



# Curricular Action Workflow

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

## Change Program Proposal Form

**Submitted on 02/25/2020 by S Mathis ([Aliciamathis@missouristate.edu](mailto:Aliciamathis@missouristate.edu)).**

**Department:**

Biology

**Type of Program**

**Choose One:**

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

Does this program include any new courses?

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

**Title of Program Affected:**

Biology/Wildlife Biology-BS

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

Biology (Comprehensive) (BS)  
Bachelor of Science  
General Education Program and Requirements  
General Baccalaureate Degree Requirements  
Major Requirements

## Major Requirements

BIO 121(4), 122(4), 235(3), 236(1), 302(1), 492(0), 550(3)

PHY 123(4) or 203(5) and PHY 124(4) or 204(5)

MTH 138(5) or 181(3), or eligibility for MTH 261 on mathematics placement test

BIO 312(3) and 313(2) or BIO 320(4) or 361(4) or 544(4); consult options below before selecting course

CHM 116(4) and 117(1), or CHM 160(4) and 161(1); consult options below before selecting course

CHM 201(3) and 202(2), or CHM 302(5) or 342(3) and 343(2); consult options below before selecting course

Public Affairs Capstone Experience will be fulfilled by completion of BIO 302(1), 492(0) and two additional courses from the following: BIO 300(1), 355(4), 367(3), 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). Courses may also be used to satisfy option requirements.

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.)

Pre-Teacher Education (72-74 hours total)\*

Required courses: BIO 312(3), 313(2), 361(4), 367(3), 368(1), 515(3)

Complete a minimum of 9 additional hours of upper level Biology courses (with approval of advisor).

Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1); CHM 201(3) and 202(2), or CHM 302(5)

Complete the following related science courses: GLG 110(4); GRY 135(4); SCI 505(3)

Complete at least one of the following related requirements in Mathematics: MTH 181(3), or eligibility for MTH 261(5) 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 postbaccalaureate programs or master's program at Missouri State University.

Environmental Biology and Evolution (72-85 hours total)

Required courses: BIO 367(3), 368(1), 515(3)

Complete one of the following options in biodiversity and evolution: 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) and 535(1); 555(3), 556(3), 587(3), 588(3)

Complete one of the following options in population biology: 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)

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)

Complete 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), 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)

Complete 0-8 hours of elective BIO courses at the level of 300 or higher to total a minimum of 43 hours in biology

Complete at least one of the following related requirements in Mathematics, Statistics, or Computer programming: MTH 261(5), MTH 287(3), CSC 125(4), CSC 130(3), CSC 587(3), BIO 551(2), PSY 527(3)

Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1)

Related requirements in Chemistry: CHM 100(4), 101(1), 170(3), 171(1)

Complete one of the following related science courses: AGN 215(3), ANT 305(3), ANT 375(3); CHM 260(3) or 460(3); GLG 171(3), GRY 351(3)

Complete one of the following from related fields of study: BIO 561(2), ECO 540(3), GEO 363(4), LAW 537(3), PHI 302(3), PLS 555(3), PSY 379(3)

Microbiology and Biotechnology (71-87 hours total)

Required courses: BIO 312(3), 313(2), 320(4)

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 CHM 502(3) and 503(1); or CHM 504(3) and 505(1) may be substituted for one of these courses.

Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1); CHM 201(3) and 202(2), or CHM 342(3) and 345(2) and CHM 343(3), or CHM 342(3) and 345(2); CHM 352(3) or CHM 554(3) and 556(3)

Wildlife Biology (68-87 hours total)

Required courses: BIO 320(4) or 361(4), 367(3), 368(1)

Complete two courses in plant biology from: BIO 334(3), 339(2), 530(3), 544(4)

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)

Complete a minimum of 5 hours in management from: BIO 373(3), 485(1-3), 509(4), 532(3), 533(4), 562(4), 589(3)

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)

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)

Complete one course in earth/environmental science: AGN 215(3), CHM 260(3), GLG 110(4), GRY 142(4)

*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>B</b>	<i>I</i>	☒

## Biology (Comprehensive) (BS)

## Bachelor of Science

## General Education Program and Requirements

## General Baccalaureate Degree Requirements

Major Requirements BIO 121(4), 122(4), 235(3), 236(1), 302(1), 492(0), 550(3)

PHY 123(4) or 203(5) and PHY 124(4) or 204(5)

**MTH 137(3) or MTH 138(5) or ~~181(3)~~**, or eligibility for MTH 261 on mathematics placement test

BIO 312(3) and 313(2) or BIO 320(4) or 361(4) or 544(4); consult options below before selecting course

CHM 116(4) and 117(1), or CHM 160(4) and 161(1); consult options below before selecting course

CHM 201(3) and 202(2), or CHM 302(5) or 342(3) and 343(2); consult options below before selecting course

Public Affairs Capstone Experience will be fulfilled by completion of BIO 302(1), 492(0) and two additional

courses from the following: BIO 300(1), 355(4), 367(3), 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).

Courses may also be used to satisfy option requirements.

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.)

Pre-Teacher Education (72-74 hours total)\*Required courses: BIO

312(3), 313(2), 361(4), 367(3), 368(1), 515(3)

Complete a minimum of 9 additional hours of upper level Biology courses (with approval of advisor).

Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1); CHM 201(3) and 202(2), or CHM 302(5)

Complete the following related science courses: GLG 110(4); GRY 135(4); SCI 505(3)

Complete at least one of the following related requirements in Mathematics: MTH 181(3), or eligibility for MTH 261(5) on Mathematics Placement test.

\*This option is designed for students preparing to enter post-graduate studies to become a high school science teach. 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 postbaccalaureate programs or master's program at Missouri State University.

Environmental Biology and Evolution (72-85 hours total)Required courses: BIO 367(3), 368(1), 515(3)

Complete one of the following options in biodiversity and evolution: 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) and 535(1); 555(3), 556(3), 587(3), 588(3)

Complete one of the following options in population biology: 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)

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)

Complete 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), 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)

Complete 0-8 hours of elective BIO courses at the level of 300 or higher to total a minimum of 43 hours in biology

Complete at least one of the following related requirements in Mathematics, Statistics, or Computer programming: MTH 261(5), MTH 287(3), CSC 125(4), CSC 130(3), CSC 587(3), BIO 551(2), PSY 527(3)

Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1)

Complete one of the following related science courses: AGN 215(3), ANT 305(3), ANT 375(3); CHM 260(3) or 460(3); GLG 171(3), GRY 351(3)

Complete one of the following from related fields of study: BIO 561(2), ECO 540(3), GEO 363(4), LAW 537(3), PHI 302(3), PLS 555(3), PSY 379(3)

Microbiology and Biotechnology (71-87 hours total)Required courses: BIO 312(3), 313(2), 320(4)

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 CHM 502(3) and 503(1); or CHM 504(3) and 505(1) may be substituted for one of these courses.

Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1); CHM 201(3) and 202(2), or CHM 342(3) and 345(2) and CHM 343(3), or CHM 342(3) and 345(2); CHM 352(3) or CHM 554(3) and 556(3)

Wildlife Biology (68-87 hours total) Required courses: BIO 320(4) or 361(4), 367(3), 368(1)

Complete two courses in plant biology from: BIO 334(3), 339(2), 530(3), 544(4)

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)

Complete a minimum of 5 hours in management from: BIO 373(3), 485(1-3), 509(4), 532(3), 533(4), 562(4), 589(3)

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)

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)

Complete one course in earth/environmental science: AGN 215(3), CHM 260(3), GLG 110(4), GRY 142(4)

POWERED BY TINYMCE

*Not Attached*Total Hours: **What is changing? Check all boxes that apply:**

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

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

- Deleting courses from the program (major)

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

- Changing admission requirements
- Other

**Reason for Proposed Change:**

The change from MTH 181 (deleted) to MTH 137 (added) is to incorporate changes in courses and course numbers made by the Math department. Both courses include trigonometric functions, so the substance of the requirement is not changed.

