

Missouri State University—Curricular Proposal Program Change Special Form for Identification of Public Affairs Capstone (PAC) Requirement

Biology		9-20-13	
Department/School		Date	
Biology (BA)			
Title of Major and Degree			
List the course(s) which will satisfy the 3-hou title, and credit hours of each course.	r Public Affairs Capstone Exp	perience. Be specific—includ	e course code, course numb
See attachment	<u></u>		i
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Answer all following questions related to th	e course(s) entered above.		
Does the course(s) currently exist? Enter If no, a new course proposal form must	r yes or no. Yes be submitted and accompa	ny this program change form	
2. If course(s) does exist, will a course cha If yes, a course change form must be su	nge be needed (i.e., credit he bmitted and accompany this	ours, description, etc.)? Ente	r yes or no. No
 Is the course(s) currently required in the If no, the program must be revised. Att and 3) complete new catalog information 	ach a separate sheet with 1)	present catalog description;	
 Will <u>all</u> sections of the course(s) satisfy If no, specify which course(s) will be sec independent study courses will always be 	tion-specific. Note: All servic	ce learning, study away, spec	ial topics, internships, and igh the degree audit system
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Will a transfer equivalent of the course(Additional notes regarding any potentia		e? Enter yes or no. Yes	
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o <u>one</u> of the following (please check all that the program needs to go through more that omnixe marked.	apply and send to first coul	ncil/committee marked).	
College Council		gram changes through College C EIP, or directly to Faculty Senat	
Professional Education Committee	(Considers all program chang	ges affecting BS and MS in Educa	
Committee on General Education and Intercollegiate Programs	Specialist degrees) (Considers all general educat	tion and multi-college program	changes)
Graduate Council	(Considers all graduate-level	9.24.	-/ 2
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(Routing on Reverse Side)

FS Program Change - 9/10/2010

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Biology (BA)—Public Affairs Capstone Experience

List the course(s) which will satisfy the 3-hour Public Affairs Capstone Experience. Be specific—include course code, course number, title, and credit hours of each course.

BIO 300(1) Service Learning in Biology

BIO 355(4) Developmental Biology

BIO 369(4) General Ecology

BIO 370(4) Invertebrate Zoology

BIO 373(3) Principles of Wildlife Management

BIO 398(1) Laboratory Internship in Biology

BIO 399(1-3) Cooperative Education in Biology

BIO 485(1-3) Marine Conservation

BIO 494(1) Senior Seminar

BIO 498(3) Honors Senior Project

BIO 499(1-3) Special Topics in Biology

BIO 501(2) Natural History Museum Techniques

BIO 505(3) Human Nature

BIO 508(3) Environmental Microbiology

BIO 509(4) Stream Ecology

BIO 511(4) Immunology

BIO 512(3) Industrial Microbiology

BIO 520(3) Pathogenic Microbiology

BIO 527(1-4) Field Biology

BIO 539(2) Biogeography

BIO 547(3) Water Resources

BIO 561(2) Environmental Issues Education and Interpretation

BIO 573(3) Ornithology

BIO 574(2) Aquatic Entomology

BIO 575(3) Ichthyology

BIO 576(3) Herpetology

BIO 577(3) Mammalogy

BIO 578(4) Behavioral Ecology

BIO 579(4) Conservation Biology

BIO 584(3) Fish Ecology

BIO 589(3) Game Management



PRESENT CATALOG DESCRIPTION

Biology (Non-Comprehensive) (BA)

Bachelor of Arts

- 1. General Education Requirements see General Education Program and Requirements section of catalog
- 2. Major Requirements
 - 1. <u>BIO 121(4), 122(4), 235(4), 310(5)</u> or <u>320(4), 369(4), 494(1), 550(3)</u>
 - 2. Select elective courses in biology to total a minimum of 32 hours and include at least 12 hours of 300 level or higher courses. Electives may be selected from one of the following emphases. Advisors can assist students to select electives to emphasize areas that best meet their interest and career goals. Popular areas of emphasis include pre-health studies (pre-medical, pre-veterinary, pre-physical therapy, etc.), microbiology, cell/molecular biology, environmental/conservation biology, and zoology, but other areas of emphasis are also possible.
 - 3. Related Requirements: CHM 200(5) or 342(5) and 343(5) or 344(3); PHY 123(4) and 124(4) or PHY 203(5) and 204(5); MTH 261(5) or 287(3)
- 3. Minor Required (or second major)
- 4. Specific Requirements for Bachelor of Arts Degree see Specific Bachelor of Arts Degree Requirements section of catalog
- 5. General Baccalaureate Degree Requirements see <u>General Baccalaureate Degree Requirements</u> section of catalog

REVISED CATALOG DESCRIPTION

Biology (Non-Comprehensive) (BA)

Bachelor of Arts

- 1. General Education Requirements see General Education Program and Requirements section of catalog
- 2. Major Requirements
 - 1. <u>BIO 121(4), 122(4), 235(4), 310(5)</u> or <u>320(4), 369(4), 494(1), 550(3)</u>
 - 2. Select elective courses in biology to total a minimum of 32 hours and include at least 12 hours of 300 level or higher courses. Electives may be selected from one of the following emphases. Advisors can assist students to select electives to emphasize areas that best meet their interest and career goals. Popular areas of emphasis include pre-health studies (pre-medical, pre-veterinary, pre-physical therapy, etc.), microbiology, cell/molecular biology, environmental/conservation biology, and zoology, but other areas of emphasis are also possible.
 - 3. Related Requirements: <u>CHM 200(5)</u> or <u>342(5)</u> and <u>343(5)</u> or <u>344(3)</u>; <u>PHY 123(4)</u> and <u>124(4)</u> or <u>PHY 203(5)</u> and <u>204(5)</u>; <u>MTH 261(5)</u> or <u>287(3)</u>
 - 4. Public Affairs Requirements: Select 3 courses from the following list: BIO 300(1), 355(4), 369(4), 370(4), 373(3), 398(1), 399(1-3), 485(1-3), 494(1), 498(3), 499(1-3), 501(2), 505(3), 508(3), 509(4), 511(4), 512(3), 520(3), 527(1-4), 539(2), 547(3), 561(2), 573(3), 574(2), 575(3), 576(3), 577(3), 578(4), 579(4), 584(3), 589(3)
- 3. Minor Required (or second major)
- 4. Specific Requirements for Bachelor of Arts Degree see Specific Bachelor of Arts Degree Requirements section of catalog
- 5. General Baccalaureate Degree Requirements see <u>General Baccalaureate Degree Requirements</u> section of catalog

COMPLETE NEW CATALOG INFORMATION

4. Public Affairs Requirements: Select 3 courses from the following list: BIO 300(1), 355(4), 369(4), 370(4), 373(3), 398(1), 399(1-3), 485(1-3), 494(1), 498(3), 499(1-3), 501(2), 505(3), 509(4), 511(4), 512(3), 520(3), 527(1-4), 539(2), 547(3), 561(2), 573(3), 574(2), 575(3), 576(3), 577(3), 578(4), 579(4), 584(3), 589(3)



Missouri State University—Curricular Proposal Program Change Special Form for Identification of Public Affairs Capstone (PAC) Requirement

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See a	ttachment			
nswer	r all following questions related to the	e course(s) entered abo	ve.	****
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2. If	course(s) does exist, will a course cha yes, a course change form must be su	nge be needed (i.e., crec bmitted and accompany	dit hours, description, etc.)? Enter ye: y this program change form.	s or no. No
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FS Program Change - 9/10/2010

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Biology (BS)—Public Affairs Capstone Experience

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BIO 300(1) Service Learning in Biology

BIO 355(4) Developmental Biology

BIO 369(4) General Ecology

BIO 370(4) Invertebrate Zoology

BIO 373(3) Principles of Wildlife Management

BIO 398(1) Laboratory Internship in Biology

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BIO 505(3) Human Nature

BIO 508(3) Environmental Microbiology

BIO 509(4) Stream Ecology

BIO 511(4) Immunology

BIO 512(3) Industrial Microbiology

BIO 520(3) Pathogenic Microbiology

BIO 527(1-4) Field Biology

BIO 539(2) Biogeography

BIO 547(3) Water Resources

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BIO 589(3) Game Management



PRESENT CATALOG DESCRIPTION

Biology (Non-Comprehensive) (BS)

Bachelor of Science

- 1. General Education Requirements see General Education Program and Requirements section of catalog
- 2. Major Requirements
 - 1. <u>BIO 121(4)</u>, <u>122(4)</u>, <u>235(4)</u>, <u>310(5)</u> or <u>320(4)</u>, <u>369(4)</u>, <u>494(1)</u>, <u>550(3)</u>
 - 2. Select elective courses in biology to total a minimum of 36 hours and include at least 12 hours of 300-level or higher courses. Advisors can assist students to select electives to emphasize areas that best meet their interest and career goals. Popular areas of emphasis include pre-health studies (pre-medical, pre-veterinary, pre-physical therapy, etc.), microbiology, cell/molecular biology, environmental/conservation biology, and zoology, but other areas of emphasis are also possible.
 - 3. Related Requirements: CHM 200(5) or 342(5) and 343(5) or 344(3); PHY 123(4) and 124(4) or PHY 203(5) and 204(5); MTH 261(5) or 287(3)
- 3. Minor Required (or second major)
- 4. General Baccalaureate Degree Requirements see General Baccalaureate Degree Requirements section of catalog

REVISED CATALOG DESCRIPTION

Biology (Non-Comprehensive) (BS)

Bachelor of Science

- 1. General Education Requirements see General Education Program and Requirements section of catalog
- 2. Major Requirements
 - 1. <u>BIO 121(4)</u>, <u>122(4)</u>, <u>235(4)</u>, <u>310(5)</u> or <u>320(4)</u>, <u>369(4)</u>, <u>494(1)</u>, <u>550(3)</u>
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Missouri State University—Curricular Proposal Program Change Special Form for Identification of Public Affairs Capstone (PAC) Requirement

Department/School Biology (Comprehensive) (BS) Title of Major and Degree Little the course(s) which will satisfy the 3-hour Public Affairs Capstone Experience. Be specific—include course code, course numbritile, and credit hours of each course. See attachment Answer all following questions related to the course(s) entered above. 1. Does the course(s) currently exist? Enter yes or no. If no, a new course proposal form must be submitted and accompany this program change form. 2. If course(s) does exist, will a course change be needed (i.e., credit hours, description, etc.)? Enter yes or no. If yes, a course change form must be submitted and accompany this program change form. 3. Is the course(s) currently required in the program for all students? Enter yes or no. 1944-98 If no, the program must be revised. Attach a separate sheet with 1) present catalog description; 2) revised catalog description and 3) complete new catalog information specifying the PAC Experience Plus any other program changes related to the PAC 4. Will aff sections of the course(s) satisfy the PAC Experience? Enter yes or no. 1949-1949. 4. Will aff sections of the course(s) satisfy the PAC Experience? Enter yes or no. 1949-1949. 5. Will a transfer equivalent of the course(s) satisfy the PAC Experience? Enter yes or no. 1949-1949. 6. Will a transfer equivalent of the course(s) satisfy the PAC Experience? Enter yes or no. 1949-1949. 6. Will a transfer equivalent of the course(s) satisfy the PAC Experience? Enter yes or no. 1949-1949. 6. Will a transfer equivalent of the course(s) satisfy the PAC Experience? Enter yes or no. 1949-1949. 6. Will a transfer equivalent of the course(s) satisfy the PAC Experience? Enter yes or no. 1949-1949. 6. Will a transfer equivalent of the course(s) satisfy the PAC Experience? Enter yes or no. 1949-1949. 6. Will a transfer equivalent of the course(s) satisfy the PAC Experience? Enter yes or no. 1949-1949. 6. Will a transfer equivalent of the course(s) satisfy the PAC Experience? Enter yes or	Biology		9-20-13	
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1. Does the course(s) currently exist? Enter yes or no. If no, a new course proposal form must be submitted and accompany this program change form. 2. If course(s) does exist, will a course change be needed (i.e., credit hours, description, etc.)? Enter yes or no. If yes, a course change form must be submitted and accompany this program change form. 3. Is the course(s) currently required in the program for all students? Enter yes or no. If no, the program must be revised. Attach a separate sheet with 1) present catalog description; 2) revised catalog description and 3) complete new catalog information specifying the PAC Experience? Enter yes or no. If no, specify which course(s) will be section-specific. Note: All service learning, study away, special topics, internships, and independent study courses will always be section-specific and will require special handling through the degree audit system. 5. Will a transfer equivalent of the course(s) satisfy the PAC Experience? Enter yes or no. If the program deads to go through more than one committee council committee marked. 6. Will a transfer equivalent of the course(s) satisfy the PAC Experience? Enter yes or no. If the program needs to go through more than one committee/council, forward one additional form for each additional council marked. 6. College Council (Sendal undergraduate program changes through College Council as first step before forwarding either to PEC, CGEIP, or directly to Faculty Senate) (Considers all general education and multi-college program changes) (Considers all general education and multi-college program changes) 6. Considers all general education and multi-college program changes)				:
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if no, a new course proposal form must be submitted and accompany this program change form. 2. If course(s) does exist, will a course change be needed (i.e., credit hours, description, etc)? Enter yes or no. No if yes, a course change form must be submitted and accompany this program change form. 3. Is the course(s) currently required in the program for all students? Enter yes or no. 494-yes If no, the program must be revised. Attach a separate sheet with 1) present catalog description; 2) revised catalog description and 3) complete new catalog information specifying the PAC Experience plus any other program changes related to the PAC Will all sections of the course(s) satisfy the PAC Experience? Enter yes or no. Yes If no, specify which course(s) will be section-specific. Note: All service learning, study away, special topics, internships, and independent study courses will always be section-specific and will require special handling through the degree audit system Additional notes regarding any potential transfer equivalents. 5. Will a transfer equivalent of the course(s) satisfy the PAC Experience? Enter yes or no. Yes Additional notes regarding any potential transfer equivalents. 6. One of the following (please check all that apply and send to first council/committee marked). 6. One of the following (please check all that apply and send to first council/committee marked). 7. Other Council (Send all undergraduate program changes through College Council as first step before forwarding either to PEC, CGEIP, or directly to Faculty Senate) (Considers all general education and multi-college Program changes) (Considers all general education and multi-college program changes) 6. Graduate Council (Considers all general education and multi-college program changes)	Answer all following questions related to th	e course(s) entered above.		
If yes, a course change form must be submitted and accompany this program change form. Is the course(s) currently required in the program for all students? Enter yes or no. If no, the program must be revised. Attach a separate sheet with 1) present catalog description; 2) revised catalog description and 3) complete new catalog information specifying the PAC Experience plus any other program changes related to the PAC. Will all sections of the course(s) satisfy the PAC Experience? Enter yes or no. Yes if no, specify which course(s) will be section-specific. Note: All service learning, study away, special topics, internships, and independent study courses will always be section-specific and will require special handling through the degree audit system. Solutional notes regarding any potential transfer equivalents. DEPARTMENT: Route according to ART VI, SEC 3B(1-4) of Bylaws of the Faculty Senate. Forward three typed, originally signed for one of the following (please check all that apply and send to first council/committee marked). The program needs to go through more than one committee/council, forward one additional form for each additional council ommittee marked. College Council (Send all undergraduate program changes through College Council as first step before forwarding either to PEC, CGEIP, or directly to Faculty Senate) (Considers all general education and multi-college program changes) Committee on General Education and intercollegiate Programs Graduate Council (Considers all general education and multi-college program changes)		EL A C 3 OL 110.	this program change form.	
If no, the program must be revised. Attach a separate sheet with 1) present catalog description and 3) complete new catalog information specifying the PAC Experience plus any other program changes related to the PAC. 4. Will all sections of the course(s) satisfy the PAC Experience? Enter yes or no. If no, specify which course(s) will be section-specific. Note: All service learning, study away, special topics, internships, and independent study courses will always be section-specific and will require special handling through the degree audit system are special handling through the degree audit system. 5. Will a transfer equivalent of the course(s) satisfy the PAC Experience? Enter yes or no. Additional notes regarding any potential transfer equivalents. EPARTMENT: Route according to ART VI, SEC 3B(1-4) of Bylaws of the Faculty Senate. Forward three typed, originally signed for one of the following (please check all that apply and send to first council/committee marked). The program needs to go through more than one committee/council, forward one additional form for each additional council committee marked. College Council (Send all undergraduate program changes through College Council as first step before forwarding either to PEC, CGEIP, or directly to Faculty Senate) (Considers all graduate Program changes) (Considers all graduate-level program changes) (Considers all graduate-level program changes)	2. If course(s) does exist, will a course cha If yes, a course change form must be su	nge be needed (i.e., credit hou Ibmitted and accompany this p	ırs, description, etc.)? Enter yes or orogram change form.	no. No
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(Routing on Reverse Side)

