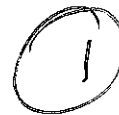


Missouri State.**Curricular Action Workflow**Missouri State > Computer Services - MIS > Curricular Action
Workflow > CAW - Change Course Proposal Form**Change Course Proposal Form****Submitted on 01/08/2018 by G Schick (AlanSchick@MissouriState.edu).*****All fields require input**

This proposal applies to:

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

Existing Course:

CHM498 Chemistry Careers

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

Current online catalog description:

CHM 498 Chemistry Careers

Prerequisite: CHM 398 and 60 hours. Writing scientific resumes and cover letters, discussion of chemistry careers, graduate school, job-hunting resources and professional ethics. Outside speakers from chemistry-related employers will be invited. Interaction with the Career Center 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 S

CHM 498 Chemistry Careers

Prerequisite: CHM 398 and 60 hours. Writing scientific resumes and cover letters, discussion of chemistry careers, graduate school, job-hunting resources and professional ethics. Outside speakers from chemistry-related employers will be invited. Interaction with the Career Center will be required. Public Affairs Capstone Experience course. **May be taught concurrently with CHM 696. Cannot receive credit for both CHM 498 and CHM 696.** 1(1-0) F.S

What is changing? Check all boxes that apply.

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

1

Reason for proposed change

A new 600-level parallel course (CHM 696) has been proposed and submitted. This proposed change involves only updating the catalog description to acknowledge the existence of the parallel course. As such, this is effectively a NON-SUBSTANTIVE change.

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

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)

09/19/2017

Current Status:

College Council Review

Proposal Progress:

01/08/2018 - Submitted by Department Head (Bryan Breyfogle)

Review Comments:

No comments have been added to this proposal.



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Missouri State.

Curricular Action Workflow



Missouri State > Computer Services - MIS > Curricular Action Workflow > CAW - Change Program Proposal Form

Change Program Proposal Form

Submitted on 12/06/2017 by William Bray (WBray@MissouriState.edu).

Department:

Mathematics

Type of Program

Choose One:

- Non-Comprehensive Undergraduate Major
- Comprehensive Undergraduate Major
- Graduate Program
- Option
- Minor
- Certificate
- Certification
- Academic Rules
- Other

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:

Mathematics-BSED

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

②

Bachelor of Science in Education (Certifiable grades 9-12)
 General Education Program and Requirements
 Major Requirements
 MTH 261(5), 280(5), 302(3), 315(3), 333(3), 345(3), 460(3), 532(3), 575(3)
 Select two courses from: MTH 503(3), 510(3), 536(3), 540(3), 567(3)
 Courses required from related areas: CSC 121(3) or 125(4) or 130(3); PHY 123(4) or 203(5)
 Public Affairs Capstone Experience will be fulfilled by completion of MTH 493(5-6) and 494(5-6).
 Professional Education Requirements. Note: A grade of "C" or better in each course is required for state certification.
 MTH 409(3), 410(3), 411(3), 493(5-6), 494(5-6)
 Professional Education Required Core and Competencies - see Teacher Education Program
 General Baccalaureate Degree Requirements
 This program also requires compliance with the Teacher Education Program for eligibility to enroll in Professional Education courses; admission to and continuance in the Teacher Education Program; approval for supervised teaching; and recommendation for certification which includes following GPA requirements. All GPA requirements include both Missouri State and transfer grades.
 at least a 2.75 GPA on all course work attempted at all colleges attended
 at least a 3.00 GPA in the certificate subject area (major field of study) which includes all courses listed under B
 at least a 3.00 GPA in any additional certificate subject area
 at least a 3.00 GPA in the professional education courses which includes all courses listed under C; and no grade lower than a "C" in all professional education courses

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

Bachelor of Science in Education (Certifiable grades 9-12)
 General Education Program and Requirements
 Major Requirements
 MTH 261(5), 280(5), 302(3), 315(3), 333(3), 345(3), 460(3), 532(3), 575(3)
 Select two courses from: MTH 503(3), 510(3), 536(3), 540(3), 567(3)
 Courses required from related areas: CSC 121(3) or 125(4) or 130(3); PHY 123(4) or 203(5)
 Public Affairs Capstone Experience will be fulfilled by completion of MTH 493(5-6) **492 (2)** and 494(5-6) **(10)**.
 Professional Education Requirements. Note: A grade of "C" or better in each course is required for state certification.
 MTH 409(3), 410(3), 411(3), ~~493(5-6)~~ **492 s(2)**, 494(5-6) **(10)**
 Professional Education Required Core and Competencies - see Teacher Education Program
 General Baccalaureate Degree Requirements
 This program also requires compliance with the Teacher Education Program for eligibility to enroll in Professional Education courses; admission to and continuance in the Teacher Education Program; approval for supervised teaching; and recommendation for certification which includes following GPA requirements. All GPA requirements include both Missouri State and transfer grades.
 at least a 2.75 GPA on all course work attempted at all colleges attended
 at least a 3.00 GPA in the certificate subject area (major field of study) which includes all courses listed under B
 at least a 3.00 GPA in any additional certificate subject area
 at least a 3.00 GPA in the professional education courses which includes all courses listed under C; and no grade lower than a "C" in all professional education courses

Not Attached

Total Hours:

What is changing? Check all boxes that apply:

- Title change
- From option to program (major)
- Other
- Course changes of under 18 hours
- From program (major) to option
- Course changes of 18 hours or more

Reason for Proposed Change:

2

MTH 493 (6 credit hours) is being replaced by MTH 492 (2 credit hours) and MTH 494 is now to be 10 credit hours. Both were in previous course change proposals.

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

09/27/2017

Current Status:

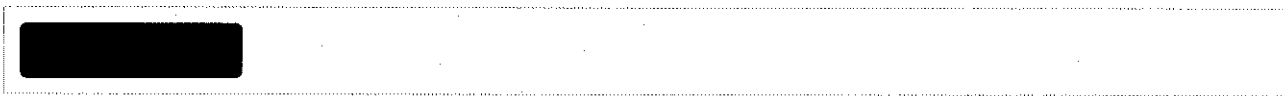
College Council Review

Proposal Progress:

12/06/2017 - Submitted by Department Head (William Bray)

Review Comments:

No comments have been added to this proposal.



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Missouri State.

Curricular Action Workflow



Missouri State > Computer Services - MIS > Curricular Action Workflow > CAW - Change Program Proposal Form

Change Program Proposal Form

Submitted on 12/12/2017 by Emmett Redd (Emmettredd@missouristate.edu).

Department:

Physics, Astronomy, & Mat Sci

Type of Program

Choose One:

- Non-Comprehensive Undergraduate Major, Option, Certification, Comprehensive Undergraduate Major, Minor, Academic Rules, Graduate Program, Certificate, Other

Choose All That Apply:

- Bachelor of Arts, Bachelor of Music Education, Bach of Science in Athl Traing, Bachelor of Applied Science, Bachelor of Music, Bach of Science in Education, Bachelor of Fine Arts, Bachelor of Science, Bachelor of Science in Nursing, Bachelor of Social Work

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

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

Physics Bachelor of Science A: PHY 203(5), 204(5) B: Electives from any other physics courses to bring total to 20 hours with no more than 14 hours of courses numbered below 300.

Attached

Complete New Catalog Description: (Either provide the revised description in the text area below [strikethrough all deletions and insert/bold new information - any

3

content that is copied and pasted will lose existing formatting; please review prior to submission] OR provide as an attachment below)

← → **B I S**

Physics
 Bachelor of Science
 A. PHY 123(4) or 203(5), 124(4) or 204(5)
 B. Ten (10) hours of electives from any other physics courses above PHY 124 except PHY 203 and 204. to bring total to 20 hours with no more than 14 hours of courses numbered below 300. Courses with math prerequisites no higher than required in item A above: PHY 131(1), 141(1), 152(3), 220(4), 324(4), 351(3), 373(3).

Attached

What is changing? Check all boxes that apply:

- Title change
- From option to program (major)
- Other
- Course changes of under 18 hours
- From program (major) to option
- Course changes of 18 hours or more

Reason for Proposed Change:

To make the minor accessible to more students.

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

12/12/2017

Current Status:

College Council Review

Proposal Progress:

01/05/2018 - Submitted by Department Head (David Cornelison)

Review Comments:

No comments have been added to this proposal.

[Redacted comment box]

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Physics

Bachelor of Science

- A. PHY 203(5), 204(5)

- B. Electives from any other physics courses to bring total to 20 hours with no more than 14 hours of courses numbered below 300.

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Physics

Bachelor of Science

A. PHY **123(4)** or 203(5), **124(4)** or 204(5)

B. **Plus 10 hours of e**lectives from any other physics courses ~~to bring total to 20 hours with at least 6~~
~~no more than 14 hours in of~~ courses numbered ~~below 300 or above.~~

Missouri State.

4

Curricular Action Workflow



Missouri State > Computer Services - MIS > Curricular Action Workflow > CAW - New Course Proposal Form

New Course Proposal Form

Submitted on 12/22/2017 by Toby Dogwiler (TDogwiler@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: Course Number: (Check Availability)

Course Title:

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':

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

Detailed treatment of a selected topic in Geospatial Science that may vary from offering to offering. Since credit and topics vary, the course may be repeated for a total of 7 hours. May be taught concurrently with GEO 697. Cannot receive credit for the same topic in both GEO 597 and GEO 697. Variable credit, may be taken 1-4 hours.

Credit Hours: Lecture Contact Hours: Lab Contact Hours:

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)

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

Complete Catalog Description:

GEO 597 Topics in Geospatial Science

Prerequisite: permission

Detailed treatment of a selected topic in Geospatial Science that may vary from offering to offering. Since credit and topics vary, the course may be repeated for a total of 7 hours. May be taught concurrently with GEO 697. Cannot receive credit for the same topic in both GEO 597 and GEO 697. Variable credit, may be taken 1-4 hours.

