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| For Academic Affairs and Research Use Only | |
| CIP Code: |  |
| Degree Code: |  |

**Course Revision Proposal Form**

**[] Undergraduate Curriculum Council**

**[X] Graduate Council**

Signed paper copies of proposals submitted for consideration are no longer required. Please type approver name and enter date of approval.

Email completed proposals to [curriculum@astate.edu](mailto:curriculum@astate.edu) for inclusion in curriculum committee agenda.

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| David F. Gilmore 9/23/2019 **Department Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **COPE Chair (if applicable)** |
| Travis D. Marsico 9/24/2019 **Department Chair:** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Head of Unit (If applicable)** |
| John Hershberger 9/25/2019 **College Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Undergraduate Curriculum Council Chair** |
| Anne A. Grippo 10/4/2019 **College Dean** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Graduate Curriculum Committee Chair** |
| |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **General Education Committee Chair (If applicable)** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Vice Chancellor for Academic Affairs** |

1. Contact Person (Name, Email Address, Phone Number)

Dr. Lorin Neuman-Lee [lneumanlee@astate.edu](mailto:lneumanlee@astate.edu)

870-972-3111

2. Proposed Starting Term and Bulletin Year for Change to Take Effect

Spring 2020

3. Current Course Prefix and Number

BIO 5412

3.1 – **[YES]** Request for Course Prefix and Number change

If yes, include new course Prefix and Number below. *(Confirm that number chosen has not been used before. For variable credit courses, indicate variable range. Proposed number for experimental course is 9. )*

BIO 5313

3.2 – YES If yes, has it been confirmed that this course number is available for use?

*If no: Contact Registrar’s Office for assistance.*

4. Current Course Title

Herpetology

4.1 – **[No]** Request for Course Title Change

If yes, include new Course Title Below.

Enter text...

1. If title is more than 30 characters (including spaces), provide short title to be used on transcripts. *Title cannot have any symbols (e.g. slash, colon, semi-colon, apostrophe, dash, and parenthesis).*

Enter text...

1. Please indicate if this course will have variable titles (e.g. independent study, thesis, special topics).

Enter text...

5. – **[Yes ]** Request for Course Description Change.

If yes, please include brief course description (40 words or fewer) as it should appear in the bulletin.

Examination of the biology of amphibians and reptiles, with emphasis on evolutionary history, behavior, physiology, morphology, and ecology.

6. – [No ] Request for prerequisites and major restrictions change.

*(If yes, indicate all prerequisites. If this course is restricted to a specific major, which major. If a student does not have the prerequisites or does not have the appropriate major, the student will not be allowed to register).*

1. **Yes / No** Are there any prerequisites?
   1. If yes, which ones?

Enter text...

* 1. Why or why not?

Enter text...

1. **Yes / No** Is this course restricted to a specific major?
   1. If yes, which major? Enter text...

7. – [No ] Request for Course Frequency Change(e.g. Fall, Spring, Summer). *Not applicable to Graduate courses.*

a. If yes, please indicate current and new frequency:

Enter text...

8. – [No ] Request for Class Mode Change

*If yes, indicate if this course will be lecture only, lab only, lecture and lab, activity, dissertation, experiential learning, independent study, internship, performance, practicum, recitation, seminar, special problems, special topics, studio, student exchange, occupational learning credit, or course for fee purpose only (e.g. an exam)? Please* *indicate the current and choose one.*

Enter text...

9. – [No ] Request for grade type change

*If yes, what is the current and the new grade type (i.e. standard letter, credit/no credit, pass/fail, no grade, developmental, or other [please elaborate])*

Enter text...

10. Yes Is this course dual listed (undergraduate/graduate)?

a. If yes, indicate course prefix, number and title of dual listed course.

BIO 4412 Herpetology, to be changed to BIO 4313

Students enrolled in this course for graduate credit are required to meet with the instructor in the first two weeks of class. Each student will conduct a literature review on a topic that intersects herpetology and their own graduate research. The product from this literature review will be a presentation that will be given to the entire class at a date arranged by the instructor and the student. Students will be evaluated on their presentation skills as well as the quality of their review.

11. No Is this course cross listed?

*(If it is, all course entries must be identical including course descriptions. Submit appropriate documentation for requested changes. It is important to check the course description of an existing course when adding a new cross listed course.)*

**11.1** – If yes, please list the prefix and course number of cross listed course.

Enter text...