FS Program Change - 9/10/2010

3

Biology (Comprehensive) (BS)—Public Affairs Capstone Experience

List the course(s) which will satisfy the 3-hour Public Affairs Capstone Experience. Be specific—include course code, course number, title, and credit hours of each course.

BIO 300(1) Service Learning in Biology

BIO 355(4) Developmental Biology

BIO 369(4) General Ecology

BIO 370(4) Invertebrate Zoology

BIO 373(3) Principles of Wildlife Management

BIO 398(1) Laboratory Internship in Biology

BIO 399(1-3) Cooperative Education in Biology

BIO 485(1-3) Marine Conservation

BIO 494(1) Senior Seminar

BIO 498(3) Honors Senior Project

BIO 499(1-3) Special Topics in Biology

BIO 501(2) Natural History Museum Techniques

BIO 505(3) Human Nature

BIO 508(3) Environmental Microbiology

BIO 509(4) Stream Ecology

BIO 511(4) Immunology

BIO 512(3) Industrial Microbiology

BIO 520(3) Pathogenic Microbiology

BIO 527(1-4) Field Biology

BIO 539(2) Biogeography

BIO 547(3) Water Resources

BIO 561(2) Environmental Issues Education and Interpretation

BIO 573(3) Ornithology

BIO 574(2) Aquatic Entomology

BIO 575(3) Ichthyology

BIO 576(3) Herpetology

BIO 577(3) Mammalogy

BIO 578(4) Behavioral Ecology

BIO 579(4) Conservation Biology

BIO 584(3) Fish Ecology

BIO 589(3) Game Management



PRESENT CATALOG DESCRIPTION

Biology (Comprehensive) (BS)

Bachelor of Science

- 1. General Education Requirements see <u>General Education Program and Requirements</u> section of catalog
- 2. Major Requirements (37-46 hours)
 - 1. <u>BIO 121(4)</u>, <u>122(4)</u>, <u>235(4)</u>, <u>494(1)</u>, <u>550(3)</u>
 - 2. PHY 123(4) and 124(4) or PHY 203(5) and 204(5)
 - 3. MTH 138(5) or 181(3), or eligibility for MTH 261 on mathematics placement test
 - 4. BIO 310(5) or 320(4) or 361(4) or 544(4); consult options below before selecting course
 - 5. CHM 105(5) or CHM 160(4) and 161(1); consult options below before selecting course
 - 6. CHM 200(5) or 302(5) or 342(5); consult options below before selecting course
 - 7. 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.
 - 1. Environmental Biology and Evolution (33-38 hours)
 - 1. Required courses: <u>BIO 369(4)</u>, <u>515(3)</u>
 - Complete courses in biodiversity and evolution totaling at least 3 hours from the following: BIO 334(3), 339(2), 370(4), 371(3), 380(5), 530(3), 571(4), 573(3), 574(2), 575(3), 576(3), 577(3); the following courses taught during the summer at the Gulf Coast Research Laboratory in Ocean Springs, Mississippi: BIO 534(2), 535(1), 555(3), 556(3), 587(3), 588(3)
 - 3. Complete courses in population biology totaling at least 3 hours from the following: BIO 436(4), 532(3), 540(4), 560(3), 563(3), 567(4), 578(4), 584(3), 589(3); the following courses taught during the summer at the Gulf Coast Research Laboratory in Ocean Springs, Mississippi: BIO 557(2), 558(2)
 - 4. Complete courses in community/ecosystem biology totaling at least 3 hours from the following: <u>BIO 373(3), 485(1-3), 508(3), 509(3), 533(3), 539(2), 547(3), 562(4), 579(4)</u>; the following courses taught during the summer at the Gulf Coast Research Laboratory in Ocean Springs, Mississippi: <u>BIO 537(2), 538(2), 565(3), 566(2)</u>
 - 5. Students must take at least one biology course with a substantial field component. A course used to satisfy this requirement also may be counted toward the biodiversity, population biology, and community/ecosystem biology concentration areas described above. Complete one of the following: BIO 334(3), 339(2), 370(4), 436(4), 509(3), 527(1-4), 562(3), 574(2), 575(3), 576(3), 577(3), any biology course taught at the Gulf Coast Research Laboratory, any biology course taught at the Bull Shoals Field station or another field station (with the approval of your advisor)
 - 6. Complete 0-7 hours of elective BIO courses at the level of 300 or higher to total a minimum of 43 hours in biology
 - 7. Complete at least one of the following related requirements in Mathematics, Statistics, or Computer programming: <u>MTH 261(5)</u> or <u>287(3)</u> or <u>546(3)</u> or <u>547(3)</u> or <u>CSC 125(4)</u> or <u>CSC 130(3)</u> or <u>PSY 527(3)</u>
 - Related requirements in Chemistry: <u>CHM 160(4)</u>, <u>161(1)</u>, <u>170(3)</u>, <u>171(1)</u>
 - 9. Complete one of the following related science courses: <u>AGN 215(3)</u>, <u>ANT 375(3)</u>; <u>CHM 260(3)</u> or <u>460(3)</u>; <u>GLG 171(3)</u>, <u>GRY 351(3)</u>
 - 10. Complete one of the following related social science courses: ECO 540(3), LAW 537(3), PHI 302(3), PLS 555(3), PSY 379(3)
 - 2. Microbiology and Biotechnology (33-42 hours)
 - 1. Required courses: <u>BIO 310(5)</u>, <u>320(4)</u>
 - 2. Complete 21 additional hours in BIO courses with a minimum of 18 hours from the following: BIO 355(4), 508(3), 511(4), 512(3), 515(3), 517(4), 518(2),

(3)

- $\underline{520}(3)$, $\underline{530}(3)$, $\underline{540}(4)$; \underline{BMS} $\underline{524}(3)$ may be substituted for one of these courses; \underline{CHM} $\underline{302}(5)$ or $\underline{502}(4)$ or $\underline{505}(4)$ may be substituted for one of these courses
- Related requirements in Chemistry: <u>CHM 160(4)</u>, <u>161(1)</u>, <u>170(3)</u>, <u>171(1)</u>; <u>CHM 200(5)</u>, or <u>CHM 342(5)</u> and <u>343(5)</u>, or <u>CHM 342(5)</u> and <u>344(3)</u>; <u>CHM 352(3)</u>, or <u>CHM 452(3)</u> and <u>552(3)</u>
- 3. Wildlife Biology (30-47 hours)
 - 1. Required courses: <u>BIO 320(4)</u> or 361(4), 369(4)
 - 2. Complete two courses in plant biology from: BIO 334(3), 339(2), 530(3), 544(4)
 - 3. Complete three courses in animal biology from: <u>BIO 370(4), 371(3), 380(5), 571(4), 573(3), 574(2), 575(3), 576(3), 577(3)</u>
 - 4. Complete a minimum of 5 hours in management from: <u>BIO 373(3)</u>, <u>485(1-3)</u>, 509(3), <u>532(3)</u>, <u>562(4)</u>, <u>589(3)</u>
 - 5. Complete two courses in ecology and evolution from: <u>BIO 436(4), 515(3), 539(2), 563(3), 567(4), 578(4), 579(4), 584(3)</u>
 - Complete one course in human dimensions from the following: <u>AGN 335(3)</u>, <u>BIO 547(3),CRM 210(3)</u>, <u>ECO 540(3)</u>, <u>GRY 108(3)</u>, <u>GRY 351(2)</u>, <u>PHI 302(3)</u>, <u>PLS 555(3)</u>, <u>LAW 537(3)</u>
 - 7. Complete one course in earth/environmental science: AGN 215(3), CHM 260(3), GLG 110(4), GRY 142(4)
- 3. General Baccalaureate Degree Requirements see <u>General Baccalaureate Degree Requirements</u> section of catalog

REVISED CATALOG DESCRIPTION

Biology (Comprehensive) (BS)

Bachelor of Science

- 1. General Education Requirements see <u>General Education Program and Requirements</u> section of catalog
- 2. Major Requirements (37-46 hours)
 - 1. <u>BIO 121(4), 122(4), 235(4), 494(1), 550(3)</u>
 - 2. PHY 123(4) and 124(4) or PHY 203(5) and 204(5)
 - 3. MTH 138(5) or 181(3), or eligibility for MTH 261 on mathematics placement test
 - 4. $\underline{BIO\ 310}(5)$ or $\underline{320}(4)$ or $\underline{361}(4)$ or $\underline{544}(4)$; consult options below before selecting course
 - 5. CHM 105(5) or CHM 160(4) and 161(1); consult options below before selecting course
 - 6. CHM 200(5) or 302(5) or 342(5); consult options below before selecting course
 - 7. Public Affairs Requirements: Select 3 courses from the following list: BIO 300(1), 355(4), 369(4), 370(4), 373(3), 398(1), 399(1-3), 485(1-3), 494(1), 498(3), 499(1-3), 501(2), 505(3), 509(4), 511(4), 512(3), 520(3), 527(1-4), 539(2), 547(3), 561(2), 573(3), 574(2), 575(3), 576(3), 577(3), 578(4), 579(4), 584(3), 589(3)
 - 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: <u>BIO 300</u>,
 399, 499, or 597.
 - 1. Environmental Biology and Evolution (33-38 hours)
 - 1. Required courses; BIO 369(4), 515(3)
 - 2. Complete courses in biodiversity and evolution totaling at least 3 hours from the following: BIO 334(3), 339(2), 370(4), 371(3), 380(5), 530(3), 571(4), 573(3), 574(2), 575(3), 576(3), 577(3); the following courses taught during the summer at the Gulf Coast Research Laboratory in Ocean Springs, Mississippi: BIO 534(2), 535(1), 555(3), 556(3), 587(3), 588(3)
 - 3. Complete courses in population biology totaling at least 3 hours from the following: BIO 436(4), 532(3), 540(4), 560(3), 563(3), 567(4), 578(4), 584(3), 589(3); the following courses taught during the summer at the Gulf Coast Research Laboratory in Ocean Springs, Mississippi: BIO 557(2), 558(2)



- 4. Complete courses in community/ecosystem biology totaling at least 3 hours from the following: BIO 373(3), 485(1-3), 508(3), 509(3), 533(3), 539(2), 547(3), 562(4), 579(4); the following courses taught during the summer at the Gulf Coast Research Laboratory in Ocean Springs, Mississippi: BIO 537(2), 538(2), 565(3), 566(2)
- 5. Students must take at least one biology course with a substantial field component. A course used to satisfy this requirement also may be counted toward the biodiversity, population biology, and community/ecosystem biology concentration areas described above. Complete one of the following: BIO 334(3), 339(2), 370(4), 436(4), 509(3), 527(1-4), 562(3), 574(2), 575(3), 576(3), 577(3), any biology course taught at the Gulf Coast Research Laboratory, any biology course taught at the Bull Shoals Field station or another field station (with the approval of your advisor)

6. Complete 0-7 hours of elective BIO courses at the level of 300 or higher to total a minimum of 43 hours in biology

- 7. Complete at least one of the following related requirements in Mathematics, Statistics, or Computer programming: <u>MTH 261(5)</u> or <u>287(3)</u> or <u>546(3)</u> or <u>547(3)</u> or <u>CSC 125(4)</u> or <u>CSC 130(3)</u> or <u>PSY 527(3)</u>
- 8. Related requirements in Chemistry: <u>CHM 160(4)</u>, <u>161(1)</u>, <u>170(3)</u>, <u>171(1)</u>
- 9. Complete one of the following related science courses: <u>AGN 215(3)</u>, <u>ANT 375(3)</u>; <u>CHM 260(3)</u> or <u>460(3)</u>; <u>GLG 171(3)</u>, <u>GRY 351(3)</u>
- 10. Complete one of the following related social science courses: ECO 540(3), LAW 537(3), PHI 302(3), PLS 555(3), PSY 379(3)
- 2. Microbiology and Biotechnology (33-42 hours)
 - 1. Required courses: <u>BIO 310(5)</u>, <u>320(4)</u>
 - 2. Complete 21 additional hours in BIO courses with a minimum of 18 hours from the following: BIO 355(4), 508(3), 511(4), 512(3), 515(3), 517(4), 518(2), 520(3), 530(3), 540(4); BMS 524(3) may be substituted for one of these courses; CHM 302(5) or 502(4) or 505(4) may be substituted for one of these courses
 - 3. Related requirements in Chemistry: <u>CHM 160(4)</u>, <u>161(1)</u>, <u>170(3)</u>, <u>171(1)</u>; <u>CHM 200(5)</u>, or <u>CHM 342(5)</u> and <u>343(5)</u>, or <u>CHM 342(5)</u> and <u>344(3)</u>; <u>CHM 352(3)</u>, or <u>CHM 452(3)</u> and <u>552(3)</u>
- 3. Wildlife Biology (30-47 hours)
 - 1. Required courses: <u>BIO 320(4)</u> or <u>361(4)</u>, <u>369(4)</u>
 - 2. Complete two courses in plant biology from: BIO 334(3), 339(2), 530(3), 544(4)
 - 3. Complete three courses in animal biology from: <u>BIO 370(4)</u>, <u>371(3)</u>, <u>380(5)</u>, 571(4), 573(3), 574(2), 575(3), <u>576(3)</u>, <u>577(3)</u>
 - 4. Complete a minimum of 5 hours in management from: <u>BIO 373(3)</u>, <u>485(1-3)</u>, <u>509(3)</u>, <u>532(3)</u>, <u>562(4)</u>, <u>589(3)</u>
 - 5. Complete two courses in ecology and evolution from: <u>BIO 436(4)</u>, <u>515(3)</u>, 539(2), 563(3), 567(4), <u>578(4)</u>, <u>579(4)</u>, <u>584(3)</u>
 - Complete one course in human dimensions from the following: <u>AGN 335(3)</u>, <u>BIO 547(3), CRM 210(3)</u>, <u>ECO 540(3)</u>, <u>GRY 108(3)</u>, <u>GRY 351(2)</u>, <u>PHI 302(3)</u>, <u>PLS 555(3)</u>, <u>LAW 537(3)</u>
 - 7. Complete one course in earth/environmental science: AGN 215(3), CHM 260(3), GLG 110(4), GRY 142(4)
- 3. General Baccalaureate Degree Requirements see General Baccalaureate Degree Requirements section of catalog