This change applies to all emphasis areas in the noncomprehensive major. The pre-teacher education portion was submitted and approved earlier.

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

11/08/2019

**Current Status:**

College Council Review

**Proposal Progress:**

02/25/2020 - Submitted by Department Head (S Mathis)

**Review Comments:**

02/25/2020 - Department Head Review - S Mathis - Reason for proposed change: Course changes of under 18 hours (I entered 0 hours on the original form because we were adding a 3 hour course and deleting a 3 hour course)

No review notes have been added.

[Copy As New Proposal](#)

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**MAKE YOUR** **MENT.**

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# Curricular Action Workflow

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

## Change Program Proposal Form

**Submitted on 02/25/2020 by S Mathis ([Aliciamathis@missouristate.edu](mailto:Aliciamathis@missouristate.edu)).**

**Department:**

Biology

**Type of Program**

**Choose One:**

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

Does this program include any new courses?

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

**Title of Program Affected:**

Biology/Microbiology and Biotechnology-BS

**Current Catalog Description:**

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

Biology (Comprehensive) (BS)  
Bachelor of Science  
General Education Program and Requirements  
General Baccalaureate Degree Requirements  
Major Requirements

## Major Requirements

BIO 121(4), 122(4), 235(3), 236(1), 302(1), 492(0), 550(3)

PHY 123(4) or 203(5) and PHY 124(4) or 204(5)

MTH 138(5) or 181(3), or eligibility for MTH 261 on mathematics placement test

BIO 312(3) and 313(2) or BIO 320(4) or 361(4) or 544(4); consult options below before selecting course

CHM 116(4) and 117(1), or CHM 160(4) and 161(1); consult options below before selecting course

CHM 201(3) and 202(2), or CHM 302(5) or 342(3) and 343(2); consult options below before selecting course

Public Affairs Capstone Experience will be fulfilled by completion of BIO 302(1), 492(0) and two additional courses from the following: BIO 300(1), 355(4), 367(3), 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). Courses may also be used to satisfy option requirements.

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.)

Pre-Teacher Education (72-74 hours total)\*

Required courses: BIO 312(3), 313(2), 361(4), 367(3), 368(1), 515(3)

Complete a minimum of 9 additional hours of upper level Biology courses (with approval of advisor).

Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1); CHM 201(3) and 202(2), or CHM 302(5)

Complete the following related science courses: GLG 110(4); GRY 135(4); SCI 505(3)

Complete at least one of the following related requirements in Mathematics: MTH 181(3), or eligibility for MTH 261(5) 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 postbaccalaureate programs or master's program at Missouri State University.

Environmental Biology and Evolution (72-85 hours total)

Required courses: BIO 367(3), 368(1), 515(3)

Complete one of the following options in biodiversity and evolution: 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) and 535(1); 555(3), 556(3), 587(3), 588(3)

Complete one of the following options in population biology: 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)

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)

Complete 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), 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)

Complete 0-8 hours of elective BIO courses at the level of 300 or higher to total a minimum of 43 hours in biology

Complete at least one of the following related requirements in Mathematics, Statistics, or Computer programming: MTH 261(5), MTH 287(3), CSC 125(4), CSC 130(3), CSC 587(3), BIO 551(2), PSY 527(3)

Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1)



Related requirements in Chemistry: CHM 100(4), 101(1), 170(3), 171(1)

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Required courses: BIO 312(3), 313(2), 320(4)

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Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1); CHM 201(3) and 202(2), or CHM 342(3) and 345(2) and CHM 343(3), or CHM 342(3) and 345(2); CHM 352(3) or CHM 554(3) and 556(3)

Wildlife Biology (68-87 hours total)

Required courses: BIO 320(4) or 361(4), 367(3), 368(1)

Complete two courses in plant biology from: BIO 334(3), 339(2), 530(3), 544(4)

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)

Complete a minimum of 5 hours in management from: BIO 373(3), 485(1-3), 509(4), 532(3), 533(4), 562(4), 589(3)






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)

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)

Complete one course in earth/environmental science: AGN 215(3), CHM 260(3), GLG 110(4), GRY 142(4)

Not Attached

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## Bachelor of Science

## General Education Program and Requirements

## General Baccalaureate Degree Requirements

Major Requirements BIO 121(4), 122(4), 235(3), 236(1), 302(1), 492(0), 550(3)

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**MTH 137(3) or MTH 138(5) or ~~181(3)~~**, or eligibility for MTH 261 on mathematics placement test

BIO 312(3) and 313(2) or BIO 320(4) or 361(4) or 544(4); consult options below before selecting course

CHM 116(4) and 117(1), or CHM 160(4) and 161(1); consult options below before selecting course

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Public Affairs Capstone Experience will be fulfilled by completion of BIO 302(1), 492(0) and two additional

courses from the following: BIO 300(1), 355(4), 367(3), 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).

Courses may also be used to satisfy option requirements.

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.)

Pre-Teacher Education (72-74 hours total)\*Required courses: BIO

312(3), 313(2), 361(4), 367(3), 368(1), 515(3)

Complete a minimum of 9 additional hours of upper level Biology courses (with approval of advisor).

Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1); CHM 201(3) and 202(2), or CHM 302(5)

Complete the following related science courses: GLG 110(4); GRY 135(4); SCI 505(3)

Complete at least one of the following related requirements in Mathematics: MTH 181(3), or eligibility for MTH 261(5) on Mathematics Placement test.

\*This option is designed for students preparing to enter post-graduate studies to become a high school science teach. 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 postbaccalaureate programs or master's program at Missouri State University.

Environmental Biology and Evolution (72-85 hours total)Required courses: BIO 367(3), 368(1), 515(3)

Complete one of the following options in biodiversity and evolution: 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) and 535(1); 555(3), 556(3), 587(3), 588(3)

Complete one of the following options in population biology: 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)

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)

Complete 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), 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)

Complete 0-8 hours of elective BIO courses at the level of 300 or higher to total a minimum of 43 hours in biology

Complete at least one of the following related requirements in Mathematics, Statistics, or Computer programming: MTH 261(5), MTH 287(3), CSC 125(4), CSC 130(3), CSC 587(3), BIO 551(2), PSY 527(3)

Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1)

Complete one of the following related science courses: AGN 215(3), ANT 305(3), ANT 375(3); CHM 260(3) or 460(3); GLG 171(3), GRY 351(3)

Complete one of the following from related fields of study: BIO 561(2), ECO 540(3), GEO 363(4), LAW 537(3), PHI 302(3), PLS 555(3), PSY 379(3)

Microbiology and Biotechnology (71-87 hours total)Required courses: BIO 312(3), 313(2), 320(4)

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 CHM 502(3) and 503(1); or CHM 504(3) and 505(1) may be substituted for one of these courses.

Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1); CHM 201(3) and 202(2), or CHM 342(3) and 345(2) and CHM 343(3), or CHM 342(3) and 345(2); CHM 352(3) or CHM 554(3) and 556(3)

Wildlife Biology (68-87 hours total) Required courses: BIO 320(4) or 361(4), 367(3), 368(1)

Complete two courses in plant biology from: BIO 334(3), 339(2), 530(3), 544(4)

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)

Complete a minimum of 5 hours in management from: BIO 373(3), 485(1-3), 509(4), 532(3), 533(4), 562(4), 589(3)

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)

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)

Complete one course in earth/environmental science: AGN 215(3), CHM 260(3), GLG 110(4), GRY 142(4)

POWERED BY TINYMCE

Not Attached

Total Hours: 0

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

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

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

- Deleting courses from the program (major)

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

- Changing admission requirements
- Other

**Reason for Proposed Change:**

The change from MTH 181 (deleted) to MTH 137 (added) is to incorporate changes in courses and course numbers by the Math department. Both courses include trigonometric functions, so the substance of the requirement is no changed.