Credit hours: 4 Lecture contact hours: 0 Lab contact hours: 0

Typically offered: On Demand only

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

Attached

Purpose of Course

This course will provide a vehicle for offering courses on particular topics that are of interest to current students and faculty. As we revise our Geospatial Science curriculum to emphasize applications to other disciplines, topics courses provide us a way cater to these needs.

Relationship to Other Departments

The approval of this course should not negatively affect any other departments. However, Geospatial Science has broad applicability as a tool that is used in many disciplines. We are hoping to build collaborations with these disciplines. Applications in geology, biology, anthropology, political science, sociology, criminology, or business could be demonstrated through this topics course.

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

New Course Resource Information

Anticipated Average Enrollment per section:	15	Maximum Enrollment Limit per section:	20
Anticipated Average Enrollment per semester:	15	Maximum Enrollment Limit per semester:	20
Anticipated Average Enrollment per year:	15	Maximum Enrollment Limit per year:	20
Faculty Load Assignment (equated hours):	3		

Is another course being deleted? No Yes

What will this course require in the way of:

Additional library Holdings

None

Additional computer resources

None. Will utilize existing Geospatial Science computing labs in Temple Hall.

Additional or remodeled facilities

None.

Additional equipment or supplies

None.

Additional travel funds

None.

Additional faculty; general vs specialized

None.

Additional faculty; regular vs per-course

None.

Other additional expenses

None.

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

Will be taught occasionally if capacity in existing faculty load exists.

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

Toby Dogwiler
Xin Miao
Xiaomin Qiu
Jun Luo

What is the anticipated source of students for this course?

Primarily Geospatial Science, Geology, Geography, and Planning majors. Some topics may be offered in collaboration with other programs or majors and would attract majors from those programs.

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

Geospatial Science majors have a 3 credit major elective requirement this could fulfill. Students in other GGP majors typically have similar discretionary major electives. This topics course could be used to fulfill those major requirements, with the approval of the program faculty and the department head.

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

N/A

Other comments:

Note: a new parallel graduate course GEO 697 is also being proposed.

4

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

11/10/2017

4

Current Status:

College Council Review

Proposal Progress:

12/22/2017 - Submitted by Department Head (Toby Dogwiler)

Review Comments:

No comments have been added to this proposal.



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SYLLABUS AND COURSE POLICY

GEO 597 Topics: XXXXXXX

3 cr

Dr. Toby Dogwiler
TDogwiler@MissouriState.edu

Office: 358 Temple Hall
Class Room: Temple 340
GEO 597, 12:30 – 1:50 TR

Office Hours: M-1:30-2:45, Tu-8:45-10:00, W-8:30-9:45, Th-10:00-11:15, or by appointment

Academic Dishonesty

I have no tolerance for academic dishonesty. There is no place for any form of academic dishonesty in a university. As such, if you are caught cheating, fabricating or misconducting research, plagiarizing, or facilitating academic dishonesty in any of its forms, I will FAIL you in this course. This is your only warning.

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 student honor code, which is entitled "Student Academic Integrity Policies and Procedures" and is available at the Reserves Desk in Meyer Library or online¹. Any student participating in any form of academic dishonesty will be subject to sanctions as described in this policy. Specifically, you will fail the course.

Course Description

Detailed treatment of a selected topic in Geospatial Science that may vary from offering to offering.

Catalog Description

Detailed treatment of a selected topic in Geospatial Science that may vary from offering to offering. Since credit and topics vary, the course may be repeated for a total of 7 hours. May be taught concurrently with GEO 697. Cannot receive credit for the same topic in both GEO 597 and GEO 697. Variable credit, may be taken 1-4 hours.

Textbook and Resources

Required

- Will vary by topic
- You need access to MyMissouriStatelive@edu accounts to stay connected to both class and university announcements and to access our Blackboard site.
- **Blackboard page**

Grading and Assignments

I will total the number of points available for the course and the points you have earned to figure your final grade using the following scale, which also applies to all assignments:

A = 90 – 100%; B = 80 – 89%; C = 70 – 79%; D = 60 – 69%; F = 59.99% and below. Note: an 89.9999% is a 'B', and so forth. Lines have to be drawn somewhere!

Weights

Projects 60% + Class Participation 15% + Exams / Quizzes 25% = 100% of your grade

¹ http://www.missouristate.edu/assets/policy/Op3_01_Academic-Integrity-Policies-and-Procedures-07-28-2014.pdf and : <http://www.missouristate.edu/academicintegrity/policies.htm>

4

Projects: This class will be primarily project-based. The goal is for you to learn how to use GIS tools to understand, analyze, and predict hydrologic phenomena across the landscape. I believe the best way to learn this is by doing it—in other words: to get your hands on GIS and its processing tools.

Class Participation: This will include attendance, participating in discussions, working on in-class assignments (which may also be part of the grade for various projects), and other activities that occur during regular class time.

Exams / Quizzes: As a project-based course, the role of exams and quizzes is diminished. The main purpose of these assessments will be to enforce reading and other assignments and require you to demonstrate your practical GIS skills.

Attendance Policy

Here are the guidelines for attendance in GEO 597:

- Many of the things we do in class are difficult or impossible to make-up. So don't miss class!
- If you are not in class, you are still responsible for the information; you **cannot** make-up class activities and points offered during classes, except in extremely rare circumstances, which will be considered on a case-by-case basis for approval by the instructor. Generally, such excused absences and make-ups will require pre-approval PRIOR to the absence.
 - Weddings, vacations, colds, sniffles, headaches, hangovers, and birthdays are **NOT** acceptable excuses.
- If you will be absent from class for a university-sanctioned event, you need to present written documentation to me PRIOR to the class you will miss in order to make up missed points.
- If you miss class (excused or unexcused) it is your responsibility to obtain the information and assignments you missed. You are responsible for the content and for completing assignments even if your absence is unexcused (and therefore cannot be made up for a grade).
- Please do not be tardy to class.
- I will evaluate your ability to complete the course in the event of excessive undocumented absences. More than four undocumented absences will require a meeting with me and will be grounds for failing the course, unless we agree on a plan for the rest of the semester and you adhere to it.
- If you have an emergency, contact the Academic Advisement Center (417-836-5258) and an advisor will notify your instructors.
- Assignments must be turned in at the beginning of the class period of the due date to receive full credit. Student may receive up to 50% if the assignment is turned in within 24 hours of a due date. Assignments turned in after 24 hours receives 0%. Exceptions will be made with verifiable emergencies (see above). Speak with me as soon as possible if you have an emergency or a problem with a deadline.

Bottom line: If you're not here, you will miss valuable input from your classmates, as well as the understanding provided through class discussions. I expect you to be here and to be ready to think and to participate.

POLICIES

Student Responsibilities

The following policies explain the manner in which I expect students to conduct themselves in my classroom:

Assignments--All assignments completed outside of class must be typed, 12 point font, Calibri, double-spaced, with 1 inch margins unless otherwise instructed. Assignments must be turned in at the beginning of the class period by the due date to receive full credit. If you are tardy, by definition, you are unable to submit an assignment at the beginning of class. Most assignments will be distributed through BlackBoard or in class. It is your responsibility to check Blackboard regularly.

Be prepared for class—assigned reading should be completed before class. In order for you to receive the most from this course, you need to be prepared to share your knowledge and to learn from your peers.

Make-up Examinations and Quizzes: Make-up exams are rarely approved or offered by the instructor. If you miss an exam for an extenuating reason (e.g., due to hospitalization, serious illness, or family emergency) special consideration may be granted at the discretion of the instructor. Whenever possible students should notify the instructor in advance and request approval.

Work obligations, common illness (colds, flus, etc.), weddings, rides home, and vacations are NOT suitable excuses for missing an exam. I expect that you will adapt your work schedule to the requirements and schedule of this course. Work is something you do to afford your education and I believe strongly that education and coursework should be the first priority of every student.

In the rare case that a make-up exam is approved it will be given during the final examination period (in addition to the regular final exam). This make-up exam will be comprehensive. If a make-up for the Final Exam is approved an alternate time will be arranged. The content, format, and comprehensiveness of make-up exams is the sole discretion of the instructor.

Generally, quizzes will not be offered for make-up for any reason. If the instructor approves an excused absence that results in missing a quiz, the missed quiz will be replaced with your average quiz score on all other quizzes.

Email and Communication—

- Emails from me will be sent through Blackboard to your MSU email account. Check it regularly.
- I encourage you to register for the Remind service (see BlackBoard). I will use Remind to send brief announcements and reminders to the class. *You must still check email. Some announcements and information are not suitable for text messaging.* Remind is an excellent way to ask and receive quick questions about class and projects.
- Use proper e-mail etiquette, as described on the first day of class, when sending e-mails to each other or the instructor. These should be respectful, professional, not have slang (e.g. "u" instead of "you"), and be well-written. **Be sure to include your name in the body of the email and "GRY 597/697" or "HTA" in the subject line.** E-mails should come from the Windows Live account you have as a student. I will strive to respond promptly to e-mails. Nonetheless, if you do not receive a response within a reasonable timeframe (one business day for most purposes), please politely resend your message.
- **If we are playing "communication tag", assume that you are always "it".**
- Note: Most of your assignments will be submitted via blackboard or flashdrive. Generally, assignments will not be accepted via email.

Use of Cell Phones, tablets, and other similar technology devices in classes—As a member of the learning community, each student has a responsibility to other students who are members of the community. When cell phones 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, tablets, 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.

- **Using any device or technology during class in a way that distracts other course participants is strictly forbidden.** Failure to comply with this policy will result in the loss of points in the course. Repeated offenses will result in escalated penalties, as determined by the instructor.
- **Communicate with Respect and Civility—**In alignment with section 2.4 of the Missouri State Code of Students' Rights and Responsibilities, all class communication must follow those guidelines to remain productive. I strongly encourage students to express their opinion, but not at the expense of being disrespectful to others. When you are speaking, please be sensitive to others and make your statements in a respectful way. When you are listening, please respect the viewpoint and perspective of the speaker and give them the benefit of the doubt that they are

doing their best to respect you. Differences of opinion should be an opportunity for learning and discussion, not a reason to attack or become defensive.

