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

**Bulletin / Banner Change Transmittal 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 for inclusion in curriculum committee agenda.

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| Tanja McKay | 9/10/2018 |

**Department Curriculum Committee Chair** |

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**COPE Chair (if applicable)** |
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| Tanja McKay | 9/10/2018 |

**Department Chair:**  |

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**Head of Unit (If applicable)**   |
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| David Gilmore | 9/11/2018 |

**College Curriculum Committee Chair** |

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**Undergraduate Curriculum Council Chair** |
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| Anne Grippo | 9/12/2018 |

**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)

Tanja McKay, tmckay@astate.edu, 870-972-3240

**2.Proposed Change**

1. Both MS and PhD EVS students currently need to take ESCI 7151, Responsible Conduct in Research. This course was last offered in Fall 2017. The Department of Biological Sciences now offers BIO 4063/5063 Biosafety and Ethics in Research every fall which the EVS Program Committee feels would be an equivalent course. We would like students in the EVS Program to have the choice of taking ESCI 7151 or BIO 5063. We do understand that this is an additional 2 hours of credit

2. Minor changes in the bulletin:

 a) Pages 261 and 277. The August 15th deadline for application is incorrect. It should be “July 15th for the spring semester”.

 b) Page 279 TIME TO DEGREE for MS EVS is incorrect. It states “within eight calendar years”. This paragraph is using the doctoral time of degree which is eight years. It should state “six years”.

**3.Effective Date**

Fall 2018

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

1. In Spring 2018, the Environmental Sciences (EVS) Program Committee met to discuss ESCI 7151 which is also taught at the same time as MBS 7151. Since these two course are usually taught by the Directors of the EVS and MBS Programs at the same time. At this time, we have an interim director of Molecular Biosciences and it is difficult to determine when ESCI 7151 or MBS 7151 will be offered again.

2. Minor changes in the bulletin:

 See justification listed under Proposed Changes.

**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.* |

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**Environmental Sciences**

**Doctor of Philosophy**

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| --- | --- |
| **University Requirements:** |  |
| See Graduate Degree Policies for additional information (p. 35) |  |
| **Core Courses:** | **Sem. Hrs.** |
| **Environmental Chemistry/ Soil and Water Science (select one of the following):**CHEM 5043, Environmental Chemistry GEOG 5633, ClimatologyPSSC 5713, Soil Quality Assessment and Interpretation PSSC 5813, Soil FertilityPSSC 5853, Soil and Water Conservation | 3 |
| **Environmental Policy, Law & Economics (select one of the following):**ECON 6353, Environmental EconomicsPOSC 5533, Environmental Law and Administration POSC 6173, Environmental Policy Processes | 3 |
| **Interdisciplinary Environmental Studies (select one of the following):**AGRI 6243, Environmental Sustainability BIO 5613, Conservation BiologyBIO 6623, Case Studies in Ecosystem Management **AND**BIO 6621, Case Studies in Ecosystem Management Lab ESCI 6303, Global Water Issues | 3-4 |
| **Sub-total** | **9-10** |
| **Additional Requirements:** | **Sem. Hrs.** |
| **Select four hours from the following:***Two hours in Topical Seminar required*ESCI 7111, Environmental Science SeminarESCI 7121, Topical Seminar in Environmental Sciences | 4 |
| **Ethics and Responsible Conduct in Research (select one of the following)**ESC1 7151, Responsible Conduct in Research**BIO 5063, Biosafety and Ethics in Research** | ~~1~~1-3 |
| **Statistics (select two of the following courses or course/lab combinations):**AGRI 6213, Experimental DesignsAGRI 5233, Experimental Agricultural Statistics BIO 5683, Biological Data AnalysesBIO 6603, Environmental Systems Analysis **AND**BIO 6601, Environmental Systems Analysis Lab STAT 6613, Nonparametric StatisticsSTAT 6623, Statistical Methods with SAS Programming STAT 6643, Multivariate AnalysisSTAT 6653, Data Analysis I: Regression AnalysisSTAT 6663, Data Analysis II: Analysis of Variance (ANOVA) STAT 6673, Design of ExperimentsSTAT 6833, Biostatistics | 6-7 |
| **Sub-total** | **~~11-12~~ 11-14** |
| **Specialty Area:** | **Sem. Hrs.** |
| Each student will normally take courses in their specialty area sufficient to bring the total number of credits to the minimum of 72 required for the Ph.D. in Environmental Sciences beyond the bachelor‘s degree or 42 beyond the master’s degree. Any additional course work requirements will be determined by the Doctoral Advisory Committee to meet the student’s specific program needs. | - |
| **Dissertation:** | **Sem. Hrs.** |
| ESCI 889V, Dissertation | **18** |
| **Total Required Hours:** | **42-72** |