This change applies to all emphasis areas in the noncomprehensive major. The pre-teacher education portion was submitted and approved earlier.

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

11/08/2019

**Current Status:**

College Council Review

**Proposal Progress:**

02/25/2020 - Submitted by Department Head (S Mathis)

**Review Comments:**

02/25/2020 - Department Head Review - S Mathis - The following change is being proposed: Course changes of under 18 hours (I entered 0 hours on the original form because we were adding a 3 hour course and deleting a 3 hour course)

No review notes have been added.

[Copy As New Proposal](#)

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# Curricular Action Workflow

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

## Change Program Proposal Form

**Submitted on 02/25/2020 by S Mathis ([Aliciamathis@missouristate.edu](mailto:Aliciamathis@missouristate.edu)).**

**Department:**

Biology

**Type of Program**

**Choose One:**

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

Does this program include any new courses?

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

**Title of Program Affected:**

Biology/Environmental Biology and Evolution-BS

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

Biology (Comprehensive) (BS)  
Bachelor of Science  
General Education Program and Requirements  
General Baccalaureate Degree Requirements  
Major Requirements

## Major Requirements

BIO 121(4), 122(4), 235(3), 236(1), 302(1), 492(0), 550(3)

PHY 123(4) or 203(5) and PHY 124(4) or 204(5)

MTH 138(5) or 181(3), or eligibility for MTH 261 on mathematics placement test

BIO 312(3) and 313(2) or BIO 320(4) or 361(4) or 544(4); consult options below before selecting course

CHM 116(4) and 117(1), or CHM 160(4) and 161(1); consult options below before selecting course

CHM 201(3) and 202(2), or CHM 302(5) or 342(3) and 343(2); consult options below before selecting course

Public Affairs Capstone Experience will be fulfilled by completion of BIO 302(1), 492(0) and two additional course: from the following: BIO 300(1), 355(4), 367(3), 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). Courses may also be used to satisfy option requirements.

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.)

Pre-Teacher Education (72-74 hours total)\*

Required courses: BIO 312(3), 313(2), 361(4), 367(3), 368(1), 515(3)

Complete a minimum of 9 additional hours of upper level Biology courses (with approval of advisor).

Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1); CHM 201(3) and 202(2), or CHM 302(5)

Complete the following related science courses: GLG 110(4); GRY 135(4); SCI 505(3)

Complete at least one of the following related requirements in Mathematics: MTH 181(3), or eligibility for MTH 261(5) on Mathematics Placement test.

\*This option is designed for students preparing to enter post-graduate studies to become a high school science teach. 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 postbaccalaureate programs or master's program at Missouri State University.

Environmental Biology and Evolution (72-85 hours total)

Required courses: BIO 367(3), 368(1), 515(3)

Complete one of the following options in biodiversity and evolution: 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) and 535(1); 555(3), 556(3), 587(3), 588(3)

Complete one of the following options in population biology: 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)

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)

Complete 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), 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)

Complete 0-8 hours of elective BIO courses at the level of 300 or higher to total a minimum of 43 hours in biology

Complete at least one of the following related requirements in Mathematics, Statistics, or Computer programming: MTH 261(5), MTH 287(3), CSC 125(4), CSC 130(3), CSC 587(3), BIO 551(2), PSY 527(3)

programming. MATH 201(3), MATH 207(3), CSC 123(4), CSC 130(3), CSC 307(3), BIO 331(2), PLS 327(3)

Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1)

Complete one of the following related science courses: AGN 215(3), ANT 305(3), ANT 375(3); CHM 260(3) or 460(3); GLG 171(3), GRY 351(3)

Complete one of the following from related fields of study: BIO 561(2), ECO 540(3), GEO 363(4), LAW 537(3), PHI 302(3), PLS 555(3), PSY 379(3)

Microbiology and Biotechnology (71-87 hours total)

Required courses: BIO 312(3), 313(2), 320(4)

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 CHM 502(3) and 503(1); or CHM 504(3) and 505(1) may be substituted for one of these courses.

Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1); CHM 201(3) and 202(2), or CHM 342(3) and 345(2) and CHM 343(3), or CHM 342(3) and 345(2); CHM 352(3) or CHM 554(3) and 556(3)

Wildlife Biology (68-87 hours total)

Required courses: BIO 320(4) or 361(4), 367(3), 368(1)

Complete two courses in plant biology from: BIO 334(3), 339(2), 530(3), 544(4)

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)

Complete a minimum of 5 hours in management from: BIO 373(3), 485(1-3), 509(4), 532(3), 533(4), 562(4), 589(3)

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)

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)

Complete one course in earth/environmental science: AGN 215(3), CHM 260(3), GLG 110(4), GRY 142(4)

*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>B</b>	<i>I</i>	☒

Biology (Comprehensive) (BS)

Bachelor of Science

General Education Program and Requirements

General Baccalaureate Degree Requirements

Major Requirements BIO 121(4), 122(4), 235(3), 236(1), 302(1), 492(0), 550(3)

PHY 123(4) or 203(5) and PHY 124(4) or 204(5)

**MTH 137(3) or MTH 138(5) or ~~181(3)~~**, or eligibility for MTH 261 on mathematics placement test

BIO 312(3) and 313(2) or BIO 320(4) or 361(4) or 544(4); consult options below before selecting course

CHM 116(4) and 117(1), or CHM 160(4) and 161(1); consult options below before selecting course

CHM 201(3) and 202(2), or CHM 302(5) or 342(3) and 343(2); consult options below before selecting course

Public Affairs Capstone Experience will be fulfilled by completion of BIO 302(1), 492(0) and two additional

courses from the following: BIO 300(1), 355(4), 367(3), 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).

Courses may also be used to satisfy option requirements.

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.)

Pre-Teacher Education (72-74 hours total)\*Required courses: BIO

312(3), 313(2), 361(4), 367(3), 368(1), 515(3)

Complete a minimum of 9 additional hours of upper level Biology courses (with approval of advisor).

Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1); CHM 201(3) and 202(2), or CHM 302(5)

Complete the following related science courses: GLG 110(4); GRY 135(4); SCI 505(3)

Complete at least one of the following related requirements in Mathematics: MTH 181(3), or eligibility for MTH 261(5) on Mathematics Placement test.

\*This option is designed for students preparing to enter post-graduate studies to become a high school science teach. 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 postbaccalaureate programs or master's program at Missouri State University.

Environmental Biology and Evolution (72-85 hours total)Required courses: BIO 367(3), 368(1), 515(3)

Complete one of the following options in biodiversity and evolution: 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) and 535(1); 555(3), 556(3), 587(3), 588(3)

Complete one of the following options in population biology: 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)

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)

Complete 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), 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)

Complete 0-8 hours of elective BIO courses at the level of 300 or higher to total a minimum of 43 hours in biology

Complete at least one of the following related requirements in Mathematics, Statistics, or Computer

programming: MTH 261(5), MTH 287(3), CSC 125(4), CSC 130(3), CSC 587(3), BIO 551(2), PSY 527(3)

Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1)

Complete one of the following related science courses: AGN 215(3), ANT 305(3), ANT 375(3); CHM 260(3) or 460(3); GLG 171(3), GRY 351(3)

Complete one of the following from related fields of study: BIO 561(2), ECO 540(3), GEO 363(4), LAW

537(3), PHI 302(3), PLS 555(3), PSY 379(3)

Microbiology and Biotechnology (71-87 hours total)Required courses: BIO 312(3), 313(2), 320(4)



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 CHM 502(3) and 503(1); or CHM 504(3) and 505(1) may be substituted for one of these courses.