EMERGENCY RESPONSE PLAN

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 location of evacuation centers for the building. Students with disabilities impacting mobility should discuss the approved accommodations for emergency situations and additional options when applicable with the instructor. For more information, go to <http://www.missouristate.edu/safetran/51597.htm> and <http://www.missouristate.edu/safetran/erp.htm>.

Shelter Information (in case of severe weather).

Building	Shelter Information
Temple Hall	2nd floor and 3rd floor, Shelter in interior labs and classrooms

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

Building	Evacuation Information
Temple Hall	North to Meyer Library Main Entrance; Alternate: Northwest to Glass Hall rooms 101, 102 and 108; and West to Kemper Hall. (Destination will be determined by type of emergency and weather condition.)

Academic Integrity Policy

There is a reason that I stated my "Academic Dishonesty" policy on the first page of this syllabus. I take it very seriously. Please see the first page of this syllabus for the course policies specific to this section of GRY 597/697. You are responsible for knowing and following the university's student honor code, *Student Academic Integrity Policies and Procedures* at the following website: <http://www.missouristate.edu/academicintegrity/policies.htm>. Any student participating in any form of academic dishonesty will be subject to sanctions as described in this policy.

Nondiscrimination Policy

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, 111 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 Office for Institutional Equity and Compliance website at <http://www.missouristate.edu/equity>.

Disability Accommodation

To request academic accommodations for a disability, contact the Director of the Disability Resource Center, Meyer Library, Suite 111, (417) 836-4192 or (417) 836-6792 (TTY), www.missouristate.edu/disability. Students are required to provide documentation of disability to the Disability Resource Center prior to receiving accommodations. The Disability Resource Center refers some types of accommodation requests to the Learning Diagnostic Clinic, which also provides diagnostic testing for learning and psychological disabilities. For information about testing, contact the Director of the Learning Diagnostic Clinic at (417) 836-4787 or visit <http://psychology.missouristate.edu/lcd>.

Policy Regarding 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.

Other important dates and deadlines: Academic Calendar: <http://calendar.missouristate.edu/academic.aspx>

4

Amendment: The instructor reserves the right to amend, correct, or change this syllabus in any manner I deem necessary provided I give notice of any substantial changes at a regularly scheduled class meeting or through email and make the updated copy available on Blackboard. Simple editorial and grammatical corrections will not require notification.

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.

COURSE TOPICS

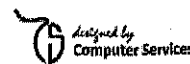
This following list of topics / projects is tentative and may be changed or added to as the semester progresses. The projects and assignments for the course will be based, at least in part, on the abilities and interests of the students.

- ***This list will vary by topic, the following is an example set of topics that would be relevant to a GEO 597 course***
- Hydrologic and Topographic Data Acquisition and Processing
- Hydrologic Conditioning of DEMs
- Watershed Delineation
- Stream Delineation and Calibration
- Spatial Analysis of Hydrologic Data
- Temporal Analysis of Hydrologic Data
- Modeling and Predicting Erosion

5

Missouri State.

Curricular Action Workflow



Missouri State > Computer Services - MIS > Curricular Action Workflow > CAW - Change Course Proposal Form

Change Course Proposal Form

Submitted on 12/22/2017 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:

GEO561 Intermediate 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

Current online catalog description:

GEO 561 Intermediate Geographic Information Science

Prerequisite: GRY 363: Principles and applications of Geographic Information Systems (GIS) software. Examines the nature and accuracy of spatially referenced data, as well as methods of data capture, storage, retrieval, visualization and output. May be taught concurrently with GEO 661. Cannot receive credit for both GEO 661 and GEO 561. 3(2-2) 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 561 ~~Intermediate-Geographic Information Science~~ **Applied Geographic Information Science**

Prerequisite: GRY 363 **or instructor's permission**. Principles and applications of Geographic Information Systems (GIS) software. Examines the nature and accuracy of spatially referenced data, as well as methods of data capture, storage, retrieval, visualization and output. **This course will emphasize the application of GIS to solving geospatial problems in various disciplines.** May be taught concurrently with GEO 661. Cannot receive credit for both GEO 661 and GEO 561. 3(2-2) S

What is changing? Check all boxes that apply.

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

5

Reason for proposed change

The content and focus of this course will largely be similar, but more emphasis will be placed on demonstrating the applications of GIS to various disciplines in the sciences and non-sciences.

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

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)

11/10/2017

Current Status:

College Council Review

Proposal Progress:

12/22/2017 - Submitted by Department Head (Toby Dogwiler)

Review Comments:

No comments have been added to this proposal.



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Missouri State

Curricular Action Workflow



Missouri State > Computer Services - MIS > Curricular Action Workflow > CAW - Change Course Proposal Form

Change Course Proposal Form

Submitted on 12/22/2017 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:

GRY360 Interpretation of Aerial Photography

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

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

Current online catalog description:

GRY 360 Interpretation of Aerial Photography

Prerequisite: 30 hours. Detection, identification, and analysis of objects or features from film and digital aerial photography and other types of high-resolution remotely sensed images. Laboratory emphasizes manual and digital image interpretation for land cover mapping, forestry, agriculture, geology, and planning applications. Field trip is required. 3(2-3) 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**

GRY **GEO** 360 Interpretation of Aerial Photography

Prerequisite: 30 hours. Detection, identification, and analysis of objects or features from film and digital aerial photography and other types of high resolution remotely sensed images. Laboratory emphasizes manual and digital image interpretation for land cover mapping, forestry, agriculture, geology, and planning applications. Field trip is required. 3(2-3) F

What is changing? Check all boxes that apply.

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

6

Reason for proposed change

GRY 360 was originally a course in our Geography (GRY) program prior to the creation of a separate Geospatial Science major. We are proposing to change the prefix for this course to "GEO" to reflect the fact that GRY 360 truly is a Geospatial Science course. This will help alleviate confusion among faculty in other departments and prospective students and majors interested in this course.

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

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

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

[Redacted area for '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)

11/10/2017

Current Status:

College Council Review

Proposal Progress:

12/22/2017 - Submitted by Department Head (Toby Dogwiler)

Review Comments:

No comments have been added to this proposal.

[Redacted area]

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Missouri State

Curricular Action Workflow



Missouri State > Computer Services - MIS > Curricular Action Workflow > CAW - Change Course Proposal Form

Change Course Proposal Form

Submitted on 12/22/2017 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:
 GRY363 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

Current online catalog description:

GRY 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~~

GRY **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

What is changing? Check all boxes that apply.

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

7

Reason for proposed change

GRY 363 was originally a course in our Geography (GRY) program prior to the creation of a separate Geospatial Science major. We are proposing to change the prefix for this course to "GEO" to reflect the fact that GRY 363 truly is a Geospatial Science course. This will help alleviate confusion among faculty in other departments and prospective students and majors interested in this course.

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

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

- Routine or annual review/assessment of curriculum
- Accreditation/certification compliance
- Other (be specific):
- Check if this is a non-substantive change.
- Faculty Input
- Student Input
- Review of catalog information

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

11/10/2017

Current Status:

College Council Review

Proposal Progress:

12/22/2017 - Submitted by Department Head (Toby Dogwiler)

Review Comments:

No comments have been added to this proposal.



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8

Missouri State

Curricular Action Workflow



Missouri State > Computer Services - MIS > Curricular Action Workflow > CAW - Change Program Proposal Form

Change Program Proposal Form

Submitted on 12/22/2017 by Toby Dogwiler (TDogwiler@MissouriState.edu).

Department:

Geography, Geology, & Planning

Type of Program

Choose One:

- Non-Comprehensive Undergraduate Major
- Option
- Certification
- Comprehensive Undergraduate Major
- Minor
- Academic Rules
- Graduate Program
- Certificate
- Other

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:

Geospatial Sciences-BS

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

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

Attached

What is changing? Check all boxes that apply:

8

- Title change
- Course changes of under 18 hours
- Course changes of 18 hours or more
- From option to program (major)
- From program (major) to option
- Other



Reason for Proposed Change:

This is part of a periodic review of the major curriculum. The faculty have decided to streamline the requirements by eliminating some Geography (GRY) course requirements that were not strictly necessary for a Geospatial Science degree. The changes also align with changes previously made to GRY 353 and 470 (changed to 3 cr courses) and the elimination of GRY 498 and GRY 367 (which is replaced with PLN 367). Finally, the proposed changes provide more options for introductory courses with a spatial component that are appropriate for entry to the Geospatial Major.

Note: The proposed changes include prefix changes for GRY 363 and GRY 360, which are changing to GEO 363 and GEO 360. The course change proposals for those courses are being submitted simultaneously to this proposal.

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

11/10/2017

Current Status:

College Council Review

Proposal Progress:

12/22/2017 - Submitted by Department Head (Toby Dogwiler)

Review Comments:

No comments have been added to this proposal.



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Geospatial Sciences (Comprehensive)

Bachelor of Science

A. General Education Program and Requirements

B. Major Requirements (59-60 hours)

1. GRY 100(3) or 108(3) or PLN 100(3)
2. GRY 142(4) or GLG 110(4)
3. GRY 275(3) or 348(3) or 351(3)
4. GRY 300(3) or 305(3) or 320(3) or 321(3) or 322(3) or 323(3)
5. GRY 301(3) or 353(3) or 470(2)
6. GRY 360(3), 363(4), 367(3), 498(1)
7. GEO 551(3), 561(3), 562(3), 566(3), 568(3), 572(3)
8. CSC 130(3)
9. AGR 330(3) or MTH 340(3) or PSY 200(3) or QBA 237(3) or REC 328(3)
or SOC 302(3)
10. Complete 3 additional hours from GEO prefix.
11. Complete 6 additional hours from the following: GRY courses numbered 300 or above; TCM 110(3); MTH 138(5), 181(3); 261(5) or 287(3), 280(5)
or 288(3); CSC 131(4), 335(3)
12. Public Affairs Capstone Experience will be fulfilled by completion of GRY 498(1)
and either GRY 301(3) or 353(3) or 470(2).

