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**Bulletin / Banner Change Transmittal Form**

**[ ] 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 | 2/26/2018 |

**Department Curriculum Committee Chair** |

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**COPE Chair (if applicable)** |
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| Thomas Risch | 2/27/2018 |

**Department Chair:**  |

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**Head of Unit (If applicable)**   |
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| David F Gilmore | 2/26/2018 |

**College Curriculum Committee Chair** |

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**Undergraduate Curriculum Council Chair** |
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| Anne A. Grippo | 2/27/2018 |

**College Dean** |

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**Graduate Curriculum Committee Chair** |
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**General Education Committee Chair (If applicable)**   |

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**Vice Chancellor for Academic Affairs** |

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

David Gilmore, dgilmore@astate.edu, 9723263

**2.Proposed Change**

Reanimation of “zombie classes”/ move others from “undead” to “dead”

SM09 (2014) removed a number of BIO classes from the Bulletin. However, examination of the current Bulletin reveals that several of these were never removed from the Bulletin, namely:

BIO 4023 History of Biological Ideas

BIO 4111 Immunology Laboratory

BIO 4211 Human Genetics Laboratory

BIO 4223 Human Endocrinology

BIO 4313 Biospeleology Life in Darkness

BIO 4353 Field Techniques Marine Mammals

With recent changes in staffing, we wish to NOT REMOVE the following courses that were originally deleted:

BIO 4111 Immunology Laboratory

BIO 4223 Human Endocrinology

The remaining classes should be removed from the Bulletin as previously requested.

BIO 4023 History of Biological Ideas

BIO 4211 Human Genetics Laboratory

BIO 4313 Biospeleology Life in Darkness

BIO 4353 Field Techniques Marine Mammals

**3.Effective Date**

3/10/2018

**4.Justification –** *Please provide details as to why this change is necessary.*

Staffing changes led to the original deletions, staffing changes bring back the zombie courses, clerical errors kept courses in the Bulletin.

**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 4023. History of Biological Ideas   This course analyzes the history of biological ideas~~

~~such as evolution, heredity, spontaneous generation, and molecular biology, aimed at a better~~

~~understanding not only of the historical background of current research but also on how science~~

~~proceeds. Special course fees may apply. Prerequisites will be at least two of the following~~

~~courses, BIO 3033, BIO 3023, and BIO 3013. Permission of Instructor required. Fall, odd.~~

BIO 4033. Bioinformatics and Applications Provides a basic understanding of computational

methods used in bioinformatics, including hands on training to access and use biological data

sources to analyze nucleotide/amino acid sequences and three-dimensional atomic structures of

proteins, nucleic acids allowing interpretations of biological processes. Lecture three hours per

week. Prerequisite, BIO 3013. Spring.

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BIO 4104. Microbiology   Morphology, physiology, taxonomy and cultivation of bacteria,

viruses, fungi, and protozoans with an emphasis on medically relevant bacteria. Relationship of

microorganisms to animals, plants, and the environment. Lecture two hours per week and laboratory

four hours per week. Prerequisites, CHEM 1023 and BIO 2013 or permission of instructor.

Special course fees may apply. Fall, Spring, Summer, even.

BIO 4111. Immunology Laboratory   Study of classical and current immunology techniques

such as ELISA, immuno electrophoresis and Western Blot analysis. Laboratory 3 hours per week.

Special course fees may apply. Prerequisites, BIO 2013 and CHEM 1013. Fall.

BIO 4113. Immunology   Study of the human immune system. Topics include innate and

acquired immunity, complement fixation and disorders of the immune system. Lecture 3 hours per

week. Special course fees may apply. Prerequisites, BIO 2013 and CHEM 1013. Fall.

BIO 4123. Cell Signaling   This course will provide an understanding of key concepts about

cellular signaling mechanisms, major signaling pathways identified to date, and about the methods

used to study these pathways. Three hours per week during spring semester. Special course fees

may apply. Prerequisites, BIO 2013 or BIO 4133, or permission of the instructor. Spring, odd.

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BIO 4202. Issues in Human Ecology   A broad ecological approach demonstrating problems

of modern society such as environmental deterioration, hunger, and resource depletion. Lecture

two hours per week. Special course fees may apply. Summer, odd.

~~BIO 4211. Human Genetics Laboratory   Three hours per week. To be taken concurrently~~

~~with BIO 4213. Special course fees may apply. Fall, odd.~~

BIO 4213. Human Genetics Current advances in the understanding of the human genome.

Lecture three hours per week. Prerequisite, BIO 3013. Special course fees may apply. Fall, odd.

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The bulletin can be accessed at http://www.astate.edu/a/registrar/students/

BIO 4223. Human Endocrinology   Control of physiological processes by hormones. Types of

chemical messengers, impact on cells, tissues and organs, and interrelationships of organ systems

with respect to hormones will be studied. Important endocrine disorders will also be addressed.

Special course fees may apply. Prerequisites, BIO 2013 or CHEM 4243, AND BIO 2223 and BIO

2221 or BIO 3233 and BIO 3231. Spring.

BIO 4301. Aquatic Entomology   Identification, life histories, and 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. Special course fees may

apply. Prerequisites, BIO 3301, BIO 3303, and BIO 3123 or BIO 4371 and BIO 4373. Spring, odd.

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BIO 4311. Special course fees may apply. Summer, even.

~~BIO 4313. Biospeleology Life in Darkness   This course analyzes the biology of organisms~~

~~that live in hypogean subterranean environments, particularly in cave, phreatic, and karst habitats.~~

~~That includes a survey of hypogean organisms, their evolution, ecology, and conservation biology.~~

~~Special course fees may apply. Course prerequisites, at least two of the following, BIO 3033, BIO~~

~~3023, and BIO 3013, and permission of the instructor. 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.

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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 4353. Field Techniques for Marine Mammals   Field experience in describing and analyzing~~

~~marine behavior of dolphins and other marine mammals. Special course fees may apply.~~

~~Permission of Instructor required. Summer, odd.~~