Related requirements in Chemistry: CHM 160(4), 161(1), 170(3), 171(1); CHM 201(3) and 202(2), or CHM 342(3) and 345(2) and CHM 343(3), or CHM 342(3) and 345(2); CHM 352(3) or CHM 554(3) and 556(3)

Wildlife Biology (68-87 hours total) Required courses: BIO 320(4) or 361(4), 367(3), 368(1)

Complete two courses in plant biology from: BIO 334(3), 339(2), 530(3), 544(4)

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)

Complete a minimum of 5 hours in management from: BIO 373(3), 485(1-3), 509(4), 532(3), 533(4), 562(4), 589(3)

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)

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)

Complete one course in earth/environmental science: AGN 215(3), CHM 260(3), GLG 110(4), GRY 142(4)

POWERED BY TINYMCE

Not Attached

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

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

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

- Deleting courses from the program (major)

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

- Changing admission requirements
- Other

**Reason for Proposed Change:**

The change from MTH 181 (deleted) to MTH 137 (added) is to incorporate changes in courses and course numbers made by the Math department. Both courses include trigonometric functions, so the substance of the requirement is not changed.

This change applies to all emphasis areas in the noncomprehensive major. The pre-teacher education portion was submitted and approved earlier.

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

11/08/2019

**Current Status:**

College Council Review

**Proposal Progress:**

02/25/2020 - Submitted by Department Head (S Mathis)

**Review Comments:**

02/25/2020 - Department Head Review - S Mathis - The following change is being proposed: Course changes of under 18 hours (I entered 0 hours on the original form because we were adding a 3 hour course and deleting a 3 hour course)

No review notes have been added.

[Copy As New Proposal](#)

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# Curricular Action Workflow



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

## New Course Proposal Form

**Submitted on 02/26/2020 by G Schick ([AlanSchick@MissouriState.edu](mailto:AlanSchick@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:

CHM

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

673

Course Title:

Inorganic Chemistry

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

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

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

Prerequisite/Co-requisite or enter 'None':

"C-" grade or better in CHM 170.

Catalog Course Description: (Include any Pass/Not Pass grading restrictions, repeatable limits, limitation on course applicability,

UG/GR parallel course, etc.)

Atomic structure, chemical bonding, acid/base and reduction/oxidation concepts, reactivity of inorganic compounds, chemistry of main group elements, fundamentals of coordination theory. A grade of "C-" or better is required in this course in order to take CHM 675. Cannot count toward the MS degree in Chemistry. May be taught concurrently with CHM 375. Cannot receive credit for both CHM 375 and CHM 673.

405/30000 character limit.

Credit Hours:

3 ▼

Lecture Contact Hours:

3 ▼

Lab Contact Hours:

0 ▼

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

Periodicity. Check all that apply.

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

**Complete Catalog Description:**

CHM 673 Inorganic Chemistry

Prerequisite: "C-" grade or better in CHM 170.

Atomic structure, chemical bonding, acid/base and reduction/oxidation concepts, reactivity of inorganic compounds, chemistry of main group elements, fundamentals of coordination theory. A grade of "C-" or better is required in this course in order to take CHM 675. Cannot count toward the MS degree in Chemistry. May be taught concurrently with CHM 375. Cannot receive credit for both CHM 375 and CHM 673.

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

Typically offered: Fall

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

Attached.

9/30000 character limit.

Attached [View Attachment](#)

**Purpose of Course**

To give graduate students in non-chemistry departments (e.g., education, geo-science, biology, physics) access to a intermediate-level survey course in inorganic chemistry. Also to give chemistry graduate students an appropriate course when their inorganic chemistry background is weak or missing (such as for students with biochemistry backgrounds).

351/30000 character limit.

#### Relationship to Other Departments

none.

5/30000 character limit.

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

Enter parallel course number

CHM375 Inorganic Chemistry

How do these classes differ?

Graduate students in CHM 673 will have an additional course project culminating in a report based on current (and relevant) literature sources.

143/30000 character limit.

#### New Course Resource Information

Anticipated Average Enrollment per section:

3

Maximum Enrollment Limit per section:

10

Anticipated Average Enrollment per semester:

3

Maximum Enrollment Limit per semester:

10

Anticipated Average Enrollment per year:

3

Maximum Enrollment Limit per year:

10

Faculty Load Assignment (equated hours):

3

Is another course being deleted?  No  Yes

Select course number and title being deleted.

null null null

#### What will this course require in the way of:

Additional library Holdings

None.

*5/30000 character limit.*

**Additional computer resources**

None.

*5/30000 character limit.*

**Additional or remodeled facilities**

None.

*5/30000 character limit.*

**Additional equipment or supplies**

None.

*5/30000 character limit.*

**Additional travel funds**

None.

*5/30000 character limit.*

**Additional faculty; general vs specialized**

None.

*5/30000 character limit.*

**Additional faculty; regular vs per-course**

None.

*5/30000 character limit.*

Other additional expenses

None.

*5/30000 character limit.*

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

This will be a parallel course to an existing undergraduate course (CHM 375), so the same faculty workload will cover this new course.

*134/30000 character limit.*

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

Nikolay Gerasimchuk  
Fei Wang

*28/30000 character limit.*

What is the anticipated source of students for this course?

Graduate students from non-chemistry science departments (geology, biology, physics), MEd students with a chemistry emphasis, chemistry graduate students with a weak or missing inorganic background (primarily biochemistry students).

*233/30000 character limit.*

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

In addition to help boost their inorganic background.

*53/30000 character limit.*

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

Nothing directly. Possibly home-department electives would be replaced by this course.

87/30000 character limit.

Other comments:

We already offer this parallel course under the CHM 697 Special Topics in Chemistry course when needed. This proposal is being made to better formalize these offerings.

169/30000 character limit.

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

08/15/2019

**Current Status:**

Waiting For Challenge Period

**Proposal Progress:**

02/26/2020 - Submitted by Department Head (Bryan Breyfogle)

02/27/2020 - Reviewed by Dean (Tamera Jahnke)

03/12/2020 - Approved by Grad Council (Douglas Gouzie)

03/27/2020 - Reviewed by Faculty Senate Executive Committee (Elizabeth Walker)

**Review Comments:**

No comments have been added to this proposal.

No review notes have been added.

[Copy As New Proposal](#)

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**MAKE YOUR COURSE PROPOSAL**

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673 (for sample syllabus)

**CHM 375 / ~~697~~: Inorganic Chemistry**      **Fall 2019**

In **Temple 3** - a large lecture room on the 1<sup>st</sup> floor **9:05 - 9:55 a.m. M, W, F**

**Instructor:** Dr. Nikolay Gerasimchuk, office in TEM 456; lab in Temple 431  
Phone: 836-5165, e-mail: [NNGerasimchuk@missouristate.edu](mailto:NNGerasimchuk@missouristate.edu)

*Instructor's other commitments during this semester:*

- October 19<sup>th</sup> – participation in the Midwest Regional American Society Meeting in Wichita, KS
- November 13 -16<sup>th</sup> Southwest Regional American Society Meeting in El Paso, TX

*Lectures during instructors' absence will be covered, not cancelled!*

**Office Hours:** Tuesday and Thursday: 10-12 a.m.

**Textbook:** *Descriptive Inorganic Chemistry*, 6<sup>th</sup> Edition by Geoff Rayner-Canham, and Tina Overton; W.H. Freeman and Company, New York, **2014**.

We will cover all or partially Chapters 1 – 17 and 19, 20 from the textbook. Chapters 4, 18, 21-23 will be omitted from this course. We will also study major classes of inorganic compounds, reduction/oxidation reactions from provided handouts.

**Objectives:**

This course was designed to develop knowledge of subject of “inorganic chemistry” that traditionally begins in general chemistry courses. CHM ~~375~~ is an intermediate level of 375/673 inorganic chemistry course that precedes advanced level course CHM ~~575~~ offered 575/675 annually in the Spring semester. This is a challenging class that requires necessary background in general chemistry, mathematics and good knowledge of high school physics. The emphasis will be given on a deep understanding of chemical bonding, periodicity and properties of elements. A substantial portion of descriptive chemistry, which requires careful reading and *retaining of the obtained information*, is included in this class.