NOTE: Students who select a surveying emphasis must take GRY 275(3), 375(3), 377(3), 379(3).

C. General Baccalaureate Degree Requirements

8

Geospatial Sciences (Comprehensive)

Bachelor of Science

A. General Education Program and Requirements

B. Major Requirements (~~59-60~~ 52-53 hours)

1. GRY 100(3) or 108(3) or 135(4) or 142(4) or PLN 100(3) or GEO 200(3) or GLG 110(4) or 171(3)
2. ~~GRY 142(4) or 135(4) or GLG 110(4)~~
3. ~~GRY 275(3) or 348(3) or 351(3)~~
4. ~~GRY 300(3) or 305(3) or 320(3) or 321(3) or 322(3) or 323(3)~~
5. GRY 301(3) or 353(3) or 470(23)
6. ~~GRY~~GEO 360(3), 363(4), PLN 367(3), ~~498(1)~~
7. GEO 551(3), 561(3), 562(3), 566(3), 568(3), 572(3)
8. CSC 130(3)
9. AGR 330(3) or MTH 340(3) or PSY 200(3) or QBA 237(3) or REC 328(3) or SOC 302(3)
10. Complete 3 additional hours from GEO prefix.
11. Complete ~~69~~ 69 additional hours from the following: GEO or GRY courses numbered ~~300~~ 275 or above; TCM 110(3); MTH 138(5), 181(3); 261(5) or 287(3); 280(5) or 288(3); CSC 131(4), 335(3)
12. Public Affairs Capstone Experience will be fulfilled by completion of ~~GRY 498(1)~~ and either GRY 301(3) or 353(3) or 470(23).

~~NOTE: Students who select a surveying emphasis must take GRY 275(3), 375(3), 377(3), 379(3).~~

C. General Baccalaureate Degree Requirements

9

Missouri State

Curricular Action Workflow



Missouri State > Computer Services - MIS > Curricular Action Workflow > CAW - Change Program Proposal Form

Change Program Proposal Form

Submitted on 12/22/2017 by Toby Dogwiler (TDogwiler@MissouriState.edu).

Department:

Geography, Geology, & Planning

Type of Program

Choose One:

- Non-Comprehensive Undergraduate Major
- Comprehensive Undergraduate Major
- Graduate Program
- Option
- Minor
- Certificate
- Certification
- Academic Rules
- Other

Choose All That Apply:

- Bachelor of Arts
- Bachelor of Applied Science
- Bachelor of Fine Arts
- Bachelor of Social Work
- Bachelor of Music Education
- Bachelor of Music
- Bachelor of Science
- Bach of Science in Athl Traing
- Bach of Science in Education
- Bachelor of Science in Nursing

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:

Geospatial Sciences

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

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)

Rich text editor toolbar with icons for undo, redo, bold, italic, and strikethrough.

9

[Empty rectangular box for attachment]

Attached

What is changing? Check all boxes that apply:

- Title change
- From option to program (major)
- Other
- Course changes of under 18 hours
- From program (major) to option
- Course changes of 18 hours or more



Reason for Proposed Change:

These changes are part of a periodic review of the curriculum by the Geospatial Science faculty. The changes reduced the number of courses required for the minor by one course.

Note: The proposed changes include prefix changes for GRY 363 and GRY 360, which are changing to GEO 363 and GEO 360. The course change proposals for those courses are being submitted simultaneously to this proposal.

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

11/10/2017

Current Status:

College Council Review

Proposal Progress:

12/22/2017 - Submitted by Department Head (Toby Dogwiler)

Review Comments:

No comments have been added to this proposal.

[Redacted area]

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Geospatial Sciences

Bachelor of Science

A. GRY 142(4) or GLG 110(4); GRY 360(3), 363(4); GEO 551(3), 561(3)

B. Complete three hours from GEO 562(3), 566(3), 568(3), 572(3), 573(3), 575(3), 578(3). Note: Students majoring in geography must complete nine hours of the following to avoid overlap with the major degree requirements: GEO 562(3), 566(3), 568(3), 572(3), 573(3), 575(3), 578(3).

Geospatial Sciences

Bachelor of Science

- ~~A. GRY 142(4) or GLG 110(4), GRY 360(3), 363(4), GEO 551(3), 561(3)~~
- A. GEO 200(3) OR GRY 100(3) OR 108(3) OR 135(4) OR 142(4) OR PLN 100(3)
OR GLG 110(4) OR 171(3)**
- ~~B. Complete three hours from GEO 562(3), 566(3), 568(3), 572(3), 573(3), 575(3),
578(3). Note: Students majoring in geography must complete nine hours of the
following to avoid overlap with the major degree requirements: GEO 562(3),
566(3), 568(3), 572(3), 573(3), 575(3), 578(3).~~
- B. GEO 360(3), 363(4), 551(3)**
- C. Complete three hours from GEO courses numbered 300 or above. Note:
Students majoring in geography must complete six hours of GEO courses
numbered 300 or above to avoid overlap with major degree requirements.**

10

Missouri State.

Curricular Action Workflow



Missouri State > Computer Services - MIS > Curricular Action Workflow > CAW - Change Program Proposal Form

Change Program Proposal Form

Submitted on 12/22/2017 by Toby Dogwiler (TDogwiler@MissouriState.edu).

Department:

Geography, Geology, & Planning

Type of Program

Choose One:

- Non-Comprehensive Undergraduate Major
- Comprehensive Undergraduate Major
- Graduate Program
- Option
- Minor
- Certificate
- Certification
- Academic Rules
- Other

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:

Geographic Information Sciences-Undergraduate Certificate

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

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

Attached

What is changing? Check all boxes that apply:

10

- Title change
- Course changes of under 18 hours
- Course changes of 18 hours or more
- From option to program (major)
- From program (major) to option
- Other

Reason for Proposed Change:

These changes are part of a periodic review of the curriculum by the Geospatial Science faculty. The changes allow students more flexibility in which GEO courses are used to fulfill the requirements in item "B" of the program requirements.

Note: The proposed changes include prefix changes for GRY 363 and GRY 360, which are changing to GEO 363 and GEO 360. The course change proposals for those courses are being submitted simultaneously to this proposal.

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

11/10/2017

Current Status:

College Council Review

Proposal Progress:

12/22/2017 - Submitted by Department Head (Toby Dogwiler)

Review Comments:

No comments have been added to this proposal.

[Redacted comment box]

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Geographic Information Sciences

The certificate in Geographic Information Sciences provides an 16 hour undergraduate level program for students and professionals who desire credentials in this area

Admission requirements

At least a 2.50 Missouri State cumulative GPA and a minimum of 30 credit hours.

Program requirements (16 hours)

- A. GRY 360(3), 363(4), GEO 551(3), 561(3)
- B. Three additional hours from GEO 562(3), 566(3), 568(3), 572(3), 573(3), 575(3), 578(3)
- C. Attain a 2.75 GPA in required courses

10

Geographic Information Sciences

The certificate in Geographic Information Sciences provides a 16 hour undergraduate level program for students and professionals who desire credentials in this area.

Admission requirements

At least a 2.50 Missouri State cumulative GPA and a minimum of 30 credit hours.

Program requirements (16 hours)

- A. GRY GEO 360(3), 363(4); GEO 551(3), 561(3)
- B. Three additional hours from: GEO courses 562(3), 566(3), 568(3), 572(3), 573(3), 575(3), 578(3)
- C. Attain a 2.75 GPA in required courses



Missouri State.

Curricular Action Workflow



Missouri State > Computer Services - MIS > Curricular Action Workflow > CAW - Change Course Proposal Form

Change Course Proposal Form

Submitted on 01/05/2018 by Debra Finn (DFinn@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:

BIO574 Aquatic Entomology

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

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

Current online catalog description:

BIO 574 Aquatic Entomology

Prerequisite: **BIO 370 or BIO 371 or AGR 383.** Aquatic insects, ecology and taxonomy with emphasis on field applications. **May be taught concurrently with BIO 674. Cannot receive credit for both BIO 674 and BIO 574. Public Affairs Capstone Experience course. 2(1-3) SE**

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 574 Aquatic Entomology

Prerequisite: **BIO 369 or BIO 370 or BIO 371 or AGP 581 or AGR 383.** Aquatic insects, ecology and taxonomy with emphasis on field applications. **One weekend field trip required.** May be taught concurrently with BIO 674. Cannot receive credit for both BIO 674 and BIO 574. Public Affairs Capstone Experience course. 2(1-3) SE **D**

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 checked="" type="checkbox"/> Periodicity | <input checked="" type="checkbox"/> Description | |

Reason for proposed change

UP

Prerequisites: updated in light of a course that no longer exists (AGR 383) and to include other useful options (Ecology, BIO 369, and Applied Entomology, AGP 581).
Description: added text for students to be aware of a weekend fieldtrip requirement.
Periodicity: changed to "D" for flexibility to schedule on student demand.

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

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

- Routine or annual review/assessment of curriculum
 - Accreditation/certification compliance
 - Other (be specific):
 - Check if this is a non-substantive change.
- Faculty Input
 - Review of catalog information
 - Student Input

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

01/08/2018

Current Status:

College Council Review

Proposal Progress:

01/05/2018 - Submitted by Department Head (S Mathis)

Review Comments:

No comments have been added to this proposal.



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12

MissouriState.

Curricular Action Workflow



Missouri State > Computer Services - MIS > Curricular Action Workflow > CAW - Change Course Proposal Form

Change Course Proposal Form

Submitted on 01/05/2018 by Laszlo Kovacs (Laszlokovacs@missouristate.edu).

All fields require input

This proposal applies to:

- Radio buttons for 'An existing COURSE' (selected) and 'An existing REGULAR (e.g. permanent) SECTION of a variable content course.'

Existing Course:

BIO235 Genetics

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

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

Current online catalog description:

BIO 235 Genetics

Prerequisite: BIO 121 or BMS 110 and 111; and CHM 116 and 117 or CHM 160 and 161 (recommended) or higher, and MTH 135 or higher. Concepts of classical, molecular and population genetics; genomics, biotechnology and epigenetics. Laboratory emphasis is on the chemical characteristics and in vitro manipulation of nucleic acids. Supplemental course fee. 4(3-3) 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.)