**11.2** – **Yes / No** Are these courses offered for equivalent credit?

Please explain. Enter text...

12. No Is this course change in support of a new program?

a. If yes, what program?

Enter text...

13. No Does this course replace a course being deleted?

a. If yes, what course?

Enter text...

14. No Will this course be equivalent to a deleted course or the previous version of the course?

a. If yes, which course?

Enter text...

15. No Does this course affect another program?

If yes, provide confirmation of acceptance/approval of changes from the Dean, Department Head, and/or Program Director whose area this affects.

Enter text...

16. Does this course require course fees?

*If yes: Please attach the New Program Tuition and Fees form, which is available from the UCC website.*

**Revision Details**

17. Please outline the proposed revisions to the course.

*Include information as to any changes to course outline, special features, required resources, or in academic rationale and goals for the course.*

A new instructor will present a broader and more in-depth examination of herpetology. This will include the physiology, behavior, and ecology. The course previously focused on identification and collection techniques. The content of the course will be made much more inclusive. Students will have lecture portions with class discussions and the identification and handling techniques will be moved to the laboratory portion of this course.

18. Please provide justification to the proposed changes to the course.

Increased content will better prepare the students and provide more opportunity to apply concepts learned in other courses. This will require an extra scheduled hour of instruction.

19. Yes Do these revisions result in a change to the assessment plan?

*\*If yes: Please complete the Assessment section of the proposal on the next page.*

*\*If no: Skip to Bulletin Changes section of the proposal.*

***\*See question 19 before completing the Assessment portion of this proposal.***

**Assessment**

**Relationship with Current Program-Level Assessment Process**

20. What is/are the intended program-level learning outcome/s for students enrolled in this course? Where will this course fit into an already existing program assessment process?

* Students will be able to understand that science is a process as well as a body of knowledge
* Students will be able to acquire the skills and knowledge needed for employment or advanced graduate study in discipline related areas.

21. Considering the indicated program-level learning outcome/s (from question #23), please fill out the following table to show how and where this course fits into the program’s continuous improvement assessment process.

*For further assistance, please see the ‘Expanded Instructions’ document available on the UCC - Forms website for guidance, or*

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| **Program-Level Outcome 1 (from question #23)** | * Students will be able to understand that science is a process as well as a body of knowledge |
| Assessment Measure | Masters of Science: Successful defense of thesis/dissertation  Masters of Arts: Successful completion of practicum II  Master of Science Education: Successful completion of program |
| Assessment  Timetable | Final Semester of degree |
| Who is responsible for assessing and reporting on the results? | The student’s committee and department chair are responsible for assessing this outcome. |
| **Program-Level Outcome 2 (from question #23)** | * Students will be able to acquire the skills and knowledge needed for employment or advanced graduate study in discipline related areas. |
| Assessment Measure | Masters of Science: Successful defense of thesis/dissertation  Masters of Arts: Successful completion of practicum II  Master of Science Education: Successful completion of program |
| Assessment  Timetable | Final Semester of degree |
| Who is responsible for assessing and reporting on the results? | The student’s committee and department chair are responsible for assessing this outcome. |

*(Repeat if this new course will support additional program-level outcomes)*

**Course-Level Outcomes**

22. What are the course-level outcomes for students enrolled in this course and the associated assessment measures?

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| **Outcome 1** | * Evaluate the phylogenetic relationships between reptiles and amphibians |
| Which learning activities are responsible for this outcome? | Lecture, discussion, building phylogenetic tree during class |
| Assessment Measure | Written examination and assessment of final cumulative project |
| **Outcome 2** | * Describe the diversity of physiological, behavioral, and ecological adaptations that reptiles and amphibians employ |
| Which learning activities are responsible for this outcome? | Lecture, discussion, reading of scientific articles, in-class activities |
| Assessment Measure | Written examination and assessment of final cumulative project |
| **Outcome 3** | * Compare and contrast among different adaptive strategies |
| Which learning activities are responsible for this outcome? | Lecture, discussion, reading of scientific articles, in-class activities |
| Assessment Measure | Written examination and assessment of final cumulative project |
| **Outcome 4** | * Recognize the importance of reptiles and amphibians in communities and ecosystems |
| Which learning activities are responsible for this outcome? | Lecture, discussion, reading of scientific articles, in-class activities |
| Assessment Measure | Written examination and assessment of final cumulative project |