## My expectations:

- 1) **Academic prerequisites:** working knowledge of basics such as CHM 160, 170 and 175 classes. Especially important topics and concepts from CHM 160 class such as:
  - a) atoms, molecules and ions
  - b) mole; chemical reactions
  - c) quantum theory of the atom
  - d) electronic configuration and periodicity
  - e) ionic and covalent bonding
  - f) solutions
  
- 2) **Attitude:** diligence, persistence, seeking help and asking questions when something is not clear or not well understood. Imagination.
  
- 3) **Attendance** is a necessary condition for receiving of solid knowledge of the subject and a good grade. Therefore, all lectures should be attended. There will be total 41 sessions (37 lectures + 4 tests) in this class. Random attendance checks will be performed to encourage students to be in the classroom and learn. Those who will be present during these irregular rolls will receive bonus points.

## Class organization and resources.

**Work in the class:** as stated above, there will be total 41 sessions in this class that include 37 lectures and 4 tests. Learning of subject of Inorganic Chemistry requires reading and understanding of the textbook, solving assigned homework problem sets, and, finally, *asking questions* in the class when something is not clear, or not well understood. There will be also numerous chemical demonstrations provided during this class in order to enhance students learning through visual observations and impressions (colors, precipitates, gas evolution, smell, etc.). Collections of pure chemical elements will be also passed around the classroom so students will get familiar with actual appearance of described in this course compounds.

**Work after hours: help sessions and consultations.** There will be help sessions available by students' request. An individual work with students during office hours or by an appointment (via phone call or e-mail) is offered as well, and was quite popular in the past.

**Handouts, supporting materials:** Nine handouts for this class and other pertinent information will be available to students – distributed in the class.

Topics that will be studied and discussed during this CHM ~~375~~ course:

**1) Part 1: Basic concepts**

Atomic structure. Periodic table: its use and applications.

Chemical bonding: covalent, metallic, ionic. Geometries of molecules with covalent bonds (VSEPR theory).

Inorganic thermodynamics.

Acids and bases.

Will be omitted sections: 3.12, and sections 6.2-6.4

10 lectures. This is covering of Chapters 1-7 approximately 153 pages. Test will be given covering this material.

**2) Part 2: Descriptive chemistry of elements**

Major classes of inorganic compounds.

Reactions of reduction/oxidation.

Hydrogen

Alkali metals

Alkali earth metals

Group III elements

Will be omitted section 8.11

10 lectures. This is covering of Chapters 8-13, approximately 130 pages. Test will be given about this material.

**3) Part 3: Descriptive chemistry of elements (continued)**

Group IV elements

Group V elements

Group VI elements, halogenes.

9 lectures. This is covering of Chapters 15-17, approximately 130 pages.

Test will cover this portion of material.

**4) Part 4: Metals and their properties.**

Group VII elements, halogens.

Introduction to transition metal complexes (coordination compounds and theories describing their structure).

Chemistry and properties of transition metals.

8 lectures. This is covering of Chapters 17, 19 and 20, totals to approximately 110 pages. Test will be about this part of material.

## Homework:

Homework will be assigned during the course, and *part* of it will be collected and graded. There will be problems assigned, but only four sets will be distributed to students, collected and then used for cumulative grading. *Maximum number of points gained from homework assignments can be 100.* An announcement about graded homework and dates of its collection will be made in class usually a week in advance. All tests are created using homework as a prototype, so regular work on assigned problem sets is an important and very beneficial part of your study.

## Exam Schedule:

Exam 1	Friday,	September, 13
Exam 2	Monday,	October, 14
Exam 3	Friday,	November, 8
Exam 4	Wednesday,	December, 4

All exams will include questions from lectures and the homework assignments. *Every exam will have an extra credit questions* that will be counted towards total number of points! Typically these extra-credit questions provide ~10-15% of total number of points.

## Grading – accumulated points system:

A letter grade will be assigned based on four exams given plus a final comprehensive test at the end of the class. A letter grade will be assigned based on the exams given. The grade scale will be: **A** (900-1000 pts), **B** (899-800), **C** (799-700), **D** (699-600) and **F** (below 600). An average will be made from the three best exams scores, the final test and graded homework. Each test will have 200 points, the final comprehensive exam 300 points, and graded homework 100 points that after addition gives maximal available score of 1000 pts.

*The distinction between undergraduate level (e.g. 375) and graduate level students (e.g. 673 697) will be based on the latter conducting literature search and preparing, writing a paper on a topic given by the instructor. The value for this work is 100 pts, totaling maximum number to 1100 pts. The course grade will be assigned based on that value.*

Final exam: The final exam will be held on Wednesday, December 13, 8:45 a.m. to 10:45 a.m. in Temple 3, and will cover the entire course which means that the final test is comprehensive. An average for the class will be made from the **three best exams scores**, + **graded homework** assignments **and** the **final test**.

*You must plan to take all exams at the scheduled time. Make-up exams are not fair to other class members and are usually not available. An exam may be taken early if a severe time conflict occurs with other disciplines.*

No physical copies of tests/problem sets will be given back to students. If interested students want to see their work, they may do so in the office of the course instructor during his office hours, by appointment, or on walk-in basis. No copying of graded tests/problem sets will be permitted at this time.

### Other important dates:

September 2 - long Labor Day weekend – no classes  
October 10-11 - Fall break – no classes  
November 27-29 - Thanksgiving holiday and December 5<sup>th</sup> – end of semester (dead day).

### Legal Issues:

#### **Academic dishonesty:**

Cheating and plagiarism will not be tolerated and will immediately be referred to the office of Academic Misconduct. No previous years materials are allowed for use.

Missouri State University is a community of scholars committed to developing educated persons who accept the responsibility to practice personal and academic integrity. You are responsible for knowing and following the University's academic integrity policy plus additional more-specific policies for each class.

The University policy, formally known as the "Student Academic Integrity Policies and Procedures" is available online:

[http://www.missouristate.edu/policy/Op3\\_01\\_AcademicIntegrityStudents.htm](http://www.missouristate.edu/policy/Op3_01_AcademicIntegrityStudents.htm)

This information is also at the Reserves Desk in Meyer Library. Any student participating in any form of academic dishonesty will be subject to sanctions as described in this policy.

#### **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.

#### **Statement of nondiscrimination:**

MSU is an equal opportunity/affirmative action institution, and maintains a grievance procedure incorporating due process 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 Jana Long, Equal Opportunity Officer, Office of Human Resources, Carrington 128, (417) 836-4252. Concerns about discrimination can also be brought directly to your instructor's attention, and/or to the attention of your instructor's Department Head.

#### **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.

**Statement on disability accommodation:**

To request academic accommodations for a disability, contact Kathryn Staeger-Wilson, Disability Services (<http://www.missouristate.edu/disability>), Plaster Student Union, Suite 405, (417) 836-4192 or (417) 836-6792 (TTY).

Students are required to provide documentation of disability to Disability Services prior to receiving accommodations. Disability Services refers some types of accommodation requests to the Learning Diagnostic Clinic, which also provides diagnostic testing for learning and psychological disabilities. (A fee is charged for testing.)

For information about testing, contact Dr. Steven Capps, Learning Diagnostic Clinic (417)836-4787; <http://www.missouristate.edu/contrib/ldc/>.

**Attendance policy:**

All class periods for semester must be attended. The instructor, however, will accommodate students whose absence from class resulted from: 1) participation in University-sanctioned activities and programs; 2) personal illness; or 3) family and/or other compelling circumstances. Specific provisions for the testing times are explained above.