Rich text editor toolbar with arrows, bold, italic, and strikethrough icons.

BIO 235 Genetics

Prerequisites: BIO 121 or BMS 110 and 111; and CHM 116 and 117 or CHM 160 and 161 (recommended) or higher, and MTH 135 or higher.

Principles of classical and molecular genetics, epigenetics and biotechnology. Course content is foundational to concepts of modern biology, recommended for all majors in life science-related fields.

Credit hours: 3

Lecture contact hours: 3

Lab contact hours: 0

Typically offered: Fall, Spring

What is changing? Check all boxes that apply.

- Checkboxes for Course Code, Course Number (Check Availability), Title, and Prerequisite.

12

- Credit Hours/Contact Hours
- Periodicity
- Description

Reason for proposed change

The purpose of this curricular proposal is to change BIO 235 into a lecture-only course without a lab component. At present, BIO 235 includes a lab component. The content of this lab component is proposed to be converted into a new stand-alone lab course (BIO 236) in a separate curricular proposal.

The reason for splitting the lecture and the lab into separate courses is to simplify the transfer of credit for lecture-only genetics courses from other institutions. Presently, requests to transfer lecture-only genetics credit are denied on-line, then the student is informed to take the lab as BIO 197 (a variable content course), the 197 section has to be built in the course schedule, the maximum enrollment number for those sections has to be fixed on-line so that the lab doesn't overload, and the transferred course + BIO 197 have to be substituted for the genetics requirement. Separate stand-alone lab and lecture-only courses will streamline this process. We can simply accept the transfer credit for lecture-only genetics and require the student to take BIO 236.

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

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):

Input from the department head and clerical staff.

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)

12/01/2017

Current Status:

College Council Review

Proposal Progress:

01/08/2018 - Submitted by Department Head (S Mathis)

Review Comments:

01/08/2018 - Department Head Review - S Mathis - This change requires program changes. Genetics (lecture and lab) is required for every degree offered by Biology. The program change forms will be submitted later today.



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Missouri State.

Curricular Action Workflow

13



Missouri State > Computer Services - MIS > Curricular Action Workflow > CAW - New Course Proposal Form

New Course Proposal Form

Submitted on 01/05/2018 by Laszlo Kovacs (Laszlokovacs@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:

BIO

Course Number: (Check Availability)

236

Course Title:

Genetics Laboratory

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':

BIO 235

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

Concurrent enrollment in BIO 235 is strongly encouraged. Problem-solving and laboratory skills to complement lecture material presented in BIO 235. Emphasis on the chemical characteristics and in vitro manipulation of nucleic acids. Cannot be taken Pass/Not Pass. Supplemental course fee.

Credit Hours:

1

Lecture Contact Hours:

0

Lab Contact Hours:

3

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)

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

Complete Catalog Description:

BIO 236 Genetics Laboratory

Prerequisite: BIO 235

Concurrent enrollment in BIO 235 is strongly encouraged. Problem-solving and laboratory skills to complement lecture material presented in BIO 235. Emphasis on the chemical characteristics and in vitro manipulation of nucleic acids. Cannot be taken Pass/Not Pass. Supplemental course fee.

Credit hours: 1 Lecture contact hours: 0 Lab contact hours: 3

Typically offered: Fall, Spring

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

Attached

Purpose of Course

The purpose of this curricular proposal is to split the lecture and lab components of BIO 235 (Genetics) into two separate courses. To accomplish this, we propose to establish a new stand-alone genetics lab course, named Genetics Laboratory, BIO 236. (BIO 235 is proposed to be changed into a stand-alone lecture-only course in a separate course change proposal). The content of the new lab course will be identical to the lab component of present BIO 235 in its present form. The sum of credit hours generated will remain the same. BIO 236 will be a 1-credit course, and the lecture-only BIO 235 will be a 3-credit course. At present, the BIO 235 is a 4-credit course.

The reason for splitting the lecture and the lab into separate courses is to simplify the transfer of credit for lecture-only genetics courses from other institutions. Presently, requests to transfer lecture-only genetics credit are denied on-line, then the student is informed to take the lab as BIO 197 (a variable content course), the 197 section has to be built in the course schedule, the maximum enrollment number for those sections has to be fixed on-line so that the lab doesn't overload, and the transferred course + BIO 197 have to be substituted for the genetics requirement. Separate stand-alone lab and lecture-only courses will streamline this process. We can simply accept the transfer credit for lecture-only genetics and require the student to take BIO 236.

Relationship to Other Departments

A similar genetics laboratory course, but with emphasis on human genetics (Human genetics Laboratory, BMS 232) is taught by the Biomedical Sciences Department.

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

New Course Resource Information

Anticipated Average Enrollment per section:	24	Maximum Enrollment Limit per section:	24
Anticipated Average Enrollment per semester:	110	Maximum Enrollment Limit per semester:	144
Anticipated Average Enrollment per year:	220	Maximum Enrollment Limit per year:	288
Faculty Load Assignment (equated hours):	6		

Is another course being deleted? No Yes

13

What will this course require in the way of:

Additional library Holdings

None

Additional computer resources

None

Additional or remodeled facilities

None

Additional equipment or supplies

None

Additional travel funds

None

Additional faculty; general vs specialized

None

Additional faculty; regular vs per-course

None

Other additional expenses

None

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

Contact hours have already been allocated to teach the lab component of BIO 235 in its present form. No additional contact hours are required.

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

Laszlo Kovacs, Tina Hopper, Tara Herring plus teaching assistants currently supervising lab sessions under Kovacs' direction.

What is the anticipated source of students for this course?

This course will be required for non-comprehensive Biology BA and BS majors, comprehensive BIO majors in all three emphasis areas and BIO minors.

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

Biology students will take this course in place of the lab component of the present BIO 235 course.

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

If BMS students decide to take this course in place of BMS 232 or the lab component of BMS 231, those courses may be affected.

Other comments:

none

13

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

12/01/2017

Current Status:

College Council Review

Proposal Progress:

01/08/2018 - Submitted by Department Head (S Mathis)

Review Comments:

01/08/2018 - Department Head Review - S Mathis - This change requires program changes. Genetics (lecture and lab) is required for every degree offered by Biology. The program change forms will be submitted later today.



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Genetics Laboratory – BIO 236

Department of Biology, Missouri State University

13

Syllabus

COURSE CONTENT: BIO 236 is an introduction to problem-solving and hands-on laboratory skills in genetics to complement lecture material presented in BIO 235. The problem-solving exercises focus on inheritance problems, probability calculations and population genetics, whereas the lab skills concentrate on the chemical and physical characteristics of nucleic acids and on technical expertise required for the extraction, cloning, sequencing and computational analysis of DNA. As recombinant DNA technology pervades all areas of life sciences, the course material is foundational for methods used in molecular, micro- and cell biology, genomics, evolution, plant and animal breeding, and biotechnology. Concurrent enrollment in BIO 235 is strongly encouraged.

PREREQUISITES: BIO 121, or BMS 110 and 111; and CHM 116 and 117 or CHM 160 and 161 (recommended) or higher; and MTH 135 or higher.

Location: Temple Hall 244

Section 1 (42284):	12:20 AM - 3:10 PM, Wednesday	Instructor: Laszlo Kovacs
Section 2 (42315):	3:35 PM - 6:25 PM, Wednesday	Instructor:
Section 3 (42320):	9:00 AM - 11:50 AM, Thursday	Instructor:
Section 4 (42321):	1:00 PM - 3:50 PM, Thursday	Instructor:
Section 5 (42909):	1:25 PM - 4:15 PM, Friday	Instructor:
Section 6 (51696):	8:00 AM -10:50 AM, Friday	Instructor:

PROFESSOR: Dr. Laszlo Kovacs

<http://biology.missouristate.edu/Kovacs.htm>

Office: Temple Hall 252 Phone: 417-836-6289 E-mail: LaszloKovacs@MissouriState.edu

Office hours: Monday: 1:00-2:00 PM, Wednesday and Thursday 3:30-4:30 PM, Friday 8:30-10 AM, or by appointment.

REQUIRED LAB MANUAL: *Genetics Laboratory Manual* by L. Kovacs and M. McKnight. Stipes Publishing L.L.C. Available only at the MSU Bookstore.

REQUIRED CLICKER: Also required is a registered Turning Technologies response device. (ISBN 978-1-60904-552-4). Available at the MSU Bookstore.

ATTENDANCE: Attendance of the laboratory sessions is mandatory and enforced. The course includes analytical and quantitative concepts requiring comprehension of probability and basic statistics. Therefore, the students' physical and mental presence at all lectures and lab sessions is necessary to keep up with the study material and succeed in class.

EVALUATION and GRADING: Your mastery of the course information will be measured by 12 lab quizzes, laboratory assignments, and a final lab exam which is scheduled at week 15. You can earn a maximum of 100 points for the final lab method quiz. In addition, you can collect 35

points for lab exercises, and 120 points for the lab quizzes (12 quizzes, 10 points each). Lab quizzes will test your knowledge of the material of the previous lab session. Quizzes will be given during the first ten minutes of the lab period and cannot be made up. Students who arrive while the quiz is being taken will have the opportunity to finish as much of it as they can in the time that remains. Daily lab assignments should be completed during the lab period and will not be accepted after the lab has ended. Lab homework assignments will receive a 10% penalty for every day that they are late (past the original due date). The total number of points that can be earned by participating in the lab sections is 255.

