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

 **Course Deletion 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.

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| Virginie Rolland | 9/13/2021 |

**Department Curriculum Committee Chair** |

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**COPE Chair (if applicable)** |
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| Stephen J. Mullin | 9/13/2021 |

**Department Chair** |

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**Head of Unit (if applicable)**   |
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| John Hershberger 9/23/2021 | Enter date |

**College Curriculum Committee Chair** |

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**Undergraduate Curriculum Council Chair** |
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| Lynn Boyd | 10/1/2021 |

**College Dean** |

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

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| Alan Utter | 11/29/2021 |

**Vice Chancellor for Academic Affairs** |

1. **Course Title, Prefix and Number**

Laboratory for Laboratory Techniques in Electron Microscopy – BIO 5003

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

SJ Mullin, smullin@astate.edu, 870-972-3082

1. **Justification**

Faculty expertise and facility support within the dept. no longer exist. This course hasn’t been offered in over 5 years.

1. **Last semester course will be offered**

N/A

1. No **Does this course appear in your curriculum? (if yes, and this deletion changes the curriculum, a Program Modification Form is required)**

No.

1. Yes **Is this course dual-listed (undergraduate/graduate)?**

Yes. A course deletion form is also being submitted for the undergraduate-level course BIO 4003.

1. No **Is this course cross-listed with a course in another department?**

If yes, which course(s)?

 No

1. No **Is there currently a course listed in the Bulletin or Banner which is a one-to-one equivalent to this course (please check with the Registrar’s Office if unsure)?**

If yes, which course?

No.

**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. Please include a before (with changed areas highlighted) and after of all affected sections.** **\*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.**  |

CURRENT VERSION (pg. 413):

College of Sciences and Mathematics

**DEPARTMENT OF BIOLOGICAL SCIENCES**

For each laboratory course taken, both the lecture and laboratory portions must be passed before credit for graduation is assigned.

**Biology (BIO)**

**BIO 5001. Laboratory Techniques in Electron Microscopy** An introduction to the preparation of biological materials for viewing with the transmission-and-scanning electron microscope. Emphasis will be placed on preparative techniques that are commonly used in the laboratory. Lecture one hour per week. Prerequisites, eight hours upper-level biology coursework and instructor permission.

**BIO 5003. Laboratory for Laboratory Techniques in Electron Microscopy** Six hours per week. To be taken concurrently with BIO 5001. Special course fees may apply.

**BIO 5013. Population Genetics** This course will investigate the theories describing the genetic structure of populations. There will be an emphasis on problem solving applying statistical tools. Intended for graduate students entering the disciplines of preprofessional, conservation, agriculture, and wildlife and fisheries sciences. Prerequisites, BIO 3013, BIO 3011.

**BIO 5033. 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. Prerequisites, BIO 3013 or instructor permission.

**BIO 5043. Biometry** An introduction to data analyses and effective data presentation, using spreadsheet software and real biological examples.

**BIO 504V. Special Topics in the Biological Sciences** Topical or technique driven seminar relating to the biological sciences that will lead to the training of students in a body of work, such as newly developed research technique/approach. Number of credit hours will vary. Prerequisites, instructor permission.

**BIO 5053. Applications in Biotechnology** Focuses on real world applications of biotechnology presented as case studies and utilizing current literature reviews. Medical, agricultural, environmental and industrial biotechnology and their ethical, legal and social implications covered. Prerequisites, BIO 3013.

**BIO 5063. Biosafety and Ethics in Research** Biosafety in the workplace, including chemical and radiation safety. Examination of moral and ethical issues in the laboratory and in research, including the concepts of transgenics, intellectual property and writing in research. Lecture three hours per week. Prerequisites, BIO 3013.

**BIO 5103. Virology** The structure, function, and classification of viruses, and their impact on modern society and the biological world. Lecture three hours per week. Prerequisites, BIOL 2103 or BIO 3013 or BIO 4104 or BIO 4133.

**BIO 5104. Microbiology** Morphology, physiology, taxonomy, and cultivation of bacteria and other microorganisms with an emphasis on medically relevant bacteria. Two hours of lecture and four hours of lab per week.

REVISED VERSION:

College of Sciences and Mathematics

**DEPARTMENT OF BIOLOGICAL SCIENCES**

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**Biology (BIO)**

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**BIO 5033. 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. Prerequisites, BIO 3013 or instructor permission.

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