**Cell phone policy:**

**AUDIO AND VIDEO RECORDING OF COURSE ACTIVITY IS NOT ALLOWED.**

As a member of the learning community, each student has a responsibility to other students who are members of the community. When cell phones or pagers ring and students respond in class or leave class to respond, it disrupts the class. *In such occurrence the mobile phone will be confiscated and returned at the end of semester in the Dean's Office.*

Therefore, the Office of the Provost prohibits the use by students of cell phones, pagers, PDAs, or similar communication devices during scheduled classes. All such devices must be turned off or put in a silent (vibrate) mode and *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.

Cell phones are absolutely prohibited in the classroom during testing times! Similar devices capable of image capturing and transmittance – smart watches – are not allowed in the classroom during testing times!

*If it is necessary for a student to have them on the day of testing, then they will be collected by the course instructor assistant prior the test and returned after the exam.*

### **Mental Health and Stress Management:**

As a student you may experience a range of personal issues that can impede learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance and may reduce your ability to participate in daily activities. You can learn more about free and confidential Missouri State University Counseling Center services available to assist you at [counselingcenter@missouristate.edu](mailto:counselingcenter@missouristate.edu).

### **Title IX Policy:**

Missouri State University has a Title IX policy that guides our response to instances of sexual violence. Sexual Violence includes: Rape, Sexual Assault, Sexual Misconduct, Sexual Discrimination, Domestic Violence, Dating Violence, Stalking, Sexual Harassment and Pregnancy issues. The Title IX policy can be located on the MSU Title IX website at [www.missouristate.edu/titleix/](http://www.missouristate.edu/titleix/). This website is also a good resource for any questions or issues involving Title IX and contains contact information for the MSU Title IX Office and staff. Read an overview of the Title IX office.



### **Emergency Storm Shelter and Evacuation Information:**

In the event of an emergency or incident in the classroom, the faculty member is often the first university representative or authority figure recognized to be in charge until emergency first responders arrive. At the first class meeting, students should become familiar with a basic emergency response plan through a dialogue with the instructor that includes a review and awareness of exits specific to the classroom and the location of evacuation centers for the building. For your convenience, this information has been provided by the Office of the Provost and Safety and Transportation and appears below. Students with disabilities impacting mobility should discuss with their instructor the approved accommodations for emergency situations and additional options. For more information contact Safety and Transportation (417-836-5509) or consult the [Emergency Quick Reference Guide and Campus Emergency Response Plan](#).





# Curricular Action Workflow



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

## New Course Proposal Form

**Submitted on 02/27/2020 by Ajay Katangur ([AjayKatangur@MissouriState.edu](mailto:AjayKatangur@MissouriState.edu)).**

**\*All fields require input**

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

Course Code:

CSC

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

660

Course Title:

Operating Systems

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

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

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

Prerequisite/Co-requisite or enter 'None':

None

Catalog Course Description: (Include any Pass/Not Pass grading restrictions, repeatable limits, limitation on course applicability,

UG/GR parallel course, etc.)

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

375/30000 character limit.

Credit Hours:

3 ▼

Lecture Contact Hours:

3 ▼

Lab Contact Hours:

0 ▼

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

Periodicity. Check all that apply.

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

**Complete Catalog Description:**

CSC 660 Operating Systems

Prerequisite: None

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

Credit hours: 3 Lecture contact hours: 3 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.

0/30000 character limit.

Attached [View Attachment](#)

Purpose of Course

Graduate students who have not taken Operating Systems in the past will be taking it.

85/30000 character limit.

Relationship to Other Departments

None

4/30000 character limit.

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

Enter parallel course number

CSC360 Operating Systems

How do these classes differ?

Graduate students are expected to complete an extra project.

60/30000 character limit.

**New Course Resource Information**

Anticipated Average Enrollment per section:

5

Maximum Enrollment Limit per section:

10

Anticipated Average Enrollment per semester:

5

Maximum Enrollment Limit per semester:

10

Anticipated Average Enrollment per year:

10

Maximum Enrollment Limit per year:

10

Faculty Load Assignment (equated hours):

3

Is another course being deleted?  No  Yes

Select course number and title being deleted.

nullnull null

**What will this course require in the way of:**

Additional library Holdings

None

4/30000 character limit.

Additional computer resources

None

*4/30000 character limit.*

Additional or remodeled facilities

None

*4/30000 character limit.*

Additional equipment or supplies

None

*4/30000 character limit.*

Additional travel funds

None

*4/30000 character limit.*

Additional faculty; general vs specialized

None

*4/30000 character limit.*

Additional faculty; regular vs per-course

None

*4/30000 character limit.*

Other additional expenses

None

4/30000 character limit.

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

This course will be cross-listed with CSC 360

45/30000 character limit.

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

Siming Liu  
Hui Liu  
Ajay Katangur

32/30000 character limit.

What is the anticipated source of students for this course?

Graduate Students who have not taken an equivalent course related to Operating Systems.

87/30000 character limit.

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

None

4/30000 character limit.

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

None

4/30000 character limit.

Other comments:

None

4/30000 character limit.

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

01/28/2020

**Current Status:**

Waiting For Challenge Period

**Proposal Progress:**

02/27/2020 - Submitted by Department Head (Ajay Katangur)

02/27/2020 - Reviewed by Dean (Tamera Jahnke)

03/12/2020 - Approved by Grad Council (Douglas Gouzie)

03/27/2020 - Reviewed by Faculty Senate Executive Committee (Elizabeth Walker)

**Review Comments:**

No comments have been added to this proposal.

No review notes have been added.

Copy As New Proposal

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**MAKE YOUR MENT.**

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**CSC 660.001 Operating Systems  
Computer Science Department  
Fall 2020**

**A. COURSE INFORMATION**

**Course number/section:** CSC 660.001  
**Class meeting time:** TBD  
**Class location:** TBD  
**Course Website:** <https://blackboard.missouristate.edu>

**B. INSTRUCTOR INFORMATION**

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

**C. COURSE DESCRIPTION****Catalog Course Description**

Introduction to operating systems concepts, principles, and design. Topics include: processes, threads, CPU scheduling, mutual exclusion, process synchronization, deadlocks, memory management, file systems, i/o systems, disk management, distributed systems, security and protection.

**D. PREREQUISITES AND COREQUISITES****Prerequisites**

None

**Corequisites**

None

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

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

**Optional Textbook(s) or Other References**

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

**F. STUDENT LEARNING OUTCOMES AND ASSESSMENT**

Assessment is a process used by instructors to help improve learning. Assessment is essential for effective learning because it provides feedback to both students and instructors. A critical step in this

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

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

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

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

### **G. MAJOR COURSE REQUIREMENTS AND GRADING**

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

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

<b>ACTIVITY</b>	<b>% of FINAL GRADE</b>
Exams	45
Quizzes	10



Homework Assignments	10
Projects	35

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

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

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

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

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

#### **H. COURSE CONTENT/SCHEDULE**

Week 1:	Course Overview Chapter 1: Introduction
Week 2:	Chapter 2: Operating System Structures, <b>HW1</b> UNIX System Calls, Signals
Week 3:	UNIX System Calls, Signals, <b>Project 1</b> Chapter 3: Processes
Week 4:	Chapter 3: Processes Chapter 4: Threads
Week 5:	Chapter 5: Process Synchronization, <b>HW2</b>
Week 6:	<b>Exam 1</b> Chapter 6: CPU Scheduling, <b>Project 2</b>
Week 7:	Chapter 6: CPU Scheduling
Week 8:	Chapter 7: Deadlocks, <b>Project 3</b> Fall Holiday, No class
Week 9:	Chapter 7: Deadlocks Chapter 8: Main Memory
Week 10:	Chapter 8: Main Memory Chapter 9: Virtual Memory

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

### **I. IMPORTANT DATES**

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

### **J. COURSE POLICIES**

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

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

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

**Missed Exam:** In the event, if you cannot attend the class to take the exam due to some

emergency or some unavoidable situation (such as serious illness, death in the family, participation in university sports, religious observations, and so on) you must notify me as soon as possible before the exam and also you must validate your absence by providing me a document (e.g., with a letter from your doctor). Once your cause is validated a make-up exam will be given.