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**Environmental Sciences**

**Master of Science**

|  |  |
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| **University Requirements:** |  |
| See Graduate Degree Policies for additional information (p. 35) |  |
| **Program Requirements:** | **Sem. Hrs.** |
| **Environmental Chemistry/ Soil and Water Science (select one of the following):**CHEM 5043, Environmental Chemistry GEOG 4633/5633, ClimatologyPSSC 4713/5713, Soil Quality Assessment and Interpretation PSSC 4813/5813, Soil FertilityPSSC 4853/5853 Soil and Water Conservation | 3 |
| **Environmental Policy, Law & Economics (select one of the following):**ECON 6353, Environmental EconomicsPOSC 5533, Environmental Law and Administration POSC 6173, Environmental Policy Processes | 3 |
| **Interdisciplinary Environmental Studies (select one of the following):**AGRI 6243, Environmental Sustainability BIO 5613, Conservation BiologyBIO 6623, Case Studies in Ecosystem Management **AND**BIO 6621, Case Studies in Ecosystem Management Lab ESCI 6303, Global Water Issues | 3-4 |
| **Sub-total** | **9-10** |
| **Additional Requirements:** | **Sem. Hrs.** |
| **Select two hours from the following:***One hour in Topical Seminar required*ESCI 7111, Environmental Science SeminarESCI 7121, Topical Seminar in Environmental Sciences | 2 |
| **Ethics and Responsible Conduct in Research (select one of the following)**ESCI 7151, Responsible Conduct in Research**BIO 5063, Biosafety and Ethics in Research** | ~~1~~ 1-3 |
| **Statistics (select two of the following courses or course/lab combinations):**AGRI 6213, Experimental DesignsAGRI 5233, Experimental Agricultural Statistics BIO 5683, Biological Data AnalysesBIO 6603, Environmental Systems Analysis **AND**BIO 6601, Environmental Systems Analysis Lab STAT 6613, Nonparametric StatisticsSTAT 6623, Statistical Methods with SAS Programming STAT 6643, Multivariate AnalysisSTAT 6653, Data Analysis I: Regression AnalysisSTAT 6663, Data Analysis II: Analysis of Variance (ANOVA) STAT 6673, Design of ExperimentsSTAT 6833, Biostatistics | 6-7 |
| **Sub-total** | **~~9-10~~ 9-12** |
| **Specialty Area:** | **Sem. Hrs.** |
| Each student will normally take courses in their specialty area sufficient to bring the total number of credits to the minimum of 30 required, beyond the bachelor‘s degree, for the M.S. in Environ- mental Sciences. | - |
| **Thesis/Practicum/Internship:** | **Sem. Hrs.** |
| **Select one of the following:**ESCI 613V, Independent Research in Environmental Sciences (Internship) ESCI 614V, Environmental Sciences Internship (Practicum)ESCI 689V, Thesis | **6** |
| **Total Required Hours:** | **30** |

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**ADMISSION REQUIREMENTS**

Applicants to the PhD Graduate Program in Environmental Sciences Program must hold a bac­calaureate degree (BA, BS) and preferrably a master’s degree (MA, MS) from an accredited institution in a relevant field of study. Applicants must submit the following to Graduate Admissions:

1. A completed application for admission to the Graduate Program in Environmental Sci­ences. Applicants are encouraged to submit the application no later than February 15th for the fall semester and ~~August 15th~~ July 15th for the spring semester. Applicants should apply online at: <http://www.astate.edu/graduate>.

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Applicants to the MS Graduate Program in Environmental Sciences must hold a baccalaureate or master’s degree (BA, BS, MA or MS) from an accredited institution in a relevant field of study. Applicants must submit the following to Graduate Admissions:

1. A completed application for admission to the Graduate Program in Environmental Sciences. Applicants are encouraged to submit the application no later than January 15 for the fall semester and ~~August 15~~ July 15th for the spring semester. Forms are available from Graduate Admissions.

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**TIME TO DEGREE**

A minimum of four semesters of graduate study beyond the baccalaureate degree is required. All requirements for the degree must be completed within ~~eight calendar years~~ six calendar years of admission to the program. A student exceeding the time limit may be required to repeat the qualifying examinations, replace out-of-date credits with up-to-date ones, and/or show other evidence of being current within both the core curriculum and the student’s emphasis area. Extension of the ~~eight-year~~ six-year requirement will be granted only if a student has obtained prior approval from his or her Master’s Advisory Committee, the Environmental Sciences Graduate Program Committee and the Registrar.