COMPLETE NEW CATALOG INFORMATION

7. Public Affairs Requirements: Select 3 courses from the following list: BIO 300(1), 355(4), 369(4), 370(4), 373(3), 398(1), 399(1-3), 485(1-3), 494(1), 498(3), 499(1-3), 501(2), 505(3), 508(3), 509(4), 511(4), 512(3), 520(3), 527(1-4), 539(2), 547(3), 561(2), 573(3), 574(2), 575(3), 576(3), 577(3), 578(4), 579(4), 584(3), 589(3)



Missouri State University—Curricular Proposal Program Change Special Form for Identification of Public Affairs Capstone (PAC) Requirement

Department/School Biology Education (BSEd) Title of Major and Degree List the course(s) which will satisfy the 3-hour Public Affairs Capstone Experience. Be specific—include course code, course nuntitle, and credit hours of each course. SCI 214(1) Introduction to Science Teaching in the 21st Century, SCI 314(3) Techniques and Technology in Science Laboratory Teaching, SCI 414(3) Teaching of Secondary School Natural Science, SCI 493(6) Supervised Teaching (Secondary Science) Answer all following questions related to the course(s) entered above. 1. Does the course(s) currently exist? Enter yes or no. Mea If no, a new course proposal form must be submitted and accompany this program change form. 2. If course(s) does exist, will a course change be needed (i.e., credit hours, description, etc.)? Enter yes or no. No If yes, a course change form must be submitted and accompany this program change form. 3. Is the course(s) currently required in the program for all students? Enter yes or no. Yes If no, the program must be revised. Attach a separate sheet with 1) present catalog description; 2) revised catalog information specifying the PAC Experience plus any other program changes related to the PV If no, the program must be revised. Attach a separate sheet with 1) present catalog description; 2) revised catalog information specifying the PAC Experience plus any other program changes related to the PV If no, the program must be revised. Attach a separate sheet with 1) present catalog description; 2) revised catalog information specifying the PAC Experience plus any other program changes related to the PV If no, specify which course(s) satisfy the PAC Experience? Enter yes or no. Yes If no, specify which course(s) will be section-specific. Note: All service learning, study away, special topics, internships, and independent study courses will always be section-specific. Note: All service learning study have, special topics, internships, and independent study courses will always be section-specific. Note: All servi	Biology	9-20-13	
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(Routing on Reverse Side)

FS Program Change - 9/10/2010

4

PRESENT CATALOG DESCRIPTION

Biology Education

Bachelor of Science in Education (Certifiable grades 9-12)

General Education Requirements - see General Education Program and Requirements section of catalog
The following required courses can be used to meet both General Education and Major Requirements: BIO
121(4); MTH 135(3) or 181(3) or 138(5) or 261(5) or 287(3); CHM 105(5) or 160(4) or GLG 110(4) or
GRY 135(4) or GLG 171(4) or PHY 100(4) or PHY 123(4)

2. Major Requirements

- 1. Core (32 hours): <u>BIO 121(4)</u>, <u>122(4)</u>, <u>215(2)</u>, <u>235(4)</u>, <u>310(5)</u>, <u>361(4)</u>, <u>369(4)</u>, <u>515(3)</u>; Select elective courses in biology, 300 level or higher, to total a minimum of 32 hours.
- 2. Related Requirements (6-9 hours): <u>SCI 505(3)</u>; <u>MTH 135(3)</u> and <u>MTH 181(3)</u>, or <u>MTH 138(5)</u> or <u>261(5)</u> or <u>287(3)</u>; *Note:* <u>MTH 130</u> cannot be substituted for MTH 135

3. Complete the requirements in one of the following grades 9-12 certification areas:

- Categorical Science (13-21 hours): <u>CHM 105(5)</u>, or (<u>CHM 160(4)</u> and <u>161(1)</u> and <u>170(3)</u> and <u>171(1)</u>); <u>PHY 100(4)</u>, or <u>PHY 123(4)</u> and <u>124(4)</u>; <u>GLG 110(4)</u> or <u>GRY 135(4)</u> or <u>GLG 171(4)</u>
- 2. Unified Science (25 hours): <u>CHM 160(4)</u>, <u>170(3)</u>, <u>171(1)</u>; <u>PHY 123(4)</u>, <u>124(4)</u>; <u>GLG 110(4)</u>; <u>GRY 135(4)</u>
- 3. Professional Education Courses (37 hours)

1. <u>SCI 214(1), 314(3), 414(3), 493(6), 494(6)</u>

- 2. Professional Education Required Core and Competencies see <u>Teacher Certification</u>, <u>Teacher Education Program and Secondary Education Requirements</u> section of catalog
- 4. This program also requires compliance with the Teacher Education Program requirements for eligibility to enroll in Professional Education courses; admission to and continuance in the Teacher Education Program; approval for supervised teaching; and recommendation for certification; as well as the requirements for Secondary Education. Refer to the Teacher Education Program section of the catalog for requirements.

5. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog

6. In order to meet Missouri state teacher certification requirements, candidates for the Bachelor of Science in Education degree are required to meet the following grade point average requirements: at least a 2.75 GPA on all course work attempted at all colleges attended; at least a 3.00 GPA in the certificate subject area (major field of study) which includes all courses listed under B; at least a 3.00 GPA in any additional certificate subject area; at least a 3.00 GPA in the professional education courses which includes all courses listed under C; and no grade lower than a "C" in all professional education courses. All GPA requirements include both Missouri State and transfer grades.

REVISED CATALOG DESCRIPTION

Biology Education

Bachelor of Science in Education (Certifiable grades 9-12)

- 1. General Education Requirements see <u>General Education Program and Requirements</u> section of catalog
 - The following required courses can be used to meet both General Education and Major Requirements: BIO 121(4); MTH 135(3) or 181(3) or 181(5) or 181(5)
- 2. Major Requirements



- 1. Core (32 hours): <u>BIO 121(4)</u>, <u>122(4)</u>, <u>215(2)</u>, <u>235(4)</u>, <u>310(5)</u>, <u>361(4)</u>, <u>369(4)</u>, <u>515(3)</u>; Select elective courses in biology, 300 level or higher, to total a minimum of 32 hours.
- 2. Related Requirements (6-9 hours): <u>SCI 505(3)</u>; <u>MTH 135(3)</u> and <u>MTH 181(3)</u>, or <u>MTH 138(5)</u> or <u>261(5)</u> or <u>287(3)</u>; *Note: MTH 130 cannot be substituted for MTH 135*
- 3. Complete the requirements in one of the following grades 9-12 certification areas:
 - Categorical Science (13-21 hours): CHM 105(5), or (CHM 160(4) and 161(1) and 170(3) and 171(1)); PHY 100(4), or PHY 123(4) and 124(4); GLG 110(4) or GRY 135(4) or GLG 171(4)
 - Unified Science (25 hours): <u>CHM 160(4)</u>, <u>170(3)</u>, <u>171(1)</u>; <u>PHY 123(4)</u>, <u>124(4)</u>; <u>GLG 110(4)</u>; <u>GRY 135(4)</u>
- 3. Professional Education Courses (37 hours)
 - 1. <u>SCI 214(1)</u>, <u>314(3)</u>, <u>414(3)</u>, <u>493(6)</u>, <u>494(6)</u>
 - 2. Professional Education Required Core and Competencies see <u>Teacher Certification</u>, <u>Teacher Education Program and Secondary Education Requirements section of catalog</u>
- 4. Public Affairs Requirements: Select 3 courses from the following list: SCI 214(1) Introduction to Science Teaching in the 21st Century, SCI 314(3) Techniques and Technology in Science Laboratory Teaching, SCI 414(3) Teaching of Secondary School Natural Science, SCI 493(6) Supervised Teaching (Secondary Science), SCI 494(6) Supervised Teaching (Secondary Science)
- 5. This program also requires compliance with the Teacher Education Program requirements for eligibility to enroll in Professional Education courses; admission to and continuance in the Teacher Education Program; approval for supervised teaching; and recommendation for certification; as well as the requirements for Secondary Education. Refer to the <u>Teacher Education Program</u> section of the catalog for requirements.
- 6. General Baccalaureate Degree Requirements see <u>General Baccalaureate Degree Requirements</u> section of catalog
- 7. In order to meet Missouri state teacher certification requirements, candidates for the Bachelor of Science in Education degree are required to meet the following grade point average requirements: at least a 2.75 GPA on all course work attempted at all colleges attended; at least a 3.00 GPA in the certificate subject area (major field of study) which includes all courses listed under B; at least a 3.00 GPA in any additional certificate subject area; at least a 3.00 GPA in the professional education courses which includes all courses listed under C; and no grade lower than a "C" in all professional education courses. All GPA requirements include both Missouri State and transfer grades.

COMPLETE NEW CATALOG INFORMATION

4. Public Affairs Requirements: Select 3 courses from the following list: SCI 214(1) Introduction to Science Teaching in the 21st Century, SCI 314(3) Techniques and Technology in Science Laboratory Teaching, SCI 414(3) Teaching of Secondary School Natural Science, SCI 493(6) Supervised Teaching (Secondary Science), SCI 494(6) Supervised Teaching (Secondary Science)

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FS Pragram Change - 9/10/2010

(5)

Biology (Comprehensive) (Wildlife Conservation and Managment)—Public Affairs Capstone Experience

List the course(s) which will satisfy the 3-hour Public Affairs Capstone Experience. Be specific—include course code, course number, title, and credit hours of each course.

BIO 300(1) Service Learning in Biology

BIO 355(4) Developmental Biology

BIO 369(4) General Ecology

BIO 370(4) Invertebrate Zoology

BIO 373(3) Principles of Wildlife Management

BIO 398(1) Laboratory Internship in Biology

BIO 399(1-3) Cooperative Education in Biology

BIO 485(1-3) Marine Conservation

BIO 494(1) Senior Seminar

BIO 498(3) Honors Senior Project

BIO 499(1-3) Special Topics in Biology

BIO 501(2) Natural History Museum Techniques

BIO 505(3) Human Nature

BIO 508(3) Environmental Microbiology

BIO 509(4) Stream Ecology

BIO 511(4) Immunology

BIO 512(3) Industrial Microbiology

BIO 520(3) Pathogenic Microbiology

BIO 527(1-4) Field Biology

BIO 539(2) Biogeography

BIO 547(3) Water Resources

BIO 561(2) Environmental Issues Education and Interpretation

BIO 573(3) Ornithology

BIO 574(2) Aquatic Entomology

BIO 575(3) Ichthyology

BIO 576(3) Herpetology

BIO 577(3) Mammalogy

BIO 578(4) Behavioral Ecology

BIO 579(4) Conservation Biology

BIO 584(3) Fish Ecology

BIO 589(3) Game Management



PRESENT CATALOG DESCRIPTION

Wildlife Conservation and Management (Comprehensive)

Bachelor of Science

This major is offered in cooperation with the Darr School of Agriculture.

- 1. General Education Requirements see General Education Program and Requirements section of catalog
 - Specific General Education Requirements: <u>BIO 121(4)</u>; <u>CHM 105(5)</u> or <u>160(4)</u>; <u>GLG 110(4)</u>; <u>GRY 100(3)</u>; <u>MTH 135(3)</u> or <u>138(5)</u>
- 2. Major Requirements
 - 1. Agriculture Requirements:
 - 1. <u>AGN 115(3) or AGP 103(3); AGN 143(3), 215(3), 335(3); AGP 365(3) or 375(3); AGR 383(3); AGR 490(1)</u>
 - 2. Select two courses (4-6 hours) from: <u>AGB 354(2)</u>; <u>AGN 351(2)</u>; <u>AGP 333(3)</u>, <u>485(3)</u>, <u>583(3)</u>
 - 2. Biology Requirements:
 - 1. <u>BIO 121(4)</u>, <u>122(4)</u>, <u>334(3)</u>, <u>339(2)</u>, <u>373(3)</u>
 - 2. Select one course from: <u>BIO 369(4)</u>, <u>436(4)</u>, <u>562(4)</u>
 - 3. Select two courses from: <u>BIO 573(3)</u>, <u>575(3)</u>, <u>577(3)</u>
 - 3. Select ten additional hours in Agriculture and/or Biology. An advisor must be contacted to determine specific requirements that would result in eligibility to be placed on federal and state registries in Fisheries Biology, Social Science, Wildlife Biology, etc.
- 3. General Baccalaureate Degree Requirements see General Baccalaureate Degree Requirements section of catalog

(S)

REVISED CATALOG DESCRIPTION

Wildlife Conservation and Management (Comprehensive)

Bachelor of Science

This major is offered in cooperation with the Darr School of Agriculture.