*(Repeat if needed for additional outcomes)*

**Bulletin Changes**

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| **Instructions** |
| **Please visit** [**http://www.astate.edu/a/registrar/students/bulletins/index.dot**](http://www.astate.edu/a/registrar/students/bulletins/index.dot) **and select the most recent version of the bulletin. Copy and paste all bulletin pages this proposal affects below. Follow the following guidelines for indicating necessary changes.**  **\*Please note: Courses are often listed in multiple sections of the bulletin. To ensure that all affected sections have been located, please search the bulletin (ctrl+F) for the appropriate courses before submission of this form.**  - Deleted courses/credit hours should be marked with a red strike-through (~~red strikethrough~~)  - New credit hours and text changes should be listed in blue using enlarged font (blue using enlarged font).  - Any new courses should be listed in blue bold italics using enlarged font (***blue bold italics using enlarged font***)  *You can easily apply any of these changes by selecting the example text in the instructions above, double-clicking the ‘format painter’ icon 🡪 , and selecting the text you would like to apply the change to.*  *Please visit* [*https://youtu.be/yjdL2n4lZm4*](https://youtu.be/yjdL2n4lZm4) *for more detailed instructions.* |

BIO 5333. Marine Biology Overview of the diverse discipline of marine biology. Emphasis on life history but will incorporate aspects of chemistry, microbiology, and ecology of marine systems. Also included: marine fisheries, conservation biology, aquaculture, pharmacology, resource management, and public policy.

BIO 5341. Laboratory for Animal Embryology Two hours per week. To be taken concurrently with BIO 5343. BIO 5342. Laboratory for Animal Histology Four hours per week. To be taken concurrently with BIO 5332.

BIO 5343. Animal Embryology Study of reproduction and development in animals, including reproductive systems, gamete formation, fertilization, early cleavage, formation of germ layers, and development of the organ systems. Lecture three hours per week.

BIO 5351. Laboratory for Mammalogy Three hours per week. To be taken concurrently with BIO 5352. Special course fees may apply.

BIO 5352. Mammalogy Classification, distribution, structure, ecology, adaptations, and economic importance of mammals. Lecture two hours per week. Prerequisites: BIO 1301,1303.

BIO 5361. Laboratory for Mammalian Neurobiology Two hours per week. To be taken concurrently with BIO 5363. Special course fees may apply.

BIO 5362. Applied Aquaculture Field course in which principles are applied within several aquaculture business settings. Intended for the student interested in wildlife and fisheries biology. Prerequisites: BIO 4311 AND 4312.

BIO 5363. Mammalian Neurobiology A detailed study of the mammalian nervous system with particular emphasis on morphological aspects. Lecture three hours per week. Prerequisites: BIO 1301, 1303, 2201, 2203 or permission of professor.

BIO 5371. Laboratory for Animal Ecology Two hours per week. To be taken concurrently with BIO 5373. Special course fees may apply.

BIO 5372. Applied Fisheries Field course in which principles are applied within several fisheries management settings. Intended for the Wildlife Ecology and Management major. Special course fees may apply. Prerequisite: BIO 4311.

BIO 5373. Animal Ecology A study of the distribution, abundance, population dynamics, behavior, and interactions of animals. Lecture three hours per week. Prerequisites: BIO 3023.

BIO 5382. Parasitology The parasites of vertebrates and plants with emphasis on protozoan and helminth parasites of man and domestic animals. Lecture two hours per week. Prerequisites: BIO 1301, 1303.

BIO 5392. Laboratory for Parasitology Four hours per week. To be taken concurrently with BIO 5382. Special course fees may apply.

BIO 5401. Laboratory for Ichthyology Two hours per week. To be taken concurrently with BIO 5402. Special course fees may apply.

BIO 5402. Ichthyology The taxonomy, distribution, natural history, and economic importance of fishes, with emphasis on Arkansas species. Lecture two hours per week. Prerequisites: BIO 1301, 1303.

