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

**Course Revision Proposal Form**

**[X] Undergraduate Curriculum Council**

**[ ] 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 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** |
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| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 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

870-972-3111

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

Spring 2020

3. Current Course Prefix and Number

BIO 4412

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 4313

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 5412 Herpetology, to be changed to BIO 5313

  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 identify diversity as result of evolutionary and adaptive mechanisms while recognizing the underlying genetic principles and mechanisms of these processes.
* Students will be able to distinguish biological mechanisms (e.g., cellular respiration, photosynthesis, DNA replication; etc.) and relate/apply these mechanisms to overall biological systems (for example energy production and flow, circulatory systems in plants and animals, ecological systems) and how they work.
* Students will be able to construct hypothesis; design studies to test those hypotheses.

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 identify diversity as result of evolutionary and adaptive mechanisms while recognizing the underlying genetic principles and mechanisms of these processes.  |
| Assessment Measure | Senior Seminar Assessment  |
| Assessment Timetable | Students are assessed for this outcome during their senior year. |
| Who is responsible for assessing and reporting on the results? | The course instructor for the senior seminar is responsible for administering the assessment and coordinating with the department assessment committee.  |
| **Program-Level Outcome 2 (from question #23)** | Students will be able to distinguish biological mechanisms (e.g., cellular respiration, photosynthesis, DNA replication; etc.) and relate/apply these mechanisms to overall biological systems (for example energy production and flow, circulatory systems in plants and animals, ecological systems) and how they work.    |
| Assessment Measure | Senior Seminar Assessment  |
| Assessment Timetable | Students are assessed for this outcome during their senior year. |
| Who is responsible for assessing and reporting on the results? | The course instructor for the senior seminar is responsible for administering the assessment and coordinating with the department assessment committee.  |
| **Program-Level Outcome 3 (from question #23)** | Students will be able to construct hypothesis; design studies to test those hypotheses. |
| Assessment Measure | Senior Seminar Assessment  |
| Assessment Timetable | Students are assessed for this outcome during their senior year. |
| Who is responsible for assessing and reporting on the results? | The course instructor for the senior seminar is responsible for administering the assessment and coordinating with the department assessment committee.  |

 *(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 4373. Animal Ecology   The relationship of animals to their chemical, physical, and biological environment, and the distribution of animal life. Lecture three hours per week. Special course fees may apply. Prerequisites, BIO 3023. Fall, odd.

BIO 4382. Parasitology Parasites of vertebrates and plants, with emphasis on protozoan and helminth parasites of man and domestic animals. Lecture two hours per week. Special course fees may apply. Prerequisites, BIO 1301 and BIO 1303. Spring.

BIO 4392. Parasitology Laboratory   Four hours per week. Special course fees may apply. To be taken concurrently with BIO 4382. Spring.

BIO 4401. Ichthyology Laboratory   Two hours per week. Special course fees may apply. To be taken concurrently with BIO 4402. Fall, even.

BIO 4402. Ichthyology   Taxonomy, distribution, natural history, and economic importance of fishes, with emphasis on Arkansas species. Lecture two hours per week. Special course fees may apply. Prerequisites, BIO 1301 and BIO 1303. Fall, even.

BIO 4403. Comparative Vertebrate Reproduction   This combined lecture and lab course surveys major events in the vertebrate reproductive cycles and patterns. Special course fees may apply. Prerequisites, BIO 3231 and BIO 3233, or BIO 3323 and 3321. Dual Listed BIO 5403. Fall even.

BIO 4411. Herpetology Laboratory    ~~Two~~ Three hours per week. Special course fees may apply. To be taken concurrently with BIO ~~4412~~ 4313. Spring, even.

~~BIO 4412. Herpetology   Collection, identification, classification, distribution, economic importance, and life histories of amphibians and reptiles, with emphasis on Arkansas species. Lecture two hours per week. Special course fees may apply. Prerequisites, BIO 1301 and 1303. Spring, even.~~

BIO 4413. Wildlife Program Internship Participation in a professional wildlife educational, management or research program activity. Internship is arranged by the student and may be a volunteer or paid position. Entails a minimum of 160 work hours. Special course fees may apply. Must be approved by advisor or chair. Fall, Spring, Summer.

BIO 4421. Ornithology Laboratory   Three hours per week. Special course fees may apply. To be taken concurrently with BIO 4423. Spring, even.

BIO 4423. Ornithology   Morphology, physiology, taxonomy, behavior, ecology, natural history, zoogeography, and evolution of birds. Lecture three hours per week. Special course fees may apply. Prerequisites, BIO 1301 and BIO 1303. Spring, even.