- 1. General Education Requirements see General Education Program and Requirements section of catalog
 - Specific General Education Requirements: <u>BIO 121(4)</u>; <u>CHM 105(5)</u> or <u>160(4)</u>; <u>GLG 110(4)</u>; <u>GRY 100(3)</u>; <u>MTH 135(3)</u> or <u>138(5)</u>
- 2. Major Requirements
 - 1. Agriculture Requirements:
 - 1. <u>AGN 115(3) or AGP 103(3)</u>; <u>AGN 143(3)</u>, <u>215(3)</u>, <u>335(3)</u>; <u>AGP 365(3)</u> or <u>375(3)</u>; <u>AGR 383(3)</u>; <u>AGR 490(1)</u>
 - Select two courses (4-6 hours) from: <u>AGB 354(2)</u>; <u>AGN 351(2)</u>; <u>AGP 333(3)</u>, <u>485(3)</u>, <u>583(3)</u>
 - Biology Requirements:
 - 1. <u>BIO 121(4)</u>, <u>122(4)</u>, <u>334(3)</u>, <u>339(2)</u>, <u>373(3)</u>
 - 2. Select one course from: <u>BIO 369(4)</u>, <u>436(4)</u>, <u>562(4)</u>
 - 3. Select two courses from: <u>BIO 573(3)</u>, <u>575(3)</u>, <u>577(3)</u>
 - 4. Public Affairs Requirements: Select 3 courses from the following list: BIO 300(1), 355(4), 369(4), 370(4), 373(3), 398(1), 399(1-3), 485(1-3), 494(1), 498(3), 499(1-3), 501(2), 505(3), 508(3), 509(4), 511(4), 512(3), 520(3), 527(1-4), 539(2), 547(3), 561(2), 573(3), 574(2), 575(3), 576(3), 577(3), 578(4), 579(4), 584(3), 589(3)
 - Select ten additional hours in Agriculture and/or Biology. An advisor must be contacted to
 determine specific requirements that would result in eligibility to be placed on federal and state
 registries in Fisheries Biology, Social Science, Wildlife Biology, etc.
- 3. General Baccalaureate Degree Requirements see General Baccalaureate Degree Requirements section of catalog

COMPLETE NEW CATALOG INFORMATION

4. Public Affairs Requirements: Select 3 courses from the following list: BIO 300(1), 355(4), 369(4), 370(4), 373(3), 398(1), 399(1-3), 485(1-3), 494(1), 498(3), 499(1-3), 501(2), 505(3), 509(4), 511(4), 512(3), 520(3), 527(1-4), 539(2), 547(3), 561(2), 573(3), 574(2), 575(3), 576(3), 577(3), 578(4), 579(4), 584(3), 589(3)



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FS Course Change - 9/10/2010



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BIO 320 - Introduction to Cellular Biolo Prerequisite: BIO 235 or BMS 230; and Introduction to the structure and func emphasis on eukaryotes. Supplementa	CHM 200 or CHM 342. tion of cells with an	BIO 320 - Prerequis "C-" grad better in and funct	Introduction t ite: BIO 235 or e or better in I CHM 200 or C	o Cellular Biology -BMS-230; and CHM 200 or CHM 34 BIO 235 or BMS 230; and "C-" grade HM 342. Introduction to the structu h an emphasis on eukaryotes. e. 4(3-2) F,S
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Reason for Proposed Change or Deletio Basic comprehension of genetics is integral t				
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COMPLETE NEW CATALOG INFORMATION BIO 320 - Introduction to Cellular Biolog Prerequisite: "C-" grade or better in BIO structure and function of cells with an el 0.000 TO 4.000 Credit hours 0.000 TO 3.000 Lecture hours 0.000 TO 2.000 Lab hours	y 235 or BMS 230; and "C-"			
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FS Course Change - 9/10/2010



Present Catalog Description (Cut and paste from web catalog or use most recent description.)	e. permanent) SECTION of a variable content course Revised Catalog Description (Cut and paste description again, strikethrough all deletions, and insert and bold new information.) BIO 361 - General Physiology Prerequisite: "C-" grade or better in BIO 235. A study in animal
(Cut and paste from web catalog or use most recent description.)	(Cut and paste description again, strikethrough all deletions, and insert and bold new information.) BIO 361 - General Physiology
DISTRICT OF THE PROPERTY OF TH	BIO 361 - General Physiology
required in this course in order to take BMS 363. Supplemental	biology that emphasizes the functional features of whole organisms including physiological regulations. A grade of "C" or better is required in this course in order to take BMS 363. Supplemental course fee. 4(3-3) F,S
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Reason for Proposed Change or Deletion Basic comprehension of genetics is integral to success in course	
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COMPLETE NEW CATALOG INFORMATION (typed) BIO 361 - General Physiology Prerequisite: "C-" grade or better in BIO 235. A study in animal biological including physiological regulations. A grade of "C" or better is required fee. 4(3-3) F,S 0.000 TO 4.000 Credit hours 0.000 TO 3.000 Lecture hours 0.000 TO 3.000 Lab hours	ogy that emphasizes the functional features of whole organisms red in this course in order to take BMS 363. Supplemental course
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FS Course Change - 9/10/2010

Missouri State University—Curricular Proposal Program Change Special Form for Identification of Public Affairs Capstone (PAC) Requirement



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Attachment A—Present Catalog Description

Geography (Non-Comprehensive) Bachelor of Science

- A. General Education Requirements see General Education Program and Requirements section of catalog
- B. Major Requirements (38-44 hours)
 - 1. Core Requirements (15 hours): GRY 100(3), GRY 142(4), 363(4), 367(3), 498(1)
 - 2. Related Requirement (3 hours): AGR 330(3) or MTH 340(3) or PSY 200(3) or QBA 237(3) or REC 328(3) or SOC 302(3)
 - 3. Complete one of the following options:
 - a. Cultural and Regional Geography (20-21 hours)
 - 1. Complete one of the following: GRY 300(3), 301(3), 305(3)
 - 2. Complete one of the following: GRY 320(3), 321(3), 322(3), 323(3)
 - 3. Complete one of the following field-studies courses: GRY 301(3), 353(3), 470(2)
 - 4. Complete 12 additional hours with GRY, GEO or PLN prefix
 - b. Environmental and Natural Resources (24-25 hours)
 - 1. GRY 135(4), 348(3), 351(3), 535(3); GEO 561(3)
 - 2. Complete one of the following: GRY 300(3), 305(3), 320(3), 321(3), 322(3), 323(3)
 - 3. Complete one of the following field-studies courses: GRY 301(3), 353(3), 470(2); GLG 360(2)
 - 4. Complete 3 additional hours with GRY, GEO, or PLN prefix
 - Recommended supplementary courses: CHM 105(5) or CHM 160(4); AGA 215(3); BIO 122(4); GRY 597(1-5). Students should select a minor in science, mathematics, agriculture, or an approved personalized minor.
 - c. Geotourism (26 hours)
 - 1. GRY 308(3), 310(3), 328(3), 410(3), 470(2), 510(3); HRA 340(3)
 - 2. Complete one of the following: GRY 318(3), 320(3); PLN 372(3)
 - 3. Complete a minimum of 3 hours from the following: GLG 171(4); GRY 108(3), 301(3), 305(3), 321(3), 322(3), 323(3), 353(2), 399(1-3); PLN 100(3), 573(3), 574(3), 599(1-3)
 - Recommended supplementary courses: any additional courses in subsection 2 or 3, plus any of the following: AGF 121(2); ART 271(3); HRA 210(3), 428(3), 430(3); JRN 270(3); MKT 150(3); PHI 302(3); PLS 232(3); REC 152(3), 303(3); THE 101(3)



Attachment B-Revised Catalog Description

Geography (Non-Comprehensive)

Bachelor of Science

- A. General Education Requirements see General Education Program and Requirements section of catalog
- B. Major Requirements (38-44 hours)
 - 1. Core Requirements (15 hours): GRY 100(3), GRY 142(4), 363(4), 367(3), 498(1)
 - 2. Related Requirement (3 hours): AGR 330(3) or MTH 340(3) or PSY 200(3) or QBA 237(3) or REC 328(3) or SOC 302(3)
 - 3. Complete one of the following options:
 - a. Cultural and Regional Geography (20-21 hours)
 - 1. Complete one of the following: GRY 300(3), 301(3), 305(3)
 - 2. Complete one of the following: GRY 320(3), 321(3), 322(3), 323(3)
 - 3. Complete one of the following field-studies courses: GRY 301(3), 353(3), 470(2)
 - 4. Complete 12 additional hours with GRY, GEO or PLN prefix
 - b. Environmental and Natural Resources (24-25 hours)
 - 1. GRY 135(4), 348(3), 351(3), 535(3); GEO 561(3)
 - 2. Complete one of the following: GRY 300(3), 305(3), 320(3), 321(3), 322(3), 323(3)
 - Complete one of the following field-studies courses: GRY 301(3), 353(3), 470(2); GLG 360(2)
 - 4. Complete 3 additional hours with GRY, GEO, or PLN prefix
 - Recommended supplementary courses: CHM 105(5) or CHM 160(4); AGA 215(3); BIO 122(4); GRY 597(1-5). Students should select a minor in science, mathematics, agriculture, or an approved personalized minor.
 - c. Geotourism (26 hours)
 - 1. GRY <u>108(3)</u>, 308(3), 310(3), 328(3), 410(3), 470(2), 510(3); HRA 340(3)
 - Complete one of the following: GRY 318(3), 320(3); PLN 372(3).
 - 3 2. Complete a minimum of 3 hours from the following: GLG 171(4); GRY 108(3), 301(3), 305(3), 318(3), 320(3), 321(3), 322(3), 353(2), 399(1-3); PLN 100(3), 372(3), 573(3), 574(3), 599(1-3)
 - 4 <u>3</u>. Recommended supplementary courses: any additional courses in subsection 2 or 3, plus any of the following: AGF 121(2); ART 271(3); HRA 210(3), 428(3), 430(3); JRN 270(3); MKT 150(3); PHI 302(3); PLS 232(3); REC 152(3), 303(3); THE 101(3)



Attachment C—Complete New Catalog Information

Geography (Non-Comprehensive)

Bachelor of Science

- A. General Education Requirements see General Education Program and Requirements section of catalog
- B. Major Requirements (38-44 hours)
 - 1. Core Requirements (15 hours): GRY 100(3), GRY 142(4), 363(4), 367(3), 498(1)
 - Related Requirement (3 hours): AGR 330(3) or MTH 340(3) or PSY 200(3) or QBA 237(3) or REC 328(3) or SOC 302(3)
 - Complete one of the following options:
 - a. Cultural and Regional Geography (20-21 hours)
 - Complete one of the following: GRY 300(3), 301(3), 305(3)
 - 2. Complete one of the following: GRY 320(3), 321(3), 322(3), 323(3)
 - 3. Complete one of the following field-studies courses: GRY 301(3), 353(3), 470(2)
 - Complete 12 additional hours with GRY, GEO or PLN prefix
 - b. Environmental and Natural Resources (24-25 hours)
 - 1. GRY 135(4), 348(3), 351(3), 535(3); GEO 561(3)
 - Complete one of the following: GRY 300(3), 305(3), 320(3), 321(3), 322(3), 323(3)
 - 3. Complete one of the following field-studies courses: GRY 301(3), 353(3), 470(2); GLG 360(2)
 - Complete 3 additional hours with GRY, GEO, or PLN prefix
 - Recommended supplementary courses: CHM 105(5) or CHM 160(4); AGA 215(3); BIO 122(4); GRY 597(1-5). Students should select a minor in science, mathematics, agriculture, or an approved personalized minor.
 - c. Geotourism (26 hours)
 - 1. GRY 108(3), 308(3), 310(3), 328(3), 410(3), 470(2), 510(3); HRA 340(3)
 - Complete a minimum of 3 hours from the following: GLG 171(4); GRY 301(3), 305(3), 318(3), 320(3), 321(3), 322(3), 323(3), 353(2), 399(1-3); PLN 100(3), 372(3), 573(3), 574(3), 599(1-3)
 - Recommended supplementary courses: any additional courses in subsection 2 or 3, plus any of the following: AGF 121(2); ART 271(3); HRA 210(3), 428(3), 430(3); JRN 270(3); MKT 150(3); PHI 302(3); PLS 232(3); REC 152(3), 303(3); THE 101(3)



Department	Geography, G	ieology, ar	nd Planning		Date	Augus	t 30, 2013		
Title of Program	Affected	Geospa	atial Science	s B.S. (Comp	reh <u>ensive</u>)			
Major Compr	ehensive Major <u>X</u>	Option	Minor	Certificate	_ Certificat	ion	Academic Rule	es	Other
Present Catalog I (Cut and paste from	Description n web catalog or use mo	st recent desc	ription.)	Revised Car (Cut and pas bold new inf		otion again, stri	kethrough all del	letions, a	and insert and
See Attack	nment A.			See A	Attachmen	t B.			
Title change X Course chan	ges of under 18 hoges of 18 hours or	urs	From pr	tion to progra ogram (major or option del) to option		Other		
REASON FOR PRO	OPOSED CHANGE								
To streamli potential st	ne the curriculum udents.	of this co	mprehensiv	e major to n	nake it mo	re attra	ctive to a wi	ider au	ıdience of
COMPLETE NEW	CATALOG INFORM	I ATION (Ty	ped)						
See Attachi	ment C ₂							•	
•				·		Tota	l Hours <u>59</u> -	-63 (fro	<u>m 65-68)</u>
signed forms to If the program n council/ commit		g (please o	heck all that n one commit	apply and ser tee/council,	nd to first o forward on	ouncil/o e additi	ommittee m onal form for	arked) r each :	additional
X College Co	ouncil		(Send all und before forwa	ergraduate pro rding either to	gram chang PEC, CGEIP,	es throug or directi	h College Cour y to Faculty Se	nate)	rst step
Profession	nal Education Comm	ittee	(Considers al Specialist de	l program chan grees)	iges affecting	g BS and I	VIS in Educatio	n and E	ducational
	e on General Educat ate Programs	on and	(Considers al	general educa	ation and mu	ilti-colleg	e program cha	nges)	
Graduate	Council		(Considers al	l graduate-leve	el program cl	nanges)	•	^	
Signature _	Thomas	181	note		Date		1/24/2	/ <u>'0 / 3</u>	,
	Departme	ent Head	/ (Rou	— ting on Reverse S	Side)	'/	FS Program C	hange -	9/10/2010



Attachment A—Present Catalog Description

Geospatial Sciences (Comprehensive)

Bachelor of Science

- A. General Education Requirements see General Education Program and Requirements section of catalog
- B. Major Requirements (65-68 hours)
 - GRY 100(3) or 108(3); GRY 142(4) or GLG 110(4); GRY 275(3); GRY 300(3) or 301(3) or 305(3); GRY 360(3), 363(4), 367(3), 470(2), 498(1); GEO 551(3), 561(3), 562(3), 566(3), 568(3), 572(3); CSC 121(3) or CSC 125(4) or CIS 260(3); MTH 181(3) or 138(5); AGR 330(3) or MTH 340(3) or PSY 200(3) or QBA 237(3) or REC 328(3) or SOC 302(3)
 - Complete 12 additional hours from the following: GRY 300(3) or 301(3) or 305(3); GRY 320(3), 321(3), 322(3), 323(3), 348(3), 351(3), 375(3), 377(3), 379(3), 507(3), 525(3); GEO 573(3), 575(3), 578(3); TCM 110(3), 313(3); MTH 261(5) or 287(3); MTH 280(5) or 288(3); CIS 230(3), 270(3), 321(3), 326(3), 528(3); CSC 131(3), 232(3), 335(3), 525(3). NOTE: Students who select a surveying emphasis must take GRY 375(3), 377(3), 379(3).
- C. General Baccalaureate Degree Requirements see General Baccalaureate Degree Requirements section of catalog