BIO 5403. Comparative Vertebrate Reproduction This combined lecture/lab course surveys major events in the vertebrate reproductive cycles and patterns. Prerequisites BIO 3231 and 3233 or 3323, or permission of the instructor.

BIO 5411. Laboratory for Herpetology ~~Two~~ Three hours per week. To be taken concurrently with BIO ~~5412~~ 5313. Special course fees may apply.

~~BIO 5412. Herpetology Collection, identification, classification, distribution, economic importance, and life histories of amphibians and reptiles, with emphasis on Arkansas species. Lecture two hours per week. Prerequisites: BIO 1301, 1303.~~

BIO 5123. Cell Signaling This course will provide an understanding of key concepts about cellular signaling mechanisms, and major signaling pathways identified to date about the methods used to study these pathways. Three hours per week during spring semester. Prerequisite: Cell biology course(s) or permission of the instructor.

BIO 5131. Laboratory for Cell Biology Two hours per week. To be taken concurrently with BIO 5133. Special course fees may apply.

BIO 5133. Cell Biology A study of the organization and activities of cells, with emphasis on the ultrastructure and function of cellular organelles. Lecture three hours per week. Prerequisites: BIO 2013, BIO 2011; CHEM 1023, CHEM 1021.

BIO 5143. Pharmacology The study of drugs and their mechanisms of action at the system, cellular, and molecular levels. Prerequisites: BIO 2223 OR BIO 3233, BIOL 4104, and CHEM 4243.

BIO 5153. Laboratory in BioTechniques I Laboratory techniques in DNA/RNA isolation, analysis and applications, including PCR, reverse transcriptase PCR, high-throughput sequencing sample preparation for gene expression products. Laboratory 6 hours per week. Special course fees may apply. Dual listed as BIO 4153. Prerequisite, BIO 3013. Fall.

BIO 5163. Laboratory in BioTechniques II Laboratory techniques in protein expression and functional analysis including recombinant DNA, protein expression systems, protein chemistry, chromatographic methods, and other analytical techniques. Laboratory 6 hours per week. Special course fees may apply. Dual listed as BIO 4163. Prerequisites, BIO 5153 or permission of instructor. Spring.

BIO 5201. Laboratory for Issues in Human Ecology Two hours per week. To be taken concurrently with BIO 5202. Special course fees may apply.

BIO 5202. Issues in Human Ecology A broad ecological approach demonstrating problems of modern society such as environmental deterioration, hunger, and resources depletion. Lecture two hours per week.

BIO 5213. Human Genetics Current advances in the understanding of the human genome. Lecture three hours per week. Prerequisite: BIO 3013. BIO 5301. Aquatic Entomology Identification, life histories, ecology of aquatic arthropods, with emphasis on freshwater insects. For students in wildlife management, fisheries management, aquatic biology, and advanced entomology. Lecture one hour per week. Prerequisites: BIO 3301, 3303; BIO 3023 OR BIO 4371 AND 4373.

BIO 5302. Laboratory for Aquatic Entomology Four hours per week. To be taken concurrently with BIO 5301. Special course fees may apply.

BIO 5311. Fishery Biology A study of identification, ecology, food habits, management, and behavior of fishes. Lecture one hour per week. Prerequisites: BIO 1301,1303. BIO 5312. Laboratory for Fishery Biology Four hours per week. To be taken concurrently with BIO 5311. Special course fees may apply.

BIO 5313 Herpetology    Examination of the biology amphibians and reptiles, with emphasis on evolutionary history, behavior, physiology, morphology, and ecology. Three hours per week. Spring, even.

BIO 5322. Biology of Marine Mammals Laboratory Hands on experience on the classification, anatomy, and behavior of marine mammals. Concurrent enrollment in BIO 5323. Special Course fees may apply. Permission of instructor required.

BIO 5323. Biology of Marine Mammals This course analyzes the biology of marine mammals based on their adaptations to the aquatic environment from evolutionary, anatomical, physiological, and ecological perspectives. Prerequisites will be at least two of the following courses: BIO 3322, BIO 3013, BIO 3033, and permission of the instructor.

BIO 5332. Animal Histology Microscopic survey of cells and tissues of vertebrate organ systems. This is a pre-existing undergraduate course (BIO 4332). The graduate version will require grad students to investigate selected methods/topics beyond what is expected of undergrads. No prerequisites.