BIO 4433. Field Experience in Marine Environments   Hands on experience with living and non living components of environments. Emphasis on marine organisms and habitats but will incorporate human interactions associated with marine environments. Course is comprised of an intensive 12 day, 10 hours a day, field trip to an appropriate marine environment. Special course fees may apply. Prerequisites, BIO 4333, or BIOL 1003 and BIOL 1001, or permission of instructor.

BIO 4513. Plant Physiology General principles of conduction, cellular reactions, respiration, growth, photosynthesis, movement, hormones, and metabolism in plants. Lecture three hours per week. Special course fees may apply. Prerequisites, BIO 1501, BIO 1503, and CHEM 2064 or 3103 and 3101. Spring, even.

BIO 4521. Wetland Plant Ecology Laboratory Two hours per week. To be taken concurrently with BIO 4522. Special course fees may apply. Spring, odd.

 BIO 4522. Wetland Plant Ecology A study of plant responses to environmental factors during germination, growth, reproduction, and dormancy. Lecture two hours per week. Special course fees may apply. Prerequisites, BIO 3023 or permission of professor or chair. Spring, odd.

BIO 4541. Mycology Laboratory Two hours per week. To be taken concurrently with BIO 4542. Special course fees may apply. Fall, even every 4 years. Fall, odd.

BIO 4542. Mycology Morphology, cytology, genetics, and physiology of fungi. Lecture two hours per week. Four hours per week. To be taken concurrently with BIO 4541. Special course fees may apply. Fall, odd.

BIO 4311. Fishery Biology   Identification, ecology, food habits, management, and behavior of fishes. Lecture one hour per week. Special course fees may apply. Prerequisites, BIO 1303 and BIO 1301. Summer, even.

BIO 4312. Fishery Biology Laboratory   Four hours per week. To be taken concurrently with BIO 4311. Special course fees may apply. Summer, even.

BIO 4313 Herpetology    Examination of the biology amphibians and reptiles, with emphasis on evolutionary history, behavior, physiology, morphology, and ecology. Prerequisites, BIO 1301 and 1303. Spring, even.

BIO 4322. Marine Mammals Laboratory   Hands on experience on the classification, anatomy, and behavior of marine mammals. Concurrent enrollment in BIO 4323. Special course fees may apply. Permission of instructor required. Spring, odd.

BIO 4323. 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. Special course fees may apply. Prerequisites will be at least two the following courses, BIO 3312, BIO 4352, BIO 4653, BIO 3023, or BIO 3033. Permission of Instructor required. Spring, odd.

BIO 4332. Animal Histology   Cells and tissues of the organ systems of vertebrates. Lecture two hours per week. Special course fees may apply. Prerequisites, BIO 3302 and BIO 3312. Spring.

BIO 4333. Marine Biology   Overview of the diverse discipline of marine biology. Emphasis on life history but will incorporate aspects of chemistry, microbiology, molecular biology, and ecology of marine systems. Also includes marine fisheries, conservation biology, aquaculture, pharmacology, resource management, and public policy. Special course fees may apply. Prerequisites, BIO 1303 and BIO 1301 or BIOL 1003 and 1001, and BIO 3023, or permission of instructor. Dual listed BIO 5333. Spring, even.

BIO 4341. Animal Embryology Laboratory   Two hours per week. Special course fees may apply. To be taken concurrently with BIO 4343. Spring.

BIO 4342. Animal Histology Laboratory   Four hours per week. Special course fees may apply. To be taken concurrently with BIO 4332. Spring.

BIO 4343. 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. Special course fees may apply. To be taken concurrently with BIO 4341. Prerequisites, BIO 1301 and BIO 1303. Spring.

BIO 4351. Mammology Laboratory   Three hours per week. Special course fees may apply. To be taken concurrently with BIO 4352. Fall, even.

BIO 4352. Mammology   Classification, distribution, structure, ecology, adaptations, and economic importance of mammals. Lecture two hours per week. Special course fees may apply. Prerequisites, BIO 1301 and BIO 1303. Fall, even.

BIO 4361. Mammalian Neurobiology Laboratory   Two hours per week. Special course fees may apply. To be taken concurrently with BIO 4363. Fall, odd.

BIO 4362. Applied Aquaculture Field course in which principles of aquaculture are applied within several public and private enterprises. Intended for the student interested in wildlife, fisheries biology, and agriculture. Special course fees may apply. Prerequisites, BIO 4311 and BIO 4312. Summer.

BIO 4363. Mammalian Neurobiology   A detailed study of the mammalian nervous system with particular emphasis on morphological aspects. Lecture three hours per week. Special course fees may apply. Prerequisites, BIO 1301 and BIO 1303, or BIO 2223 and BIO 2221, or permission of instructor. Fall, odd.

BIO 4371. Animal Ecology Laboratory   Two hours per week. Special course fees may apply. To be taken concurrently with BIO 4373. Fall, odd.

BIO 4372. 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. Summer.