** ~~152(3)~~, 204(5), 291(3), ~~324(4)~~ **325 (3)**, 333(3), 343(3), 353(3), 375(3), 385(2), 386(1), 391(3), 486(1)
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C. General Baccalaureate Degree Requirements

Curricular Action Workflow



Change Program Proposal Form

**Submitted on 01/27/2020 by David
Cornelison (DavidCornelison@MissouriState.edu).**

Department:

Physics, Astronomy, & Mat Sci

Type of Program**Choose One:**

- | | |
|--|-----------------------------------|
| <input type="radio"/> Non-Comprehensive Undergraduate Major | <input type="radio"/> Option |
| <input checked="" type="radio"/> Comprehensive Undergraduate Major | <input type="radio"/> Minor |
| <input type="radio"/> Graduate Program | <input type="radio"/> Certificate |

Does this program include any new courses?

- No Yes (A corresponding new course form must be submitted to create each new course.)

Title of Program Affected:

Physics/Astronomy and Astrophysics-BS

Current Catalog Description: *(Either cut and paste present description from online catalog **OR** provide as an attachment below)*

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- Changing admission requirements
- Other

Reason for Proposed Change:

Two courses are being replaced with new courses that better meet the needs of the majors.

**What is the date that this new program was approved by departmental or program faculty?
(MM/DD/YYYY)**

10/22/2019

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4. Related Requirements: MTH 280(5), 302(3), 303(3)

C. General Baccalaureate Degree Requirements

PHYSICS (Comprehensive)

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B. Major Requirements

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Curricular Action Workflow



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**Submitted on 01/27/2020 by David
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|--|-----------------------------------|
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| <input checked="" type="radio"/> Comprehensive Undergraduate Major | <input type="radio"/> Minor |
| <input type="radio"/> Graduate Program | <input type="radio"/> Certificate |

Does this program include any new courses?

- No Yes (A corresponding new course form must be submitted to create each new course.)

Title of Program Affected:

Physics/Materials Physics-BS

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