Grades are based on the percentage of total points obtained:

- A 90 - 100%
- B 80 - 89.9%
- C 70 - 79.9%
- D 60 - 69.9%
- F 59.9% and below

Week	Date	Exercise
1	1/18-20/2018	Introduction to genetic databases
2	1/25-27/2018	Mitosis and meiosis
3	2/1-3/2018	Mendelian inheritance, crosses with fruit fly
4	2/8-10/2018	Extraction of genomic DNA from plant tissue
5	2/15-17/2018	PCR amplification of a DNA fragment
6	2/22-24/2018	Cloning a DNA fragment in a plasmid vector
7	3/1-3/2018	Plasmid purification and spectrophotometry
8	3/8-10/2018	DNA sequencing and bioinformatics
9	Spring Break	
10	3/22-24/2018	Phylogenetic analysis using nucleotide and amino acid sequences
11	3/29-31/2018	Genotyping a locus in humans: Marker amplification
12	4/5-7/2018	Genotyping a locus in humans: Data analysis
13	Spring Holiday	
14	4/19-21/2018	Population genetics
15	4/26-28/2018	Review for methods quiz
16	5/3-5/2018	Lab Final

LAB ATTENDANCE AND LATE WORK POLICY: Lab attendance is mandatory. If you miss your lab section, attend another section in the same week. If you cannot make up the lab that same week, there is no other opportunity to make up for a missed lab. If you have an emergency/illness that will cause you to miss all of the lab sections in a given week, please contact your instructor to make arrangements to complete as much of the activity as you can.

DROP POLICY: It is your responsibility to understand the University's procedure for dropping the 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. Should you decide to drop this course during the first week of the semester, be sure to follow university policies (<http://www.missouristate.edu/registrar/catalog/chnsched.html>) to avoid being financially responsible for the course or making a failing grade. If you drop the course before the end of the Change of Schedule Period on November 10, you may receive a withdrawal (W) grade. If you

withdraw from the class after November 10, your professor must assign a grade based on your performance in the class, and may not assign you a W grade. Be sure to keep this in mind and avoid withdrawing from the course late in the semester. It is important for you to avoid dropping a course if at all possible. Should it become necessary, always consult your academic advisor before you make a final decision.

LABORATORY SAFETY RULES. All lab sessions are designed to be safe for all participants. Nonetheless, inappropriate behavior or lack of care may result in personal injury and damage to laboratory equipment. To ensure your and your classmates' safety, you will be asked to read and follow the important rules listed. During the 4th lab session, you will acknowledge with your signature your understanding and your obligation to observe these rules.

- Always follow verbal and written instructions given by your supervisor. Handle biological samples, chemicals, and equipment only as directed by your lab supervisor. If you do not understand a given task or a procedure, ask for clarification.
- Wear appropriate clothing that protects you from accidental chemical spills. You are not allowed to work in the lab in sandals or open shoes. Avoid wearing dangling jewelry or baggy clothes and tie your hair back if it is long.
- Do not eat, drink or chew gum in the lab, and refrain from foolish behavior, practical jokes or pranks during lab exercises.
- Wear protective clothing (gloves, goggles) as instructed by the supervisor. When such protective gear is required, you are not allowed to take part in the lab exercise without them. Gloves will be occasionally required not only for your safety, but to protect your sample from enzymes and DNA that are naturally part of your skin.
- When using Bunsen burners, make sure that they are extinguished before you leave the lab.
- Keep your work area clean. Dispose of waste material by pouring/throwing it in designated waste containers and dry up all spills from the bench that might have occurred during your work. Upon completion of your experiment, clean up your bench to leave a dry, neat, and safe work area for the students in the following section.
- When using a centrifuge, you should always balance your sample tube with a tube of similar weight.
- Adjustable volume pipets should be held and stored up-right or in horizontal position, and never in a slanted or upside down position which allows liquid flow down the barrel of the pipets.
- The volume of pipets should never be adjusted outside their designated range.
- Important: Your lab supervisor will check the condition of all pipets at the end of each class. If a pipet is found adjusted out of its designated range, all four members of a working group at that location will have 20 points deducted from their lab score.

14

Missouri State.

Curricular Action Workflow



Missouri State > Computer Services - MIS > Curricular Action Workflow > CAW - Change Program Proposal Form

Change Program Proposal Form

Submitted on 01/08/2018 by Rachel Rigby (RachelRigby@MissouriState.edu).

Department:

Biology

Type of Program

Choose One:

- Non-Comprehensive Undergraduate Major
- Option
- Certification
- Comprehensive Undergraduate Major
- Minor
- Academic Rules
- Graduate Program
- Certificate
- Other

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:

Biology-BA-Minor-Required

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

14

Bachelor of Arts
 General Education Program and Requirements
 Major Requirements
 BIO 121(4), 122(4), 235(4), 310(5) or 320(4), 369(4), 494(1), 550(3)
 Select elective courses in biology to total a minimum of 32 hours and include at least 12 hours of 300 level or higher courses. Electives may be selected from one of the following emphases. Advisors can assist students to select electives to emphasize areas that best meet their interest and career goals. Popular areas of emphasis include pre-health studies (pre-medical, pre-veterinary, pre-physical therapy, etc.), microbiology, cell/molecular biology, environmental/conservation biology, and zoology, but other areas of emphasis are also possible.
 Related Requirements: CHM 201(3) and 202(2), or CHM 342(5) and 343(5) or 344(3); PHY 123(4) and 124(4) or PHY 203(5) and 204(5); MTH 261(5) or 287(3)
 Public Affairs Capstone Experience will be fulfilled by completion of BIO 369(4) and 494(1) and one additional course from the following: BIO 300(1), 355(4), 370(4), 373(3), 398(1), 399(1-3), 485(1-3), 498(3), 499(1-3), 501(2), 505(3), 508(3), 509(4), 511(4), 512(3), 520(3), 527(1-4), 539(3), 547(3), 561(2), 573(3), 574(2), 575(3), 576(3), 577(3), 578(4), 579(4), 584(3), 589(3). Course may also be used to satisfy the elective courses in biology.
 Minor Required (or second major)
 Specific Bachelor of Arts Degree Requirements
 General Baccalaureate Degree 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 S

Bachelor of Arts
 General Education Program and Requirements
 Major Requirements
 BIO 121(4), 122(4), 235(4), **236(1)**, 310(5) or 320(4), 369(4), 494(1), 550(3)
 Select elective courses in biology to total a minimum of 32 hours and include at least 12 hours of 300 level or higher courses. Electives may be selected from one of the following emphases. Advisors can assist students to select electives to emphasize areas that best meet their interest and career goals. Popular areas of emphasis include pre-health studies (pre-medical, pre-veterinary, pre-physical therapy, etc.), microbiology, cell/molecular biology, environmental/conservation biology, and zoology, but other areas of emphasis are also possible.
 Related Requirements: CHM 201(3) and 202(2), or CHM 342(5) and 343(5) or 344(3); PHY 123(4) and 124(4) or PHY 203(5) and 204(5); MTH 261(5) or 287(3)
 Public Affairs Capstone Experience will be fulfilled by completion of BIO 369(4) and 494(1) and one additional course from the following: BIO 300(1), 355(4), 370(4), 373(3), 398(1), 399(1-3), 485(1-3), 498(3), 499(1-3), 501(2), 505(3), 508(3), 509(4), 511(4), 512(3), 520(3), 527(1-4), 539(3), 547(3), 561(2), 573(3), 574(2), 575(3), 576(3), 577(3), 578(4), 579(4), 584(3), 589(3). Course may also be used to satisfy the elective courses in biology.
 Minor Required (or second major)
 Specific Bachelor of Arts Degree Requirements
 General Baccalaureate Degree Requirements

Not Attached

Total Hours: no change

What is changing? Check all boxes that apply:

- Title change
- Course changes of under 18 hours
- Course changes of 18 hours or more
- From option to program (major)
- From program (major) to option
- Other

Reason for Proposed Change:

We are splitting the current BIO 235(4) into separate lecture BIO 235(3) and lab BIO 236(1) sections. Both lecture and lab are still required for Biology majors and minors. The change will make it easier for students who transfer a lecture-only genetics course to take the lab-only portion at MSU to complete the requirement.

14

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

12/01/2017

Current Status:

College Council Review

Proposal Progress:

01/08/2018 - Submitted by Department Head (S Mathis)

Review Comments:

01/08/2018 - Department Head Review - S Mathis - Accompanies course change (BIO 235) and new course (BIO 236) proposals. Note that the strikethrough on the "4" on the "235(4 3)" on the "complete new catalog description" is not visible because it goes through the horizontal line on the "4".



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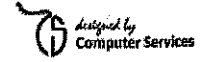
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15

Missouri State.

Curricular Action Workflow



Missouri State > Computer Services - MIS > Curricular Action Workflow > CAW - Change Program Proposal Form

Change Program Proposal Form

Submitted on 01/08/2018 by Rachel Rigby (RachelRigby@MissouriState.edu).

Department:

Biology

Type of Program

Choose One:

- Non-Comprehensive Undergraduate Major
- Option
- Certification
- Comprehensive Undergraduate Major
- Minor
- Academic Rules
- Graduate Program
- Certificate
- Other

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:

Biology-BS-Minor Required

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

15

Bachelor of Science
 General Education Program and Requirements
 Major Requirements
 BIO 121(4), 122(4), 235(4), 310(5) or 320(4), 369(4), 494(1), 550(3)
 Select elective courses in biology to total a minimum of 36 hours and include at least 12 hours of 300-level or higher courses. Advisors can assist students to select electives to emphasize areas that best meet their interest and career goals. Popular areas of emphasis include pre-health studies (pre-medical, pre-veterinary, pre-physical therapy, etc.), microbiology, cell/molecular biology, environmental/conservation biology, and zoology, but other areas of emphasis are also possible.
 Public Affairs Capstone Experience will be fulfilled by completion of BIO 369(4) and 494(1) and one additional course from the following: BIO 300(1), 355(4), 370(4), 373(3), 398(1), 399(1-3), 485(1-3), 498(3), 499(1-3), 501(2), 505(3), 508(3), 509(4), 511(4), 512(3), 520(3), 527(1-4), 539(3), 547(3), 561(2), 573(3), 574(2), 575(3), 576(3), 577(3), 578(4), 579(4), 584(3), 589(3). Course may also be used to satisfy the elective courses in biology.
 Related Requirements: CHM 201(3) and 202(2), or CHM 342(5) and 343(5) or 344(3); PHY 123(4) and 124(4) or PHY 203(5) and 204(5); MTH 261(5) or 287(3)
 Minor Required (or second major)
 General Baccalaureate Degree 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 S**