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

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

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

**Extra Credit:** There is no EXTRA CREDIT

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

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

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

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

### **Laptop Use**

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

### **Food in Class**

No food in the class or labs.

## **K. UNIVERSITY POLICIES**

- **Academic Dishonesty**

Missouri State University is a community of scholars committed to developing educated persons who accept the responsibility to practice personal and academic integrity. You are responsible for knowing and following the University's academic integrity policy plus additional more-specific policies for each class. The University policy, formally known as the "Student Academic Integrity Policies and Procedures" is available online at [www.missouristate.edu/policy/Op3\\_01\\_AcademicIntegrityStudents.htm](http://www.missouristate.edu/policy/Op3_01_AcademicIntegrityStudents.htm) and also at the Reserves Desk in Meyer Library. Any student participating in any form of academic dishonesty will be subject to sanctions as described in this policy.

- **Cell Phone Policy**

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

- **Emergency Storm Shelter and Evacuation Information**

In the event of an emergency or incident in the classroom, the faculty member is often the first university representative or authority figure recognized to be in charge until emergency first responders arrive. At the first class meeting, students should become familiar with a basic emergency response plan through a dialogue with the instructor that includes a review and awareness of exits specific to the classroom and the emergency relocation areas for the

building. For your convenience, this information has been provided below by the Office of the Provost and the Office of University Safety. Students with disabilities impacting mobility should discuss with their instructor the approved accommodations for emergency situations and additional options. Faculty must include information related to emergency response in their syllabi (see <http://www.missouristate.edu/provost/syllabi.htm>). For more information contact University Safety (417-836-5509) or consult the [Emergency Quick Reference Guide](#) and [Campus Emergency Response Plan](#).

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

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

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

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

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

Building	Area of Rescue
Cheek Hall	None in this facility

- **Religious accommodation**

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

- **Nondiscrimination**

Missouri State University is an equal opportunity/affirmative action institution, and maintains a grievance procedure available to any person who believes he or she has been discriminated against. At all times, it is your right to address inquiries or concerns about possible discrimination to the Office for Institutional Equity and Compliance, Park Central Office Building, 117 Park Central Square, Suite 111, 417-836-4252. Other types of concerns (i.e., concerns of an academic

nature) should be discussed directly with your instructor and can also be brought to the attention of your instructor's Department Head. Please visit the OED website at [www.missouristate.edu/equity](http://www.missouristate.edu/equity).

- **Disability Accommodation**

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

- **Dropping a Class**

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

- **Audio and Video Recording Course Activity**

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

## **L. GENERAL DISCLAIMER**

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

# Curricular Action Workflow



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

## New Course Proposal Form

**Submitted on 02/28/2020 by Damon Bassett ([DBassett@MissouriState.edu](mailto:DBassett@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:

GLG

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

615

Course Title:

Invertebrate Paleontology

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':

None

Catalog Course Description: (Include any Pass/Not Pass grading restrictions, repeatable limits, limitation on course applicability,

UG/GR parallel course, etc.)

This is a UG/GR parallel course with GLG 415.

45/30000 character limit.

Credit Hours:

4 ▼

Lecture Contact Hours:

2 ▼

Lab Contact Hours:

4 ▼

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

Periodicity. Check all that apply.

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

**Complete Catalog Description:**

GLG 615 Invertebrate Paleontology

Prerequisite: None

This is a UG/GR parallel course with GLG 415.

Credit hours: 4 Lecture contact hours: 2 Lab contact hours: 4

Typically offered: Spring (odd-numbered years only)

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

0/30000 character limit.

Attached [View Attachment](#)

**Purpose of Course**

The primary goals of this course are to survey the groups most important in the fossil record and to discuss insights gained from, as well as the limitations of the fossil record. The course is organized around taxonomic groups and will progress from single celled organisms through the major invertebrate phyla that have hard parts (those most likely to be preserved in rocks).

378/30000 character limit.

Relationship to Other Departments



None

4/30000 character limit.

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

Enter parallel course number

GLG415 Invertebrate Paleontology

How do these classes differ?

GLG 615 students will be required to lead some class discussions during the semester and complete an additional research component for their term paper/presentation.

166/30000 character limit.

**New Course Resource Information**

Anticipated Average Enrollment per section:

Maximum Enrollment Limit per section:

Anticipated Average Enrollment per semester:

Maximum Enrollment Limit per semester:

Anticipated Average Enrollment per year:

Maximum Enrollment Limit per year:

Faculty Load Assignment (equated hours):

Is another course being deleted?  No  Yes

Select course number and title being deleted.

**What will this course require in the way of:**

Additional library Holdings

None

4/30000 character limit.

Additional computer resources

None

*4/30000 character limit.*

Additional or remodeled facilities

None

*4/30000 character limit.*

Additional equipment or supplies

None

*4/30000 character limit.*

Additional travel funds

None

*4/30000 character limit.*

Additional faculty; general vs specialized

None

*4/30000 character limit.*

Additional faculty; regular vs per-course

None

*4/30000 character limit.*

## Other additional expenses

None

*4/30000 character limit.*

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

The instructor already assigned to GLG 415 will be responsible for teaching GLG 615.

*84/30000 character limit.*

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

Damon Bassett

*13/30000 character limit.*

## What is the anticipated source of students for this course?

Students will come from the geology graduate student population, though graduate students in other related programs would be welcome.

*133/30000 character limit.*

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

Students from within the department will take this in addition to other graduate level courses.

*95/30000 character limit.*

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

Biology.

*8/30000 character limit.*

Other comments:

None

4/30000 character limit.

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

01/24/2020

**Current Status:**

Department Head Review

**Proposal Progress:**

This proposal is waiting for its first review.

**Review Comments:**

No comments have been added to this proposal.

No review notes have been added.

[Copy As New Proposal](#)

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**MAKE YOUR MENT.**

[Accessibility](#) [Disclaimer](#) [Disclosures](#) [EO/AA/M/F/Veterans/Disability](#)

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[Contact Information](#)

# GEOLOGY 615: Invertebrate Paleontology

TEM 335

Damon Bassett  
phone: 836-4897  
**Office Hours:**

office: TEM 352  
e-mail: dbassett@missouristate.edu  
**or by appointment**

**Text:** *Bringing Fossils to Life* (Prothero, 3<sup>rd</sup> edition)

## Overview:

The history of life on earth is recorded by fossils, and the fossil record provides the only direct evidence of evolutionary change on relevant time scales. The fossil record is the Earth's "memory" of how life has evolved through time. Unfortunately, the recording, much like real memories, is imperfect and mostly contains snapshots of instances in time that we must learn to splice together. What we will learn is that the majority of individuals within a species are not preserved and commonly those that are preserved are not complete. There is still a multitude of information contained within the fossil record and using the right techniques we can recreate not only the individual, but the environment in which it lived.

The primary goals of this course are to survey the groups most important in the fossil record and to discuss insights gained from, as well as the limitations of the fossil record. The course is organized around taxonomic groups and will progress from single celled organisms through the major invertebrate phyla that have hard parts (those most likely to be preserved in rocks).

Lectures will address major taxa (morphology, ecology, and biostratigraphy, and geographic ranges) and concepts (e.g., taphonomy/fossilization, paleoecology, paleoclimatology, and evolution/extinction). Laboratory exercises will provide hands on experience with different fossil groups and allow further exploration of concepts.