Attachment B—Revised Catalog Description

Geospatial Sciences (Comprehensive)

Bachelor of Science

- A. General Education Requirements see General Education Program and Requirements section of catalog
- B. Major Requirements (65-68 59-63 hours)
 - 1. GRY 100(3) or 108(3) or PLN 100(3)
 - 2. GRY 142(4) or GLG 110(4)
 - 3. GRY 275(3) or 348(3) or 351(3)
 - 4. GRY 300(3) or 301(3) or 305(3) or 320(3) or 321(3) or 322(3) or 323(3)
 - 5. GRY 301(3) or 353(2) or 470(2)
 - 6. GRY 360(3), 363(4), 367(3), 470(2), 498(1)
 - 7. GEO 551(3), 561(3), 562(3), 566(3), 568(3), 572(3)
 - 8. CSC 121(3) 130(3) or CSC 125(4) or CIS 260(3); MTH 181(3) or 138(5)
 - 9. AGR 330(3) or MTH 340(3) or PSY 200(3) or QBA 237(3) or REC 328(3) or SOC 302(3)
 - 10. Complete 3 additional hours with GEO prefix
 - 11. Complete 42 <u>6</u> additional hours from the following: GRY <u>courses numbered 300 or above</u> 300(3) or 305(3); GRY 320(3), 321(3), 322(3), 323(3), 348(3), 351(3), 375(3), 377(3), 379(3), 507(3), 525(3); GEO 573(3), 575(3), 578(3); TCM 110(3), 313(3); MTH <u>138(5)</u>, 181(3), 261(5) or 287(3), 310(3), 310(3), 326(3), 528(3); CSC 131(34), 232(3), 335(3), 525(3)

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

C. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog



Attachment C—Complete New Catalog Description

Geospatial Sciences (Comprehensive)

Bachelor of Science

- A. General Education Requirements see General Education Program and Requirements section of catalog
- B. Major Requirements (59-63 hours)
 - 4. GRY 100(3) or 108(3) or PLN 100(3)
 - 2. GRY 142(4) or GLG 110(4)
 - 3. GRY 275(3) or 348(3) or 351(3)
 - 4. GRY 300(3) or 305(3) or 320(3) or 321(3) or 322(3) or 323(3)
 - 5. GRY 301(3) or 353(2) or 470(2)
 - 6. GRY 360(3), 363(4), 367(3), 498(1)
 - 7. GEO 551(3), 561(3), 562(3), 566(3), 568(3), 572(3)
 - 8. CSC 130(3)
 - 9. AGR 330(3) or MTH 340(3) or PSY 200(3) or QBA 237(3) or REC 328(3) or SOC 302(3)
 - 10. Complete 3 additional hours with GEO prefix
 - 11. Complete 6 additional hours from the following: GRY courses numbered 300 or above; TCM 110(3); MTH 138(5), 181(3), 261(5) or 287(3), 280(5) or 288(3); CSC 131(4), 335(3)

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

C. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog



FS Program Change - 9/10/2010

Department Geography, Geology, and	d Planning		Date	Augus	t 30, 2013	
Title of Program Affected Geograp	hy Minor					
Major Comprehensive Major Option Present Catalog Description (Cut and paste from web catalog or use most recent description)	Minor <u>X</u>	(Cut and pa	Certificat atalog Description attended description aformation.)	ption	Academic Rules, ethrough all deletion	Other
Geography Bachelor of Arts Bachelor of Science Bachelor of Science in Education (Non-Certifiab A. GRY 100(3), 142(4), 321(3), 351(3) B. Additional upper divisional electives in GRY PLN to total at least 18 hours.		Geograph Bachelor Bachelor Bachelor A. GRY B. Add	of Arts of Science of Science in 100(3), 142	(4), 321(2 r division	on (Non-Certifiab 3), 351(3), 363(4) al electives in GR	,
What is changing? Check all boxes that apply. Title change X Course changes of under 18 hours Course changes of 18 hours or more	From p	tion to progr ogram (majo or option de	or) to option		Other	
REASON FOR PROPOSED CHANGE						
 Require GRY 363 (Introduction to Geospatial (Conservation of Natural Resources). Reason geography and related disciplines. Reduce the total number of hours from 18 to list is 11 hours. Most of our upper division e to 17 hours. 	n: to reflec o 17. Reasc	t the growing on: with the	g importance addition of (e of Geog SRY 363(4	raphic Information 4), the total in the	on Systems in
COMPLETE NEW CATALOG INFORMATION (Type	ed)					
Geography Bachelor of Arts Bachelor of Science Bachelor of Science in Education (Non-Certifiable A. GRY 100(3), 142(4), 363(4) B. Additional upper divisional electives in GRY,		N to total at	least 17 hou	ırs.		
			•	Total I	Hours 17 (chan	ge from 18)
DEPARTMENT: Route according to ART VI, SEC signed forms to one of the following (please che if the program needs to go through more than council/ committee marked.	eck all that	apply and se	end to first c	nate. For ouncil/co	ward <u>three</u> typed ommittee marked	d, originally d).
					College Council as to Faculty Senate)	
	(Considers al Specialist dep		nges affecting	g BS and M	1S in Education and	Educational
Committee on General Education and Intercollegiate Programs	(Considers al	l general educ	ation and mu	lti-college	program changes)	
Graduate Council	(Considers al	l graduate-lev	el program ch	nanges)	/ /	
Signature Department Head	rote	·	Date	9/	24 201 <u>-</u>	3

(13)

Missouri State University Curricular Proposal Program Change or Deletion

Department	Geography,	Geology, a	nd Planning		Date	August 30, 2013	
•							
Title of Program A	Affected	Georg	urism Minor		-		
Major Compre	ehensive Major	Option	Minor_X_	Certificate	Certificatio		sOther
Present Catalog D (Cut and paste from	escription		scription.)	(Cut and pa	atalog Descript ste description ag iformation.)	ion gain, strikethrough all del	etions, and insert and
Geotourism				Geotouri	sm		
Bachelor of Arts				Bachelor			
Bachelor of Scie					of Science		
	, 308(3), 310(3),	328(3), 410	(3)			<u>),</u> 308(3), 310(3), 328	3(3), 410(3)
B. HRA 340(3)				B. HRA	340(3)	rlap, this minor can	not he used by
, ,	•			Because	of course ove	Geotourism option	in the B.S. major
				Geograp		OLOCOUNIST PROPERTY	
	<u> </u>			<u> 9008:57</u>	1.2.		
What is changing	? Check all boxe	s that apply				0.4	
Title change			From op	tion to progr	ram (major)	Other	
X Course chan	ges of under 181	hours	From pr	ogram (maj	or) to option		
Course chan	ges of 18 hours of	or more	Program	or option de	eletion		
REASON FOR PRO	DOSED CHANG	F					
Custoinability is	an integral nar	t of the Ge	otourism app	roach to to	urism develo	opment, and GRY 1	.08 will provide
the basic conce	nte		0.000				
the pasic conce	pts.						
COMPLETE NEW	CATALOG INFOR	RMATION (T	yped)				
	•						
Geotourism	•						
Bachelor of Art	s						
Bachelor of Scie							
), 308(3), 310(3	3), 328(3), 4	110(3)				
	1						
Because of cou	, rse overlap, thi	s minor car	nnot be used	by student	s selecting th	ne Geotourism opt	ion in the B.S.
major in Geogr	aphv.			-			
major in ocog.	~ p.,,,						Total Hours <u>18</u>
	one of the follow eeds to go thro	محمداسا حمضه	sabaak ali that	onniv and 9	end to tirst ci	ate. Forward <u>three</u> ouncil/committee m e additional form fo	aircuj.
X College Co	ouncil		(Send all un before forw	dergraduate parding either	orogram change to PEC, CGEIP, (es through College Cou or directly to Faculty So	ncil as first step enate)
Profession	nal Education Com	nmittee	(Considers a Specialist de		anges affecting	BS and MS in Education	on and Educational
	e on General Edu iate Programs	cation and	(Considers a	all general edu	ucation and mu	lti-college program cha	anges)
	~		(Considers a	all graduate-le	evel program ch	nanges)	
Graduate	Council		100				
Graduate	Council		_ /1			1. 1	•
Graduate	Council	18			· ·		·
Graduate Signature	Thomas	481	Jak.		Date	9/24/2	6/3



Department Geography, Geology	, and Planning	Date	August 30, 2013	
Title of Program Affected Glo	bal Studies Min	or	•	
Major Comprehensive Major Option	Minor_ X	Certificate Certificati	on Academic Rules	Other
Present Catalog Description (Cut and paste from web catalog or use most recent	description.)	Revised Catalog Description a (Cut and paste description a bold new information.)	t ion Igain, strikethrough all deletion	ns, and insert and
Global Studies		Global Studies	_	
Bachelor of Arts		Bachelor of Arts		•
Bachelor of Science		Bachelor of Science		
A. GRY 100(3); GRY 320(3) or 323(3); GR	(Y 363(4) or	A. GRY 100(3); GRY GRY 363(4) or 36	305(3); GRY 320(3) or <u>32</u>	<u>21(3) or</u> 323(3
367(3) B. Nine additional hours in regional geo	granhy courses:	1	गराजा ours in regional geograp	hy courses
GRY 305(3), 308(3), 316(3), 507(3). N		at .	RY 305(3), 308(3), 316(3)	•
is a variable content course that may			07(3). Note: GRY 305(3)	
with new content.		content course th	nat may be repeated wit	h new conten
			erlap, this minor cannot	
			<u>e Cultural & Regional Ge</u>	eography opti
	· · · · · · · · · · · · · · · · · · ·	in the B.S. major in G	eography.	
Vhat is changing? Check all boxes that app Title change Course changes of under 18 hours Course changes of 18 hours or more	From op From pr	on to program (major) ogram (major) to option or option deletion	Other	<u>-</u>
EASON FOR PROPOSED CHANGE				
he global studies minor emphasizes global Introduction to Geospatial Science) or GRY			chnical skills taught in G	RY 363
OMPLETE NEW CATALOG INFORMATION	(Typed)			
Global Studies Bachelor of Arts Bachelor of Science A. GRY 100(3); GRY 305(3); GRY 320(3) or	321(3) or 323(3)			
Nine additional hours in regional geogr 323(3), 507(3). Note: GRY 305(3) is a valecause of course overlap, this minor cannot	aphy courses sele riable content co	urse that may be repeate	ed with new content.	
B.S. major in Geography.	·	-		l Hours 18
.				
DEPARTMENT: Route according to ART VI, igned forms to <u>one</u> of the following (pleas f the program needs to go through more to ouncil/ committee marked.	e check all that	pply and send to first co	uncil/committee marke	d).
X College Council		rgraduate program changes ding either to PEC, CGEIP, o		
Professional Education Committee	(Considers all Specialist deg	orogram changes affecting l ees)	BS and MS in Education and	d Educational
Committee on General Education and Intercollegiate Programs	(Considers all	general education and mult	i-college program changes)	
Graduate Council	(Considers all	graduate-level program cha	nges)	
signature Thomas G	Mante	Date	9/24/201	/3
Department Head	- (Rout	ng on Reverse Side)	FS Program Change	- 9/10/2010



Department Geography, Geolog	gy, and Planning	, <u>, , , , , , , , , , , , , , , , , , </u>	Date Aug	gust 30, 2013	· · · · · · · · · · · · · · · · · · ·	
Check one: This is a change to _>	C an existing COURSE					
	an existing REGULAR	(i.e. permanent	t) SECTION of	a variable conte	ent course	
Present Catalog Description (Cut and paste from web catalog or use most	recent description.)	Revised Catalog Description (Cut and paste description again, strikethrough all deletions, and insert and bold new information.)				
GLG 340 Structural Geology Prerequisite: GLG 314 and GLG 333; MTH 181. Recommended Prerequisit Elementary theory of stress and strair continuous structures, fracture theory and kinematics of plate motion. A gra- required in this course in order to take may not be taken Pass/Not Pass. 4(3)	e: PHY 123 or PHY 203. n, rock behavior, discontinuous structures de of "C" or better is e GLG 413. This course	GLG 340 Struct Prerequisite: GL and either MTH PHY 123 or PHY behavior, continustructures and k	LG 314 and GLG 138 or MTH 18 Y 203. Elementa nuous structures kinematics of pla is course in orde	G 333 or concurred. Recommended ary theory of stress, fracture theory, cate motion. A gradier to take GLG 413 ss. 4(3-2)-F. S.	Prerequisite: s and strain, rock discontinuous e of "C" or better	
What is changing? Check all boxes tha	at apply.					
□Course Deletion □Course Course Cour	ode □Course N	umber □T	Γitle :	X Prerequisite		
□Credit Hours/Contact Hours	X Periodici	ty 🗆 🛭	Description			
Reason for Proposed Change or Delet	ion					
Because of staffing limitations, it is necessary	ary to move GLG from Fall to S	Spring.				
How Did You Determine the Need For	This Change or Deletion?					
Since the prerequisite to GLG 340, GLG 333 This will preclude the necessity of adding a	3, is a Spring-only course, we a in additional year to course se	are now going to alk equence for many of	ow concurrent er f our geology maj	rollment in GLG 33 ors.	3 and GLG 340.	
COMPLETE NEW CATALOG INFORMAT	FION (typed)				-	
GLG 340 Structural Geology Prerequisite: GLG 314 and GLG 333 or or PHY 203. Elementary theory of stres kinematics of plate motion. A grade of " Pass/Not Pass. 4(3-2) S.	ss and strain, rock behavior	, continuous struct	tures, fracture th	neory, discontinuo	us structures and	
Check if this is a non-substantive cha Faculty Senate; 600- through 900-level courses: approval.	nge. Distribution for non-substar three originally-signed copies to	ntive changes of 100- t Graduate Council. Grad	through 500-level co duate Council will g	ourses: two originally- live two copies to Facu	signed copies to ulty Senate after	
Substantive Change: Department routes accord (please check all that apply and send to first couform for each additional council/committee man	ncil/committee marked). If propo	sal needs to go throug	gh more than one c	council/committee, for	of the following ward one additional	
X College Council	(All substantive course	changes numbered	! 100-599 must gc	o through College Co	ouncil first. After	
	approval, College Council will forward appropriate number of copies to the next committee/council or directly to the Faculty Senate if no further committee approval is needed. The last level of committee/council will forward two originally signed copies to the Faculty					
Professional Education Committee	Senate.) (Considers all substantive course changes for Professional Education courses and Teaching Methods courses.)					
Committee on General Education and Intercollegiate Programs	(Considers all substant proposals.)	ive course changes f	for General Educa	ation and Intercolle	giate Program	
Graduate Council	(Considers a) \$00-990	level course change	·s.)	, ,		
Signature // //	4 Styl-		Date	9/24/20	13	
Depártment Head	(Routing on Re	verse Side)		FS Course (Change - 9/10/2010	