Bachelor of Science
 General Education Program and Requirements
 Major Requirements
 BIO 121(4), 122(4), 235(4 **3**), **236(1)**, 310(5) or 320(4), 369(4), 494(1), 550(3)
 Select elective courses in biology to total a minimum of 36 hours and include at least 12 hours of 300-level or higher courses. Advisors can assist students to select electives to emphasize areas that best meet their interest and career goals. Popular areas of emphasis include pre-health studies (pre-medical, pre-veterinary, pre-physical therapy, etc.), microbiology, cell/molecular biology, environmental/conservation biology, and zoology, but other areas of emphasis are also possible.
 Public Affairs Capstone Experience will be fulfilled by completion of BIO 369(4) and 494(1) and one additional course from the following: BIO 300(1), 355(4), 370(4), 373(3), 398(1), 399(1-3), 485(1-3), 498(3), 499(1-3), 501(2), 505(3), 508(3), 509(4), 511(4), 512(3), 520(3), 527(1-4), 539(3), 547(3), 561(2), 573(3), 574(2), 575(3), 576(3), 577(3), 578(4), 579(4), 584(3), 589(3). Course may also be used to satisfy the elective courses in biology.
 Related Requirements: CHM 201(3) and 202(2), or CHM 342(5) and 343(5) or 344(3); PHY 123(4) and 124(4) or PHY 203(5) and 204(5); MTH 261(5) or 287(3)
 Minor Required (or second major)
 General Baccalaureate Degree Requirements

Not Attached

Total Hours: no change

What is changing? Check all boxes that apply:

- Title change
- From option to program (major)
- Other
- Course changes of under 18 hours
- From program (major) to option
- Course changes of 18 hours or more

Reason for Proposed Change:

15

We are splitting the current BIO 235(4) into separate lecture BIO 235(3) and lab BIO 236(1) sections. Both lecture and lab are still required for Biology majors and minors. The change will make it easier for students who transfer a lecture-only genetics course to take the lab-only portion at MSU to complete the requirement.

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

12/01/2017

Current Status:

College Council Review

Proposal Progress:

01/08/2018 - Submitted by Department Head (S Mathis)

Review Comments:

01/08/2018 - Department Head Review - S Mathis - Accompanies course change (BIO 235) and new course (BIO 236) proposals. Note that the strikethrough on the "4" on the "235(4 3)" on the "complete new catalog description" is not visible because it goes through the horizontal line on the "4".



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16

Missouri State.

Curricular Action Workflow



Missouri State > Computer Services - MIS > Curricular Action Workflow > CAW - Change Program Proposal Form

Change Program Proposal Form

Submitted on 01/08/2018 by Rachel Rigby (RachelRigby@MissouriState.edu).

Department:

Biology

Type of Program

Choose One:

- Non-Comprehensive Undergraduate Major
- Comprehensive Undergraduate Major
- Graduate Program
- Option
- Minor
- Certificate
- Certification
- Academic Rules
- Other

Choose All That Apply:

- Bachelor of Arts
- Bachelor of Applied Science
- Bachelor of Fine Arts
- Bachelor of Social Work
- Bachelor of Music Education
- Bachelor of Music
- Bachelor of Science
- Bach of Science in Athl Traing
- Bach of Science in Education
- Bachelor of Science in Nursing

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:

Biology

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

16

Minor(s)
 Biology
 Bachelor of Arts
 BIO 121(4), 122(4), 235(4)
 Additional biology electives to total 15 hours.
 Biology
 Bachelor of Science
 BIO 121(4), 122(4), 235(4)
 Additional biology electives to total 19 hours.

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

Minor(s)
 Biology
 Bachelor of Arts
 BIO 121(4), 122(4), 235(-4 3), **236(1)**
 Additional biology electives to total 15 hours.
 Biology
 Bachelor of Science
 BIO 121(4), 122(4), 235(-4 3), **236(1)**
 Additional biology electives to total 19 hours.

Not Attached

Total Hours: no change

What is changing? Check all boxes that apply:

- Title change
- From option to program (major)
- Other
- Course changes of under 18 hours
- From program (major) to option
- Course changes of 18 hours or more

Reason for Proposed Change:

We are splitting the current BIO 235(4) into separate lecture BIO 235(3) and lab BIO 236(1) sections. Both lecture and lab are still required for Biology majors and minors. The change will make it easier for students who transfer a lecture-only genetics course to take the lab-only portion at MSU to complete the requirement.

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

12/01/2017

Current Status:

College Council Review

Proposal Progress:

01/08/2018 - Submitted by Department Head (S Mathis)

Review Comments:

16

01/08/2018 - Department Head Review - S Mathis - Accompanies course change (BIO 235) and new course (BIO 236) proposals. Note that the strikethrough on the '4' on the '235(4 3)' on the 'complete new catalog description' is not visible because it goes through the horizontal line on the '4'.



MAKE YOUR MENT.

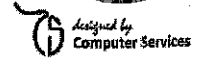
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Missouri State.

Curricular Action Workflow

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Missouri State > Computer Services - MIS > Curricular Action Workflow > CAW - Change Program Proposal Form

Change Program Proposal Form

Submitted on 01/09/2018 by Georgianna Saunders (Gigisaunders@missouristate.edu).

Department:

Biology

Type of Program

Choose One:

- Non-Comprehensive Undergraduate Major
- Option
- Certification
- Comprehensive Undergraduate Major
- Minor
- Academic Rules
- Graduate Program
- Certificate
- Other

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:

Biology/Environmental Biology and Evolution-BS

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

see attachment

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

Attached

What is changing? Check all boxes that apply:

- Title change
- From option to program (major)
- Course changes of under 18 hours
- From program (major) to option
- Course changes of 18 hours or more

Other

Reason for Proposed Change:

17

This is an update to the Biology comprehensive BS degree program that accommodates course changes that have occurred over several years. (Note that I selected the Biology/Environmental Biology and Evolution option from the pull-down menu because there is no entry for the comprehensive degree itself.) These changes include changes in course numbers, changes in course credit hours, the addition of new courses that are appropriate menu options, and the elimination of courses with new prerequisites that our students do not meet. We are splitting the current BIO 235(4) into separate lecture BIO 235(3) and lab BIO 236(1) sections. Both lecture and lab are still required for Biology majors and minors. The change will make it easier for students who transfer a lecture-only genetics course to take the lab-only portion at MSU to complete the requirement. Additionally, BIO 494 (senior seminar, 1 credit) is being replaced by BIO 302 (Biology seminar, 1 credit) and BIO 492 (Biology program assessment, 0 credits). Finally, an error is corrected in the math requirement for the Pre-Teacher Education option, which was approved earlier this year.

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

12/01/2017

Current Status:

College Council Review

Proposal Progress:

01/09/2018 - Submitted by Department Head (S Mathis)

Review Comments:

No comments have been added to this proposal.



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Biology (Comprehensive) (BS)

Bachelor of Science

A. General Education Program and Requirements

B. Major Requirements

1. BIO 121(4), 122(4), 235(4), 494(1), 550(3)
2. PHY 123(4) and 124(4) or PHY 203(5) and 204(5)
3. MTH 138(5) or 181(3), or eligibility for MTH 261 on mathematics placement test
4. BIO 310(5) or 320(4) or 361(4) or 544(4); consult options below before selecting course
5. CHM 116(4) and 117(1), or CHM160(4) and 161(1); consult options below before selecting course
6. CHM 201(3) and 202(2), or 302(5) or 342(5); consult options below before selecting course
7. Public Affairs Capstone Experience will be fulfilled by completion of BIO 494(1) and two additional courses from the following: BIO 300(1), 355(4), 369(4), 370(4), 373(3), 398(1), 399(1-3), 485(1-3), 498(3), 499(1-3), 501(2), 505(3), 508(3), 509(4), 511(4), 512(3), 520(3), 527(1-4), 539(2), 547(3), 561(2), 573(3), 574(2), 575(3), 576(3), 577(3), 578(4), 579(4), 584(3), 589(3). Courses may also be used to satisfy option requirements.
8. Complete requirements in one of the following options*: Note: With approval of advisor, up to 3 hours of the following can be substituted for one of the BIO courses listed in any option: BIO 300, 399, 499, or 597.
 - a. **Environmental Biology and Evolution** (71-85 hours total)
 1. Required courses: BIO 369(4), 515(3)
 2. Complete courses in biodiversity and evolution totaling at least 3 hours from the following: BIO 334(3), 339(2), 370(4), 371(3), 380(5), 530(3), 571(4), 573(3), 574(2), 575(3), 576(3), 577(3); the following courses taught during the summer at the Gulf Coast Research Laboratory in Ocean Springs, Mississippi: BIO 534(2), 535(1), 555(3), 556(3), 587(3), 588(3)

3. Complete courses in population biology totaling at least 3 hours from the following: BIO 436(4), 505(3), 532(3), 540(4), 560(3), 563(3), 567(4), 578(4), 584(3), 589(3); the following courses taught during the summer at the Gulf Coast Research Laboratory in Ocean Springs, Mississippi: BIO 557(2), 558(2)
4. Complete courses in community/ecosystem biology totaling at least 3 hours from the following: BIO 373(3), 485(1-3), 508(3), 509(4), 533(3), 539(3), 547(3), 562(4), 579(4); the following courses taught during the summer at the Gulf Coast Research Laboratory in Ocean Springs, Mississippi: BIO 537(2), 538(2), 565(3), 566(2)
5. Students must take at least one biology course with a substantial field component. A course used to satisfy this requirement also may be counted toward the biodiversity, population biology, and community/ecosystem biology concentration areas described above. Complete one of the following: BIO 334(3), 339(2), 370(4), 436(4), 509(3), 527(1-4), 562(4), 574(2), 575(3), 576(3), 577(3), any biology course taught at the Gulf Coast Research Laboratory, any biology course taught at the Bull Shoals Field station or another field station (with the approval of your advisor)
6. Complete 0-7 hours of elective BIO courses at the level of 300 or above to total a minimum of 43 hours in biology
7. Complete at least one of the following related requirements in Mathematics, Statistics, or Computer programming: MTH 261(5) or 287(3) or 546(3) or 547(3) or CSC 125(4) or CSC 130(3) or BIO 551(2) or PSY 527(3)
8. Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1)
9. Complete one of the following related science courses: AGN 215(3), ANT 375(3); CHM 260(3) or 460(3); GLG 171(3), GRY 351(3)
10. Complete one of the following courses from related fields of study: ECO 540(3), LAW 537(3), PHI 302(3), PHI 325(3), PLS 555(3), PSY 379(3)

b. Microbiology and Biotechnology (71-87 hours total)