## Goals:

- survey taxonomic groups important in the fossil record
- become familiar with the history and diversity of life through time
- explore the processes that cause changes in life through time
- understand how geological processes illuminate, but also bias our view of the past

**Grades:** Your final score will be calculated based on 600 total points.

**Lecture (400 pts.):** There will be three hour exams each worth 100 points. The exams will not be comprehensive *per se*, but many topics (e.g., evolution) have broad relevance and may figure in questions on more than one exam. The exams will cover material discussed in class. You will not be held responsible for terminology in the text that is not covered in lecture or lab (there will be plenty of terminology already).

In lieu of a final exam there will be a final presentation and paper worth 40 and 60 points, respectively. Each person will investigate a subject related to the material covered during the semester and make a presentation to the class and turn in an original, fully referenced, 10-12 page term paper. We'll talk more about the details later in the semester.

**Research Project (100 pts.):** You will be required to design and complete a research project that ties into your final paper and presentation topic. This project can include sample collection and identification, biostratigraphic correlation, geochemical analysis, SEM imaging, or any other related topic. You will include the methods & results of your project in your final paper for the course, as well as the chapters required for background and discussion.

**Lab (200 pts.):** The lab accounts for 1/3 of the final grade, so it will be an important part of your grade. Lab grades will be based on lab quizzes and lab write-ups. We will go over details in lab.

**Grading: Summary of Points Possible:** There are 600 points possible in this course, distributed as:

(3) Lecture Examinations	300 points
(1) Final Paper	60 points
(1) Final Presentation	40 points
(1) Independent Research Project	100 points
(5) Lab Assignments	100 points
(2) Lab Quizzes/Attendance/Participation	100 points
<b>TOTAL</b>	<b>700 points</b>

Grading Scale:	<b>A</b> = 100 - 92.50%	<b>A-</b> = 92.49 - 90.00%
<b>B+</b> = 89.99 - 87.50%	<b>B</b> = 87.49 – 82.50%	<b>B-</b> = 82.49 - 80.00%
<b>C+</b> = 79.99 - 77.50%	<b>C</b> = 77.49 - 72.50%	<b>C-</b> = 72.49 - 70.00%
<b>D+</b> = 69.99 - 67.50%	<b>D</b> = 67.49 – 60.00%	
	<b>F</b> = 59.99 – 0.00%	

**Tentative class schedule:** \*reading assignments should be completed before lecture

week of	TAXA, TOPICS	READING*
Jan. 14	<i>introduction, history of paleontology</i>	Ch. 1
Jan. 21	<i>fossilization, taphonomy, and traces</i>	Ch. 1, 19
Jan. 28	<i>paleoecology, protists and porifera</i>	Ch. 8, 12
Feb. 4	<i>paleoecology (cont'd), cnideria and bryozoa</i>	Ch. 8, 13, & 14
Feb. 11	<i>reefs, systematics</i>	Ch. 4
	<b>Exam 1- Thursday 2/14</b>	
Feb. 18	<i>species and variation, brachiopods</i>	Ch. 2, 14
Feb. 25	<i>evolution and speciation, arthropods</i>	Ch. 3, 15
Mar. 4	<i>evolution (cont'd)</i>	Ch. 5
Mar. 11	<i>SPRING BREAK</i>	
Mar. 18	<i>early earth</i>	Ch. 11
Mar. 25	<i>functional morphology, molluscs (gastropods)</i>	Ch. 7, 16
	<b>Exam 2- Thursday 3/28</b>	
Apr. 1	<i>functional morphology (cont'd), molluscs (bivalves)</i>	Ch. 7, 16
Apr. 8	<i>biostratigraphy, molluscs (cephalopods)</i>	Ch. 10, 16
	<b>(no class on 4/11 – Spring Holiday)</b>	
Apr. 15	<i>biogeography, echinoderms, graptolites, and basal verts.</i>	Ch. 9, 17, 18
Apr. 22	<i>diversity, mass extinctions</i>	Ch. 6
Apr. 29	<i>vertebrates &amp; plants et al.</i>	Ch. 18, 20
	<b>Exam 3, Thursday 5/2</b>	
May 6	<i>Presentations</i>	
	Final Exam Period; Tue. May 14, 11:00 am-1:00 pm	

## Lab Syllabus

**Attendance Policy:** Attendance is essential to learning the lab material presented. 10 points will be allotted for attendance.

**Grading Policy:** The laboratory will constitute 1/3 of your total class grade. There will be two lab exams each worth 40 pts and one lab quiz worth 10 pts. In addition, there will be five homework write-ups\* worth 20 pts each.

5 homework write-ups	100 pts
Attendance	20 pts
<u>8 lab quizzes</u>	<u>80 pts</u>
Total	200 pts

**Make-up Work:** Students who cannot attend lab during the specified time, may, for a **valid** reason, be entitled to a make-up assignment (including exams, quizzes, and write-ups). To qualify for a make-up assignment a student must notify me personally **prior** to the scheduled lab assignment, and be prepared to present documentation of the emergency or illness. In the case of an emergency you should contact me as soon as reasonably possible. Unexcused absence from a laboratory assignment will result in a score of zero for that assignment.

***Tentative lab schedule:***

Date	TOPIC	READING
Jan. 14	<b>No Lab</b>	
*Jan. 21	preservation and ichnofossils	Ch. 1, 20
Jan. 28	protists and porifera	Ch. 12 & 13
Feb. 4	cnidaria and bryozoa	Ch. 13 & 14
Feb. 11	<b>TBA</b>	
*Feb. 18	brachiopods	Ch. 15
Feb. 25	arthropods	Ch. 15
*Mar. 4	evolution game	
Mar. 11	<b>SPRING BREAK</b>	
Mar. 18	molluscs (bivalves)	Ch. 16
Mar. 25	molluscs (gastropods)	Ch. 16
Apr. 1	molluscs (cephalopods)	Ch. 16
*Apr. 8	graphic correlation ( <b>No class 4/11 – Spring Holiday</b> )	
Apr. 15	echinoderms	Ch. 17
*Apr. 22	sampling	Ch. 10
Apr. 29	conodonts, graptolites, et al.	Ch. 18
May 6		

\* labs for which there will be a write-up to turn in

**Laboratory Objectives:** The primary purpose of the laboratory exercises is to provide practical experience and knowledge related to the lecture material. Lab will provide a chance for hands on interaction with fossils in an attempt to better understand taxonomy and morphology.

**Absence and Tardiness Policies:** Success in this course, as with any other, is heavily dependent on regular attendance and attendance will be taken regularly. The university places responsibility for attendance policies in the hands of instructors. Tardiness disrupts the class, as does leaving early.

**Drop Policy:** 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.

#### **Last day to Drop or Withdraw is**

**Academic Integrity:** 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, Student Academic Integrity Policies and Procedures, available at [www.missouristate.edu/policy/academicintegritystudents.htm](http://www.missouristate.edu/policy/academicintegritystudents.htm) and also available at the Reserves Desk in Meyer Library. Any student participating in any form of academic dishonesty will be subject to sanctions as described in this policy.

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**Audio and Video Recording:** Students must request permission from the instructor before making any audio or video recordings of course activity. However, the redistribution of audio or video recordings from the course to individuals who are not students in the class is prohibited without the express permission of the faculty member and any of the students who are recorded.

**Accommodating Students:** To request academic accommodations for a disability, contact the Director of the Disability Resource Center, Plaster Student Union, Suite 405, (417) 836-4192 or (417) 836-6792 (TTY), [www.missouristate.edu/disability](http://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, (417) 836-4787, <http://psychology.missouristate.edu/lcd>.

**Nondiscrimination Statement:** 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 Equity and Diversity, Park Central Office Building, 117 Park Central Square, Suite 111, (417) 836-4252. Other types of concerns (i.e., concerns of an academic nature) should be discussed directly with your instructor and can also be brought to the attention of your instructor's Department Head. Please visit the OED website at [www.missouristate.edu/equity/](http://www.missouristate.edu/equity/).