Department Geography, Geology,	and Planning	<u></u>	Date	August 30, 2013
Check one: This is a change to X			.) 656710	61 - E - constabile resultant account
i kan kan salah salah Salah salah sa	an existing REGULAR	R (i.e. perm	anent) SECTIO	N of a variable content course
Present Catalog Description		Revised	Catalog Descri	ption
(Cut and paste from web catalog or use most rece	ent description.)	l .		, strikethrough all deletions, and insert and bold
		new informa		
GLG 412 Field Geology of the Midcon Prerequisite: GLG 314 and permission.	tinent Region	GLG 412	Field Geology o	of the Midcontinent Region d permission <u>either GLG 318 or GLG</u>
Regional geology of the Midcontinent inc	cluding the Ozark.		ncurrent enroll	
Wichita, Arbuckle, Ouachita and Boston	Mountains, and			lidcontinent including the Ozark, Wichita
associated basins. Introduction to geolog including the use of aerial photograph ar		Arbuckle,	Ouachita and Bo	oston Mountains, and associated basins eld methods including the use of aerial
cross-sections, and block diagrams in the				maps, cross-sections, and block
regional geologic history. Supplemental				tion of regional geologic history.
		Suppleme	ental course fee.	4(2-4) S.
What is changing? Check all boxes that a	apply.			
□Course Deletion , □Course Cod	e → □Course N	Number	□Title	X Prerequisite
©Credit Hours/Contact Hours	□Periodic	ity	Description	on
Reason for Proposed Change or Deletion	1 ·			
Experience over the past few years has indica		ace not provic	le sufficient genin	gic hackground for students to consistently
do well in the 6-contact-hour field course.	ted (liat GLG 514 alone do	bes not provid	e sumetern Beolo	Sic packground for students to consistently
How Did You Determine the Need For Th	his Change or Deletion	?		
GLG 412 serves two primary audiences: B.S. n	najors in Geology and B.S.	Ed. majors in	Earth Science Edu	cation. The Geology majors typically take
our GLG 332-333 sequence immediately after	completing GLG 314; the	Earth Science	Education majors	s typically take GLG 318 immediately after
completing GLG 314. This change in prerequi maturity" before attempting the GLG 412 field		iuaiences wiii	nave approximate	217 the same minimum level of geologic
[개통] [1] [1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1				
COMPLETE NEW CATALOG INFORMATIO	IN (typed)	1		
GLG 412 Field Geology of the Midconti		(!!	4	
Prerequisite: GLG 314 and either GLG 31 Regional geology of the Midcontinent inclu	uding the Ozark. Wichita	a. Arbuckle.	Ouachita and Bo	oston Mountains, and associated basins.
Introduction to geologic field methods incl	luding the use of aerial p	ohotograph a	ınd geologic map	os, cross-sections, and block diagrams in
the interpretation of regional geologic history	ory. Supplemental cours	se tee. 4(2-4) S.	
Check if this is a non-substantive change	e. Distribution for non-substi	antive changes	of 100- through 500	-level courses: two originally-signed copies to
Faculty Senate; 600- through 900-level courses: thr	ee originally-signed copies to	Graduate Cou	ncil. Graduate Counc	cil will give two copies to Faculty Senate after
e approval.			•	
Substantive Change: Department routes according	to ART VI, SEC 3B(1-4) of Byl	aws of the Fact	ilty. Forward three o	originally signed forms to <u>one</u> of the following
(please check all that apply and send to first counci	d. See Senate Action 11-93/9	oosai needs to E 14 for definition	s of substantive/nor	n-substantive changes.
의 개발한 기계 (1995년 - 1915년 - 1915 - 1915년 - 1917년 - 1917				
X College Council				nust go through College Council first. After
	approval, College Council will forward appropriate number of copies to the next committee/council or directly to the Faculty Senate if no further committee approval is needed.			
				originally signed copies to the Faculty
	Senate.)			
Professional Education Committee		ntive course c	nanges for Profess	sional Education courses and Teaching
Committee on General Education	Methods courses.)	ntive course c'	hanges for Genera	al Education and Intercollegiate Program
and Intercollegiate Programs	proposals.)	TEIVE COURSE C	anges to: octrara	Tadadation and materials against 1 to great
Graduate Council	(Considers all 600-900	0 level course	changes.)	_ / /
Signature Thomas G	(Whate		Date	9/24/2013
Départment Head				
	(Routing on I	Reverse Side)		FS Course Change - 9/10/2010



Department Geography, Geology,	and Planning	<u></u>	Date	August 30, 2013	
Check one: This is a change to X	on existing COURSE				
	-	R (i.e. perman	ent) SECTION	of a variable content course	
		- ₁			
Present Catalog Description (Cut and paste from web catalog or use most reco	ent description \		talog Descript	ION trikethrough all deletions, and insert and bold	
Acut and paste from web catalog of use most reco	ent descriptions;		new information.)		
GLG 570 Principles of Stratigraphy			nciples of Stra		
Prerequisite: GLG 314. Recommended				emmended Prerequisite: and GLG edges of the deposition of sediments;	
Principles underlying the deposition of s environmental control of lithofacies and				ofacies and biofacies; recognition of	
ancient depositional environments by ke				ments by key indicators and modern	
modern analogs. May be taught concurr				currently with GLG 670. Cannot	
Cannot receive credit for both GLG 670	and GLG 570. 4(3-2) F.	receive credi	t for both GLG	670 and GLG 570. 4(3-2) F.	
What is changing? Check all boxes that a	apply.				
□Course Deletion □Course Cod	• • •	lumber	□Title	X Prerequisite	
☐Credit Hours/Contact Hours	□Periodici		□ Description	•	
		ity	- Description	•	
Reason for Proposed Change or Deletion		•		·	
Experience over the past few years has indica				sufficient practice in the identification ar	
classification of sedimentary rocks to do well	in GLG 570. Those topics	are emphasized i	n GLG 333.		
How Did You Determine the Need For T	his Change or Deletion?	þ			
Experience over the past few years has indica	ited that GLG 314 does not	t provide our ged	logy majors with	sufficient practice in the identification as	
classification of sedimentary rocks to do well				at the first product of the factor of	
COMPLETE NEW CATALOG INFORMATION	ON (typed)				
GLG 570 Principles of Stratigraphy				•	
Prerequisite: GLG 314 and GLG 333. Prir					
biofacies; recognition of ancient depositio GLG 670. Cannot receive credit for both (modern analog	s. May be taught concurrently with	
GLG 670. Cannot receive credit for both C	SEG 6/0 and GEG 5/0.	4(3- <i>2)</i> F.			
Check if this is a non-substantive chang	e. Distribution for non-substa	antive changes of 1	00- through 500-le	vel courses: two originally-signed copies to	
Faculty Senate; 600- through 900-level courses: thr	ree originally-signed copies to	Graduate Council.	Graduate Council v	will give two copies to Faculty Senate after	
approval.	**************************************				
Substantive Change: Department routes according					
(please check all that apply and send to first counci- form for each additional council/committee marke					
				-	
X College Council	•	-		st go through College Council first. After	
				ber of copies to the next	
		•		o further committee approval is needed. iginally signed copies to the Faculty	
	Senate.)	mittee/council wi	11 101 Wala 2000 01	igniany signed copies to the ractity	
Professional Education Committee		tive course chan	ges for Profession	nal Education courses and Teaching	
	Methods courses.)				
Committee on General Education		tive course chan	ges for General E	ducation and intercollegiate Program	
and Intercollegiate Programs	proposals.)	•			
Graduate Council	(Considers all 600-900	Mevel course cha	inges.)		
	//// 1	/	- /	2/01/2002	
Signature / Chomas C	2 Mayufe	<u> </u>	Date	7/29/2013	
Department Head	' - / /			7 1/2	
基金的 1000 1000 1000	(Routing on R	leverse Side)		' FS Course Change - 9/10/2010	



Department Geography, Geology	, and Planning		Date	August 30, 2013	<u> </u>	
Check one: This is a change to X	_an existing COURS	SE		,		
Company of the Compan			nanent) SECTIO	N of a variable content	course	
GRY 308 Geography of World Tourism A systematic description and analysis of the world's major tourism destination regions including coastal zones, alpine areas, interior lakes and waterways, cities, and cultural attractions. Geographic and economic factors affecting the development of tourism regions are considered. 3(3-0) F,S.		(Cut and paste	Revised Catalog Description (Cut and paste description again, strikethrough all deletions, and insert and bold new			
		information.) GRY 308 Geography of World Tourism A systematic description and analysis of the world's major tourism destination regions including coastal zones, alpine areas, interior lakes and waterways, cities, and cultural attractions with special emphasis on World Heritage sites. Case studies will examine the role local communities play in the sustainable development of sites with special natural and/or cultural value. 3(3-0) F,S.				
What is changing? Check all boxes that	apply.	· · · · · · · · · · · · · · · · · · ·				
□Course Deletion □Course Coc □Credit Hours/Contact Hours		e Number licity	□Title X Description	□ Prerequisite on		
Reason for Proposed Change or Deletion	n ·					
This course was originally structured as an ex is more successful in one region of the world How Did You Determine the Need For T With an emphasis on World Heritage Sites, the	versus another. his Change or Deletion	on?				
sites, their cultural, heritage and natural impo	ortance to the communi	ities, and the im	pact of tourism fro	om both a positive and negative	ve perspective	
COMPLETE NEW CATALOG INFORMATIO	ON (typed)					
GRY 308 Geography of World Tourism A systematic description and analysis of t Case studies will examine the role local of value. 3(3-0) F,S.	he world's major touris	sm destination e sustainable d	regions with spe levelopment of si	cial emphasis on World He tes with special natural and	ritage sites. /or cultural	
Check if this is a non-substantive change Faculty Senate; 600- through 900-level courses: thr approval.	e. Distribution for non-sub ree originally-signed copies	stantive changes to Graduate Cou	of 100- through 500- ncil. Graduate Counc	ievel courses: two originally-signe il will give two copies to Faculty S	ed copies to enate after	
Substantive Change: Department routes according (please check all that apply and send to first counciform for each additional council/committee market	il/committee marked). If pr	oposal needs to g	o through more than	one council/committee, forward	e following l one additional	
X College Council	(All substantive course changes numbered 100-599 must go through College Council first. After					
	approval, College Council will forward appropriate number of copies to the next committee/council or directly to the Faculty Senate if no further committee approval is needed. The last level of committee/council will forward two originally signed copies to the Faculty Senate.)					
Professional Education Committee	(Considers all substa Methods courses.)	antive course ch	anges for Professi	onal Education courses and Te	eaching	
Committee on General Education and Intercollegiate Programs		antive course ch	anges for General	Education and Intercollegiate	Program	
Graduate Council	(Gongiders <i>jól</i> l 600-9	00 level course	changes.)	, /		
Signature Thought	Slote	~~~~	Date	9/24/2013		
Department Head	(Routing on	ı Reverse Side)		FS Course Chang	ge - 9/10/2010	



Department Geography, Geology, and	Planning	Date S	eptember 3, 2013
Check one: This is a change to X an e	-		
an e	existing REGULAR (i.e. pern	nanent) SECTION o	of a variable content course
Present Catalog Description	Revised Catalog Descrip	tion	
<u> </u>			ns, and insert and bold new information.)
GRY 310 Fundamentals of Tourism Geographical and recreational elements of tourism and travel including social, economic environmental and political factors. Career options will be identified. Students participate in tourism research projects. One field trip may be required. Team taught by Geography and Recreation and Leisure Studies faculty. Identical with REC 320. Cannot receive credit for both GRY 310 and REC 320. 3(3-0) F.	students participate in tourier Team taught by Geography with REC 320. Cannot rece analyzed from the academ principles, and theories fit marketing that greatly infi destination, marketing, de geographical elements ar	nal elements of tour nd political factors. (ism research project r and Recreation and pive credit for both G nic perspective. The rom disciplines sur luence the industry emand, and transpond the impact of tou	
		mat attempt to miti	gate negative results. 3(3-0) F.
What is changing? Check all boxes that apply			
□Course Deletion □Course Code	□Course Number	□Title	□ Prerequisite
☐ Credit Hours/Contact Hours	□Periodicity	X Description	
Reason for Proposed Change or Deletion		•	
This course was originally developed in conjur the two programs have grown and evolved, th The proposed change to the catalog description	ne role of these two courses has d	liverged; they have no	t been team-taught for over a decade.
How Did You Determine the Need For This Cl	hange or Deletion?		•
GRY 310 is taught from a geographic perspect UNWTO are utilized for research papers. The process. The current course content goes wel	course focuses on tourism develo	pment and all of the v	rganizations, such as the WTTC and the various actors that participate in the
COMPLETE NEW CATALOG INFORMATION (ty	yped)		
GRY 310 Fundamentals of Tourism Tourism is analyzed from the academic perspensive psychology, economics and marketing that great transportation. It connects the geographical eattempt to mitigate negative results. 3(3-0) F.	eatly influence the industry. The elements and the impact of touris	course covers the desi	tination, marketing, demand, and
Check if this is a non-substantive change. Dist Faculty Senate; 600- through 900-level courses: three or approval.			
Substantive Change: Department routes according to AR (please check all that apply and send to first council/comform for each additional council/committee marked. See	mittee marked). If proposal needs to	go through more than or	ne council/committee, forward one additiona
X_College Council (A	All substantive course changes nu	mbered 100-599 must	t go through College Council first. After
a co Ti	pproval, College Council will forw ommittee/council or directly to th	ard appropriate numb ne Faculty Senate if no	
Professional Education Committee (0		hanges for Profession	al Education courses and Teaching
Committee on General Education (0	,	hanges for General Ed	ucation and Intercollegiate Program
	Considers all 600,900 level course	changes.)	124/2012
Signature / / / / / / /	11 zuje	Date	1-1/213
Department Head	(Routing on Reverse Side)		/ FS Course Change - 9/10/2010