1. Required courses: BIO 310(5), 320(4)

2. Complete 21 additional hours in BIO courses with a minimum of 18 hours from the following: BIO 355(4), 508(3), 511(4), 512(3), 505(3) or 515(3), 517(4), 518(2), 520(3), 530(3), 540(4); BMS 524(3) may be substituted for one of these courses; CHM 302(5) or 502(4) or 505(4) may be substituted for one of these courses
3. Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1); CHM 201(3) and 202(2), or CHM 342(5) and 343(5), or CHM 342(5) and 344(3); CHM 352(3), or CHM 452(3) and 552(3)

c. **Pre-Teacher Education** (71 - 73 hours total)*:

1. Required courses: BIO 310(5), 361(4), 369(4), 515(3)
2. Complete a minimum of 9 additional hours of upper level Biology courses (with approval of advisor).
3. Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1); CHM 201(3) and 202(2), or CHM 302(5)
4. Complete the following related science courses: GLG 110(3); GRY 135(3); SCI 505(3)
5. Complete at least one of the following related requirements in Mathematics: MTH 181(3), or eligibility for MTH 261 on mathematics placement test

* This option is designed for students preparing to enter post-graduate studies to become a high school science teacher. This program does not include courses in teacher education that are required by the state of Missouri for certification as a teacher. Certification requirements can be met through post-baccalaureate programs or masters programs at Missouri State University.

d. **Wildlife Biology** (67-87 hours total)

1. Required courses: BIO 320(4) or 361(4), 369(4)
2. Complete two courses in plant biology from: BIO 334(3), 339(2), 530(3), 544(4)
3. Complete three courses in animal biology from: BIO 370(4), 371(3), 380(5), 571(4), 573(3), 574(2), 575(3), 576(3), 577(3)
4. Complete a minimum of 5 hours in management from: BIO 373(3), 485(1-3), 509(4), 532(3), 562(4), 589(3)

5. Complete two courses in ecology and evolution from: BIO 436(4), 515(3), 539(3), 563(3), 567(4), 578(4), 579(4), 584(3)
6. Complete one course in human dimensions from the following: AGN 335(3), BIO 547(3), BIO 561(2), CRM 210(3), ECO 540(3), GRY 108(3), GRY 351(2), PHI 302(3), PLS 555(3), LAW 537(3)
7. Complete one course in earth/environmental science: AGN 215(3), CHM 260(3), GLG 110(4), GRY 142(4)

C. General Baccalaureate Degree Requirements

Biology (Comprehensive) (BS)

Bachelor of Science

A. General Education Program and Requirements

B. Major Requirements

1. BIO 121(4), 122(4), 235(-4 3), **236(1)**, **302(1)**, **492(0)**, ~~494(4)~~, 550(3)
2. PHY 123(4) or **203(5)**, and PHY 124(4) or ~~PHY 203(5)~~ and 204(5)
3. MTH 138(5) or 181(3), or eligibility for MTH 261 on mathematics placement test
4. BIO 310(5) or 320(4) or 361(4) or 544(4); consult options below before selecting course
5. CHM 116(4) and 117(1), or CHM 160(4) and 161(1); consult options below before selecting course
6. CHM 201(3) and 202(2), or 302(5) or 342(5); consult options below before selecting course
7. Public Affairs Capstone Experience will be fulfilled by completion of BIO ~~302~~494(1) and two additional courses from the following: BIO 300(1), 355(4), **367(3)**, ~~369(4)~~, 370(4), 373(3), 398(1), 399(1-3), 485(1-3), 498(3), 499(1-3), 501(2), 505(3), 508(3), 509(4), 511(4), 512(3), 520(3), 527(1-4), 539(2), 547(3), 561(2), 573(3), 574(2), 575(3), 576(3), 577(3), 578(4), 579(4), 584(3), 589(3). Courses may also be used to satisfy option requirements.
8. Complete requirements in one of the following options*: (Note: With approval of advisor, up to 3 hours of the following can be substituted for one of the BIO courses listed in any option: BIO 300, 399, 499, or 597-)
 - a. Environmental Biology and Evolution (7472-85 hours total)
 1. Required courses: BIO **367(3)**, **368(1)**, ~~369(4)~~, 515(3)
 2. Complete **one of the following options** courses in biodiversity and evolution totaling at least 3 hours from the following: BIO 334(3), 339(2), 370(4), 371(3), 380(5), 530(3), 571(4), 573(3), 574(23), 575(3), 576(3), 577(3); the following courses taught during the summer at the Gulf Coast Research Laboratory in Ocean Springs, Mississippi: BIO 534(2); **and** 535(1), 555(3), 556(3), 587(3), 588(3)

3. Complete **one of the following options** courses in population biology ~~totaling at least 3 hours from the following~~: BIO 436(4), 505(3), 532(3), 540(4), 560(3), 563(3), 567(4), 578(4), 584(3), 589(3); the following courses taught during the summer at the Gulf Coast Research Laboratory in Ocean Springs, Mississippi: BIO 557(2), **and** 558(2)
 4. Complete courses in community/ecosystem biology totaling at least 3 hours from the following: BIO 373(3), 485(1-3), 508(3), 509(4), 533(3), 539(3), 547(3), 562(4), **564(2)**, 579(4); the following courses taught during the summer at the Gulf Coast Research Laboratory in Ocean Springs, Mississippi: BIO 537(2), 538(2), 565(3), 566(2)
 5. Students must take at least one biology course with a substantial field component. A course used to satisfy this requirement also may be counted toward the biodiversity, population biology, and community/ecosystem biology concentration areas described above. Complete one of the following: BIO 334(3), 339(2), 370(4), 436(4), 509(~~4~~3), 527(1-4), 562(4), **564(2)**, 574(2), 575(3), 576(3), 577(3), any biology course taught at the Gulf Coast Research Laboratory, any biology course taught at the Bull Shoals Field station or another field station (with the approval of your advisor)
 6. Complete ~~0-87~~ hours of elective BIO courses at the level of 300 or above to total a minimum of 43 hours in biology
 7. Complete at least one of the following related requirements in Mathematics, Statistics, or Computer programming: MTH 261(5) or 287(3), ~~or 546(3) or 547(3)~~ or CSC 125(4), or CSC 130(3), **CSC 587(3)**, or BIO 551(2), or PSY 527(3)
 8. Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1)
 9. Complete one of the following related science courses: AGN 215(3), **ANT 240(3)**, ANT 375(3); CHM 260(3) or 460(3); GLG 171(3), GRY 351(3)
 10. Complete one of the following courses from related fields of study: **BIO 561(2)**, ECO 540(3), **GRY 363(4)**, LAW 537(3), PHI 302(3), PHI 325(3), PLS 555(3), PSY 379(3)
- b. Microbiology and Biotechnology (71-87 hours total)

1. Required courses: BIO 310(5), 320(4)
 2. Complete 21 additional hours in BIO courses with a minimum of 18 hours from the following: BIO 355(4), 508(3), 511(4), 512(3), 505(3) or 515(3), 517(4), 518(2), 520(3), 530(3), 540(4); BMS 524(3) may be substituted for one of these courses; CHM 302(5) or 502(4) or 505(4) may be substituted for one of these courses
 3. Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1); CHM 201(3) and 202(2), or CHM 342(5) and 343(5), or CHM 342(5) and 344(3); CHM 352(3), or CHM 452(3) and 552(3)
- c. Pre-Teacher Education (71 - 73 hours total)*:
1. Required courses: BIO 310(5), 361(4), **367(3)**, **368(1)**, ~~369(4)~~, 515(3)
 2. Complete a minimum of 9 additional hours of upper level Biology courses (with approval of advisor).
 3. Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1); CHM 201(3) and 202(2), or CHM 302(5)
 4. Complete the following related science courses: GLG 110(3); GRY 135(3); SCI 505(3)
 5. ~~Complete at least one of the following related requirements in Mathematics: MTH 181(3), or eligibility for MTH 261 on mathematics placement test~~
- * This option is designed for students preparing to enter post-graduate studies to become a high school science teacher. This program does not include courses in teacher education that are required by the state of Missouri for certification as a teacher. Certification requirements can be met through post-baccalaureate programs or masters programs at Missouri State University.
- d. Wildlife Biology (67-87 hours total)
1. Required courses: BIO 320(4) or 361(4), **367(3)**, **368(1)** ~~369(4)~~
 2. Complete two courses in plant biology from: BIO 334(3), 339(2), 530(3), 544(4)
 3. Complete three courses in animal biology from: BIO 370(4), 371(3), 380(5), 571(4), 573(3), 574(2), 575(3), 576(3), 577(3)

4. Complete a minimum of 5 hours in management from: BIO 373(3), 485(1-3), 509(4), 532(3), 562(4), 589(3)
5. Complete two courses in ecology and evolution from: BIO 436(4), 515(3), 539(3), 563(3), 567(4), 578(4), 579(4), 584(3)
6. Complete one course in human dimensions from the following: AGN 335(3), BIO 547(3), BIO 561(2), CRM 210(3), ECO 540(3), GRY 108(3), GRY 351(2), PHI 302(3), PLS 555(3), LAW 537(3)
7. Complete one course in earth/environmental science: AGN 215(3), CHM 260(3), GLG 110(4), GRY 142(4)

C. General Baccalaureate Degree Requirements