Department Geography, Geology, a	nd Planning	Date	September 3, 20	13
· · ·				
Check one: This is a change to X a	n existing COURSE		ION of a variable co	ntent course
	n existing REGULAR (i.e. permanent, scor	- Variable col	
Present Catalog Description		Revised Catalog Des (Cut and paste description a		ions and insort and hold
(Cut and paste from web catalog or use most	recent description.)	new information.)	gam, strikethrough an delet	
GRY 328 Principles of Geotourism Prerequisite: GRY 100 and GRY 310. From landscapes, habitats and species to the Olympics, the ways in which humans i explore the world leave indelible "footprint introduced to some of the key concepts are investigate and make sense of the role, significantly of a placeits environment, culture, aesther well-being of its residents. 3(3-0) S.	nteract, impact and s". The students will be nd methods used to gnificance and impact leographical character	GRY 328 Principles of Prerequisite: GRY 400 From landscapes, hab the Olympics, the way explore the world leave introduced to some of investigate and make of tourism that sustain of a placeits environment well-being of its reside	a 308 and GRY 310. Itats and species to gloss in which humans intered indelible "footprints". It the key concepts and resense of the role, significations, culture, aesthetic	ract, impact and The students will be methods used to ficance and impact graphical character
What is changing? Check all boxes that ap	ınlı	,		
□Course Deletion □Course Code □Credit Hours/Contact Hours			X Prerequisit	e .
Reason for Proposed Change or Deletion				
To more clearly illustrate the intended sequence	ing of the 300-level course	es required in our geotouri	sm programs.	
How Did You Determine the Need For Thi	s Change or Deletion?			
The students in the minor in Geotourism are no provided in GRY 308. In addition, GRY 308 prov parts of the Geotourism program.	o longer required to take G rides needed coverage of V	RY 100, but they will need Vorld Heritage Sites and to	the prerequisite knowle urism sustainability optic	dge of world regions ons, which are integral
COMPLETE NEW CATALOG INFORMATION	N (typed)			
GRY 328 Principles of Geotourism Prene such as the Olympics, the ways in which he introduced to some of the key concepts and tourism that sustains or enhances the geogleing of its residents.	umans interact, impact a d methods used to inves	nd explore the world lea tigate and make sense (ve indelible "footprints" of the role, significance	: The students will be and impact of
Check if this is a non-substantive change Faculty Senate; 600- through 900-level courses: thre approval.	. Distribution for non-substan e originally-signed copies to G	tive changes of 100- through iraduate Council. Graduate Co	500-level courses: two origi uncil will give two copies to	nally-signed copies to Faculty Senate after
Substantive Change: Department routes according to (please check all that apply and send to first council/ form for each additional council/committee marked	(committee marked). If propos	sal needs to go through more	than one council/committe	one of the following e, forward one additional
X College Council		changes numbered 100-59		
	approval, College Council will forward appropriate number of copies to the next committee/council or directly to the Faculty Senate if no further committee approval is needed. The last level of committee/council will forward two originally signed copies to the Faculty			
Professional Education Committee	Senate.) (Considers all substantive course changes for Professional Education courses and Teaching Methods courses.)			
Committee on General Education	(Considers all substanti proposals.)	ve course changes for Ger	neral Education and inter	collegiate Program
and Intercollegiate Programs				ſ
Graduate Council	Considers all 600-900	level course changes.)		/21/3
Signature / homes by	Mayote	Date	9/24/	2013
Department Head	(Routing on Re	verse Side)	/ FS Co	ourse Change - 9/10/2010



Missouri State University—Curricular Proposal Program Change Special Form for Identification of Public Affairs Capstone (PAC) Requirement

	ation	September 23, 2013
epartment/School		Date
BS and/or BAS in Hospitality and Re	staurant Administratio	n
tle of Major and Degree		
st the course(s) which will satisfy the 3- tle, and credit hours of each course.	-hour Public Affairs Caps	stone Experience. Be specific—include course code, course numbe
IRA 499 Internship in Hospitality, 6 of IRA 490 Advanced Hospitality Lead		
		•
nswer all following questions related t		-1
et .		above.
 Does the course(s) currently exist? If no, a new course proposal form n 	Enter yes or no. yes	ccompany this program change form.
If yes, a course change form must b	e submitted and accom	credit hours, description, etc.)? Enter yes or no. yes pany this program change form.
Is the course(s) currently required in	n the program for <i>all</i> stu	idents? Foter ves or no. Ves
If no, the program must be revised.	Attach a separate shee	t with 1) present catalog description; 2) revised catalog description
and 3) complete new catalog inform	nation specifying the PA	C Experience plus any other program changes related to the PAC.
. Will <u>all</u> sections of the course(s) sat	Penter yes or no. yes	
independent study courses will always	e section-specific. Note: avs be section-specific a	All service learning, study away, special topics, internships, and nd will require special handling through the degree audit system.
,		was warrequire special narroung through the degree addit system.
*		
Will a transfer equivalent of the cou Additional notes regarding any pote	urse(s) satisfy the PAC Ex	perience? Enter yes or no. Depends
Transfer equivalence will be made		
Transfer equivalence will be filed	de on a case-by-case	Jasis.
PARTMENT: Route according to APT V	I SEC 2B(1 4) of Bulgues	of the Faculty Senate. Forward three typed, originally signed fo
	that apply and send to f	irst council/committee marked).
one of the following (please check all		ouncil, forward one additional form for each additional council/
one of the following (please check all the program needs to go through more	than one committee/c	
<u>one</u> of the following (please check all t	than one committee/c	
one of the following (please check all the program needs to go through more	(Send all undergrad	uate program changes through College Council as first step before
one of the following (please check all the program needs to go through more marked.	(Send all undergrad forwarding either to	PEC, CGEIP, or directly to Faculty Senate)
one of the following (please check all the program needs to go through more mittee marked. College Council Professional Education Committee	(Send all undergrad forwarding either to (Considers all progr Specialist degrees)	o PEC, CGEIP, or directly to Faculty Senate) am changes affecting BS and MS in Education and Educational
one of the following (please check all the program needs to go through more muittee marked. College Council	(Send all undergrad forwarding either to (Considers all progr Specialist degrees)	PEC, CGEIP, or directly to Faculty Senate)
one of the following (please check all the program needs to go through more mmittee marked. College Council Professional Education Committee Committee on General Education and	(Send all undergrad forwarding either to (Considers all progr Specialist degrees) (Considers all gener	o PEC, CGEIP, or directly to Faculty Senate) am changes affecting BS and MS in Education and Educational

(Routing on Reverse Side)

FS Program Change - 9/10/2010





Check one: This is a change toX_				f
	an existing REGULAR	(i.e. permane	ent) SECTION o	f a variable content course
Present Catalog Description		Revised Ca	talog Descript	on
(Cut and paste from web catalog or use mos	st recent description.)	(Cut and paste bold new infor		rikethrough all deletions, and insert and
HRA 490 Advanced Hospitality Leadership Prerequisite: senior standing; and MTH 130 or h, 354 or concurrent enrollment; and Hospitality and Administration major. An in-depth investigation into leadership principle practices required of professionals in the hospita Credit hours: 3 Lecture contact hours: 3 Lab co	d Restaurant es and elity industry.	HRA 490 Adv Prerequisite: s 354 or concur. Administration An in-depth in practices requ This course is	anced Hospitality I enior standing; and rent enrollment; and major. restigation into lead ired of professionals ncludes a Public Ai	MTH 130 or higher; and HRA Hospitality and Restaurant ership principles and in the hospitality industry.
		Typically offered	: Fall, Spring	
What is changing? Check all boxes that a	nply.	<u> </u>		
□Course Deletion □Course Code	• • •	umber	⊐Title	□Prerequisite
□Credit Hours/Contact Hours	□Periodicit		X□Description	
How Did You Determine the Need For The Vote from Faculty Senate COMPLETE NEW CATALOG INFORMATIO HIRA 490 Advanced Hospitality Leadership Prerequisite: senior standing; and MTH 130 or high 354 or concurrent enrollment; and Hospitality and InAdministration major. An in-depth investigation into leadership principles practices required of professionals in the hospitality This course includes a Public Affairs component. Credit hours: 3 Leab conterprically offered: Fall, Spring X Check if this is a non-substantive chang faculty Senate; 600-through 900-level courses: threapproval.	N (typed) her; and HRA Restaurant and y industry. act hours: 0			
Substantive Change: Department routes according to please check all that apply and send to first councily				
orm for each additional council/committee marked		_	bstantive/non-subst	•
	(All substantive course of approval, College Counc committee/council or d The last level of commit Senate.)	for definitions of such anges number sil will forward apprectly to the Facted tee/council will	ed 100-599 must g opropriate number ulty Senate if no fi forward two origin	antive changes. o through College Council first. After
orm for each additional council/committee marked College Council	(All substantive course of approval, College Council or dominated the last level of commit Senate.) (Considers all substantive Methods courses.)	or definitions of such anges number cil will forward agirectly to the Factee/council will we course change	ed 100-599 must gopropriate number ulty Senate if no fo orward two origin as for Professional	antive changes. o through College Council first. After of copies to the next urther committee approval is needed. ally signed copies to the Faculty



DepartmentHospi	tality and Restaur	rant Administration	Dat	e September 2	3, 2013	
40 Carlos (1997) 40 Carlos (1997)						
Check one: This is a c						
	а	n existing REGULAR (i.e. p ern	nanent) SECTIO	N of a variable content c	ourse
Present Catalog Des	cription		Revise	d Catalog Desc	ription	
(Cut and paste from web	-	ecent description.)	(Cut and bold new	paste description againformation.)	ain, strikethrough all deletions, and	insert and
HRA 499 Internship in Hos Prerequisite: senior standing Administration major; and pure Supervised experience in a gain experience/exposure in positions during the internsh the internship and must work Credit hours: 6 Lecture con Typically offered: Upon demand	g; and Hospitality and F ermission. cooperative program in at least three lip. The student must b k a minimum of 750 hol	nospitality. Student must e paid for urs.	Prerequi Administ Supervis gain exp positions the interr a Public Credit ho	ration major; and pe ed experience in a c erience/exposure in during the internshi aship and must work Affairs component	; and Hospitality and Restaurant rmission. ooperative program in hospitality. at least three p. The student must be paid for a minimum of 750 hours. This co l	
What is changing? Chec	k all boxes that ap	ply.				
□Course Deletion	□Course Code	□Course Nu	mber	□Title	□Prerequisite	
☐Credit Hours/Contac	t Hours	□Periodicity		X□Descript	ion	
Reason for Proposed Ch This course is identified as i	ange or Deletion					
How Did You Determine Vote from Faculty Senate.	the Need For This	Change or Deletion?				
COMPLETE NEW CATALO HRA 499 Internship in Hosp Prerequisite: senior standing; Administration major; and pen Supervised experience in a co positions during the internship the internship and must work a Credit hours: 6 Lecture conta Typically offered: Upon demand	itality and Hospitality and Re mission. operative program in h o. The student must be a minimum of 750 hour	estaurant nospitality. Student must gain paid for s. This course includes a Pul			t three	
Faculty Senate; 600- through 9 approval.	00-level courses: three	originally-signed copies to Gr	aduate Cou	ncil. Graduate Coun	O-level courses: two originally-sign cil will give two copies to Faculty Se	enate after
Substantive Change: Departm (please check all that apply and form for each additional counc	d send to first council/c	ommittee marked). If proposa	el needs to	go through more tha	originally signed forms to <u>one</u> of the n one council/committee, forward n-substantive changes.	; following one additional
College Council		approval, College Council committee/council or di. The last level of committee.)	I will forw rectly to tl tee/counc	ard appropriate nume Faculty Senate i il will forward two	nust go through College Counci umber of copies to the next f no further committee approve originally signed copies to the F	al is needed. Faculty
Professional Educatio Committee on Genera		Methods courses.)			ional Education courses and Te I Education and Intercollegiate	
and Intercollegiate Pr		proposals.)				
Graduate Council	4/	(Considers all 600-900 le	vel course	changes.)		
Signature Jupit	auie Head	iii		Date	9-23-13	



Missouri State University Curricular Proposal Program Change or Deletion

Department Mathematics	-		Date	3/5/2013	······································
Title of Program Affected BSED, Seconda	ary Ed., Math Are	a			
Major_x Comprehensive Major Option Present Catalog Description	n Minor	Certificate	Certification	Academic Rules	Other
(Cut and paste from web catalog or use most recent	description.)			strikethrough all deletion	s, and insert and
					-
Attachment A	•	Attac	hment B		
			÷		
	,				
What is changing? Check all boxes that app Title change Course changes of under 18 hours Course changes of 18 hours or more	From opt	ion to progran rogram (majo or option dele	r) to option	Other Requireme	nts
REASON FOR PROPOSED CHANGE CSC 130, as the initial programming course, CSC 130.	is more appropria	ate for the BS	ED in Mathemati	is. CSC 131 now ha	s prerequisite
COMPLETE NEW CATALOG INFORMATION (Typed)				
Attachment C					
				•	
		l			
				Total Hours 79	75 125
DEPARTMENT: Route according to ART VI, signed forms to <u>one</u> of the following (please if the program needs to go through more the council / committee marked.	e check all that a	pply and send	to first council/	committee marked).
X College Council	•	-	_	gh College Council as t ly to Faculty Senate)	first step
X Professional Education Committee	(Considers all p Specialist degre		s affecting BS and	MS in Education and	Educational
Committee on General Education and Intercollegiate Programs	(Considers all g	eneral educatio	on and multi-colleg	ge program changes)	
Graduate Council	(Considers all g	raduate-level p	rogram changes)		
Signature Mar Grung			Date 3/5/0	2013	

(Routing on Reverse Side)

FS Program Change - 9/10/2010



Attachment A

Mathematics

Bachelor of Science in Education (Certifiable grades 9-12)

A. General Education Requirements - see General Education Program and Requirements section of catalog

B. Major Requirements

1. MTH 261(5), 280(5), 302(3), 315(3), 345(3), 460(3), 497(1), 532(3), 533(3), 575(3)

2. Select two courses from: MTH 503(3), 536(3), 540(3), 567(3)

3. Courses required from related areas: CSC 121(3) or 125(4) or 131(4); PHY 123(4) or 203(5)

C. Professional Education Requirements

1. MTH 409(3), 410(3), 493(5-6), 494(5-6)

2. Professional Education Required Core and Competencies - see <u>Teacher Certification</u>, <u>Teacher Education Program and Secondary Education Requirements</u> section of catalog

Attachment B

Mathematics

Bachelor of Science in Education (Certifiable grades 9-12)

A. General Education Requirements - see General Education Program and Requirements section of catalog

B. Major Requirements

1. MTH 261(5), 280(5), 302(3), 315(3), 345(3), 460(3), 497(1), 532(3), 533(3), 575(3)

2. Select two courses from: <u>MTH 503(3)</u>, <u>536(3)</u>, <u>540(3)</u>, <u>567(3)</u>

3. Courses required from related areas: <u>CSC 121(3)</u> or <u>125(4)</u> or <u>131(4)</u> 130 (3); <u>PHY 123(4)</u> or <u>203(5)</u>

C. Professional Education Requirements

1. MTH 409(3), 410(3), 493(5-6), 494(5-6)

2. Professional Education Required Core and Competencies - see <u>Teacher Certification, Teacher Education Program</u> and Secondary Education Requirements section of catalog

Attachment C

Mathematics

Bachelor of Science in Education (Certifiable grades 9-12)

A. General Education Requirements - see General Education Program and Requirements section of catalog

B. Major Requirements

1. MTH 261(5), 280(5), 302(3), 315(3), 345(3), 460(3), 497(1), 532(3), 533(3), 575(3)

2. Select two courses from: MTH 503(3), 536(3), 540(3), 567(3)

3. Courses required from related areas: CSC 121(3) or 125(4) or 130(3); PHY 123(4) or 203(5)

C. Professional Education Requirements

1. <u>MTH 409(3)</u>, <u>410(3)</u>, <u>493(5-6)</u>, <u>494(5-6)</u>

2. Professional Education Required Core and Competencies - see <u>Teacher Certification</u>, <u>Teacher Education Program and Secondary Education Requirements</u> section of catalog

Missouri State University CURRICULAR PROPOSAL



NEW COURSE (or new REGULAR SECTION of an existing variable content course)

Department Mathematics	Date 08/26/13
	lew REGULAR (i.e. permanent) SECTION of an existing variable content course. If a new regular ourse, to what existing course is it to be attached?
PROPOSED CATALOG DESCRIPTION	
basic human nature on the develor to determine how each individu	course explore the impact of major historical events, the mores of various societies, and opment of mathematical knowledge. Parallels will be drawn to events in today's world hal can foster the global advancement of knowledge. The level of mathematical and fincoming students does not exceed the level of traditional high school courses.
PURPOSE OF COURSE	
	meet the Focus on Cultural Competency portion of the Public Affairs requirement for is intended to meet Goal 13 and Goal 14 of the MSU General Education Learning
General Goal (13): Stude	nts will be able to recognize and consider multiple perspectives and cultures.
General Goal (14): Stude	ents will be able to articulate their value systems, understand the ethical implication on those values, and develop skills consistent with having a positive impact on
RELATIONSHIP TO OTHER DEPARTMEN	NTS
This course could promote coll	aboration between the mathematics department and others, such as history and burse for the Public Affairs goal, it should have no negative impact on any currently
300a/05) and forward three typed, ori	T VI, SEC.3B(1-4) of Bylaws of the Faculty. Attach New Course Resource Information form (FS iginally signed forms to one of the following (please check all that apply and send to first urse needs to go through more than one council/committee forward one additional form for each.
XCollege Council	(All new course proposals numbered 100-599 must go through College Council first. After approval, College Council will forward appropriate number of copies to the next committee/ council or directly to the Faculty Senate if no further committee approval is needed.)
Professional Education Committee	(Considers all new courses affecting BS and MS in Education and Educational Specialist degrees)
X Committee on General Education and Intercollegiate Programs	(Considers all general education and multi-college new course proposals)
Graduate Council	(Considers all 600-, 700-, and 800-level new courses)
*If the course needs to go through more than	one council/committee, forward one additional form for each additional council/committee marked.
Signature Department Head	Date 9/26/013

(Routing on Reverse Side)

FS New Course - 9/10/2010

NEW COURSE RESOURCE INFORMATION



Date 11/29/12

C	ourse Number and Title MTH 121: Multicultural Views of History and Mathematics
A	nticipated Average Enrollment 60-100 students each spring semester Maximum Enrollment Limit 44
Fa	aculty Load Assignment 3 Equated Hours
1	Is another course being deleted? If so, give course number and title.
	No course is being deleted.
2	What will this course require in the way of:
	Additional library holdings? Several titles may be requested to increase the holdings in history of mathematics for the layman.
	Additional computer resources? None anticipated. Access to web-conferencing tool like Adobe Connect may be requested.
	Additional or remodeled facilities? None.
	Additional equipment or supplies? None.
	Additional travel funds? None.
	Additional facultygeneral vs specialized? None.
	Other additional expenses? None.
3	If additional faculty are not required, how will faculty be made available to teach this course?
	This course will be offered in the spring semester, when the numbers are lower in gen ed courses.
	List names of current faculty qualified to teach this course: All Mathematics Department faculty - ranked and instructors
4	What is the anticipated source of students for this course? (If from within the department, will students be taking this course in addition to or in place of other courses? If from outside the department, which courses in other departments would most likely be affected?)
	This would be one option for students to meet the Gen Ed requirement for Public Affairs.
5	Other comments:



MTH 121: Multicultural Views of History and Mathematics

Proposed Syllabus

Mrs. Patti Blanton

Office: Cheek 55M (northeast corner of the mezzanine)

Office Hours: as below or by appointment

MWF	
M	-
TR	

Office Phone: 417-836-5317

E-mail: pblanton@missouristate.edu

Type of Course: General Education - Breadth of Knowledge: Public Affairs Focus on Cultural

Competence

Prerequisite: None

Description: Students in this course explore the impact of major historical events, the mores of various societies, and basic human nature on the development of mathematical knowledge. Parallels will be drawn to events in today's world to determine how each individual can foster the global advancement of knowledge. The level of mathematical and historical knowledge expected of incoming students does not exceed the level of traditional high school courses.

Philosophy: In The Story of Mathematics, Richard Mankiewicz claims that "the evolution of science, philosophy and mathematics, all related, is far more important to the history of humanity than a parade of rulers and a procession of wars." Many people today have no comprehension of what this evolutionary process has entailed. To help our students experience mathematics, and human knowledge in general, as an ongoing endeavor of humankind, this course is designed to explore the evolution of mathematical knowledge within the context of the culture and ethics of the times. Mathematical history can show us how this development has been affected by geography, wars, religion, society's views on equity, and the perseverance of the human spirit and how our ethics and values of today can inhibit or encourage continued development of human knowledge. In our quest to reach this understanding, students will be guided and encouraged to seek out information from reliable sources and topical experts.

Purpose of the Course: Students can take this course to meet the Focus on Cultural Competency portion of the Public Affairs requirement for General Education. This course is intended to meet Goal 13 and Goal 14 of the MSU General Education Learning Goals:



- General Goal (13): Students will be able to recognize and consider multiple perspectives and cultures.
- General Goal (14): Students will be able to articulate their value systems, understand the ethical implication of their actions based on those values, and develop skills consistent with having a positive impact on individuals, groups, or communities.

Required Textbook: Mankiewicz, R., (2000). <u>The Story of Mathematics</u>, Princeton University Press.

Additional Course Materials: Along with the required textbook, the instructor and students will use written and on-line sources to explore particular topics in more depth and to enhance the cultural experience with visual and auditory experiences.

Learning Objectives and Assessment: This course meets the General Education Learning Goals as indicated below. These goals will be assessed through quizzes, exams, presentations and research papers. Data will be collected by instructors following departmental guidelines developed by the curriculum team for this course.

MSU Learning Goal	MTH 121 Learning Objectives
Cultural Competence (Goal 13)	Students will explore various events in the
#2: Understand, critically examine, and	history of mathematics, focusing on the
articulate key similarities and differences	culture of the times and how we can learn
between their own cultural practices and	from those situations to support the
perspectives and those of other cultures, past and present.	advancement of knowledge in our times.
Cultural Competence (Goal 13)	Students will explore the competitive side
#3: Identify the importance and best	of academic research as well as the
practices of developing skills for	occasional collaborations: Newton versus
working/interacting with others.	Leibniz; Tartaglia versus Cardano; Kepler
	and Brahe partnership; and, Einstein looks
	to the mathematicians of the day for
·	assistance and finds what he needs within
	the new field of Non-Euclidean Geometry.
	Students will then consider how they can
	best support the advancement of human
	knowledge through their own actions and
	how society can best collectively support
	such advancement.



Cultural Competence (Goal 13) #4: Analyze the role that different languages, cultures, institutions, and beliefs have in shaping individual and collective behavior.	Students will re-create Eratosthenes' approximation of the measure of the Earth in about 230 BCE and trace the development of knowledge related to our place in the universe. Attention will be given to the impact of religion on this topic and how humankind arrived at the point where the common person believed the earth to be flat. Then, students apply this to today's world – how do our current beliefs, cultures and institutions shape the development of human knowledge?
Ethical Leadership (Goal 14) #1: Engage in self-evaluation of their personal values and the degree to which their ethical values and behaviors are congruent.	As students have the opportunity to see the impact of cultural mores and human actions on the development of mathematics over its history, they will be asked to evaluate their own ethical values and anticipate the effect their values would have on the development of human knowledge.
Ethical Leadership (Goal 14) #3: Identify areas of difficulty in responding to situations demanding ethical inquiry.	Cultural bias, gender bias, and religious intolerance have all had a part in the history of mathematics. Students will explore the impact of these throughout history and the level to which they appear to still be affecting the development of human knowledge today. How can we respond to these same situations today?
Ethical Leadership (Goal 14) #4: Analyze complex ethical dilemmas facing the world.	Students will explore the adage: "knowledge is power" and determine its accuracy and relevance in today's world. Emphasis will be made on how students can help their world to best support the advancement of human knowledge.

Pedagogical and Topical Aspects of the Course: This course should be presented in a variety of contexts. It can be a blended course with students accessing factual information outside of class, then discussing and analyzing contexts within class. Virtual tours can be made to explore locations and artifacts. Guest experts from various departments across campus can present on specific topics.



Topics can include:

- contributions of major figures, such as: ancient Greek mathematicians, Archimedes, Gauss, and Newton
- 2. contents of important ancient texts such as the Rhind Papyrus or the Archimedes Codex
- 3. the fragility of an axiomatic system or why we have to prove everything
- 4. development of the Hindu-Arabic numeral system
- 5. mathematics related to wars
- 6. the impact of religion on the development of mathematical knowledge
- 7. mathematics developed to measure the earth and stars
- 8. the effects of gender bias throughout the development of mathematical knowledge
- 9. the effect of laws against homosexuality on the life of a mathematician who saved lives, and possibly countries in World War II
- 10. famous theorems and problems throughout history, such as: Eratosthenes' approximation of the circumference of the earth, Euclid's Fifth Postulate, the Pythagorean Theorem, Fermat's Last Theorem.

Attendance: Due to the nature of this course, attendance to each class is critical. Students should make every effort to be in attendance at each session. In the event that you must miss class, you should contact the instructor for any items that were distributed during class. You should also contact a classmate to get any missed notes. In the event that the absence occurred on the day of an exam or a presentation that you are making, see below.

Homework and Quizzes: Homework may be given during any lesson. Unless stated otherwise, it will be due at the <u>beginning of the class period</u> immediately following assignment. A student will be granted two late assignments throughout the entire course, but you must request a date be extended by e-mailing the instructor.

Daily quizzes will be given at the discretion of the instructor. There is no make-up available for any of these quizzes.

Exams and Presentations: There will be a midterm and a final exam, both of which are cumulative in nature. ATTENDANCE IS MANDATORY ON THE DAY OF AN EXAM OR PRESENTATION!! PLAN BACK-UP TRANSPORTATION/CHILDCARE/ALARMS!!!! If a make-up exam option is granted, that exam may be more rigorous than the original exam.



Requirements to qualify to take a make-up exam or make a late presentation:

- 1. The instructor must be notified of the absence by e-mail or by office phone PRIOR TO THE START OF THE EXAM! The notification must be made as early as possible in the event of a schedule conflict that cannot be resolved. If notification prior to the exam was not possible, proper notification verifying that impossibility must be provided.
- Documentation of absence MUST be provided! That documentation may include a doctor's
 notification indicating that the student was too ill to attend class that day; a note from a
 coach or faculty sponsor indicating a required school activity on that day; or a police report
 showing date and time of an occurrence that precludes attendance to class.
- 3. The **STUDENT** must initiate a request for a make-up exam or a time for a late presentation and either of these must be completed within one week of the missed in-class activity. Situations requiring extended time must be discussed with the instructor.

Grading: The course grade will be maintained in Blackboard and it is the student's right and responsibility to verify the accuracy of the entries. The grade is weighted according to the following scale:

Category	Percent of Course Grade
Homework and Quizzes	15%
Presentation/Project	20%
Research Paper	15%
Midterm Exam	20%
Comprehensive Final	30%
Total	100%



The course grade will be round to the nearest whole number and following grading scheme will be used:

Finallant	Α	93 to 100%
Excellent	A-	90 to 92%
Good	B+	87 to 89%
	В	83 to 86%
	B-	80 to 82%
Average	C+	77 to 79%
	С	73 to 76%
	C-	70 to 72%
Inadequate -	D+	67 to 69%
	D	60 to 66%
Unacceptable	F	Below 60%

Dates for Dropping: ______ is the deadline to drop or withdraw from a full semester class.

The action of dropping the class is the responsibility of the student!! If you stop attending this class but do not follow proper procedure for dropping the class, you will receive a failing grade and will continue all financial obligations.

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 Academic Integrity Policies and Procedures*, available at www.missouristate.edu/policy/academicintegritystudents.htm. You are also responsible for understanding and following any additional academic integrity policies specific to this class (as outlined below). Any student participating in any form of academic dishonesty will be subject to sanctions as described in this policy. If you are accused of violating this policy and are in the appeals process, you should continue participating in the class.

A current university student ID or valid photo driver's license will be required for the first exam. For purposes of test security, any student leaving the room during an exam will not be allowed to re-enter or to continue with the exam. On the day of the exam, if a student wears a hat, that hat must not have a bill that projects in front of the student's face. During any quiz or test, if a cell phone or a graphing calculator with CAS capability is present, when not specifically stated as allowed, the student will receive a zero on that assessment.



Nondiscrimination Policy: Missouri State University is an equal opportunity/affirmative action institution, and maintains a grievance procedure available to any person who believes he or she has been discriminated against. At all times, it is your right to address inquiries or concerns about possible discrimination to the Office for 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/.

Disability Accommodation Policy: To request academic accommodations for a disability, contact the Director of the <u>Disability Resource Center</u>, Plaster Student Union, Suite 405, (417) 836-4192 or (417) 836-6792 (TTY), <u>www.missouristate.edu/disability</u>. 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 <u>Learning Diagnostic Clinic</u>, which also provides diagnostic testing for learning and psychological disabilities. For information about testing, contact the Director of the <u>Learning</u> Diagnostic Clinic, (417) 836-4787, http://psychology.missouristate.edu/ldc.

Electronic Communication Devices: In respect of the learning environment, all pagers, cell phones and other electronic communication devices (not for assistance of a disabled student) must be turned off during class. *Entertainment media and all electronic communication devices are not allowed during instruction or testing times.* No video or audio recording of the lectures or conferences can be made without the prior knowledge of the instructor. In the case that a recording is needed, that record is solely for the use of that student and is not to be shared in any electronic media.

Emergency Response Information: Students who require assistance during an emergency evacuation must discuss their needs with their professors and Disability Services. If you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible.

For additional information, students should contact the Office of Disability Services at 836-4192 (PSU 405), or Larry Combs, Interim Assistant Director of Public Safety and Transportation at 836-6576. For further information on Missouri State University's Emergency Response Plan, please refer to the following website: http://www.missouristate.edu/safetran/erp.htm.