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| For Academic Affairs and Research Use Only | |
| Proposal Number: | SM20 |
| CIP Code: |  |
| Degree Code: |  |

**Course Deletion 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.

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| --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | Virginie Rolland | 9/15/2021 |   **Department Curriculum Committee Chair** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **COPE Chair (if applicable)** |
| |  |  | | --- | --- | | Stephen J. Mullin | 9/15/2021 |   **Department Chair** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Head of Unit (if applicable)** |
| |  |  | | --- | --- | | John Hershberger 9/23/2021 | Enter date |   **College Curriculum Committee Chair** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Undergraduate Curriculum Council Chair** |
| |  |  | | --- | --- | | Lynn Boyd | 10/1/2021 |   **College Dean** | |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **Graduate Curriculum Committee Chair** |
| |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **General Education Committee Chair (if applicable)** | |  |  | | --- | --- | | Alan Utter | 11/16/2021 |   **Vice Chancellor for Academic Affairs** |

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

Mammalian Neurobiology – BIO 4363

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

SJ Mullin, [smulling@astate.edu](mailto:smulling@astate.edu), 870-972-3082

1. **Justification**

Faculty expertise within the dept. no longer exists. 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.

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

Yes. A course deletion form is also being submitted for the graduate-level BIO 5363

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**

|  |
| --- |
| **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. 415):

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

Select three of the following:

BIO 3203, Pathophysiology

BIO 4103, Virology

BIO 4113 AND 4111, Immunology and Laboratory

BIO 4123, Cell Signaling

BIO 4133 AND 4131, Cell Biology and Laboratory

BIO 4143, Pharmacology

BIO 4363 AND 4361, Mammalian Neurobiology and Laboratory

BIO 4213, Human Genetics

BIO 4332 AND 4342, Animal Histology and Laboratory

BIO 4343 AND 4341, Animal Embryology and Laboratory

BIO 4552 AND 4551, Medical Mycology and Laboratory

BIO 4623, Environmental Microbiology

CHEM 3153, Survey of Physical Chemistry

CHEM 4243, Biochemistry

PHIL 3713, Ethics in the Health Professions

STAT 3233, Applied Statistics I

9-12

Sub-total 24-28

Electives: Sem. Hrs.

Electives 14-18

Total Required Hours: 120

REVISED VERSION:

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

Select three of the following:

BIO 3203, Pathophysiology

BIO 4103, Virology

BIO 4113 AND 4111, Immunology and Laboratory

BIO 4123, Cell Signaling

BIO 4133 AND 4131, Cell Biology and Laboratory

BIO 4143, Pharmacology

BIO 4213, Human Genetics

BIO 4332 AND 4342, Animal Histology and Laboratory

BIO 4343 AND 4341, Animal Embryology and Laboratory

BIO 4552 AND 4551, Medical Mycology and Laboratory

BIO 4623, Environmental Microbiology

CHEM 3153, Survey of Physical Chemistry

CHEM 4243, Biochemistry

PHIL 3713, Ethics in the Health Professions

STAT 3233, Applied Statistics I

9-12

Sub-total 24-28

Electives: Sem. Hrs.

Electives 14-18

Total Required Hours: 120

CURRENT VERSION (pg. 427):

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

Major in Wildlife, Fisheries and Conservation (cont.)

Bachelor of Science

Emphasis in Fisheries

A complete 8-semester degree plan is available at https://www.astate.edu/info/academics/degrees/

Botany elective:

BIO 3542 AND BIO 3541, Plant Pathology and Laboratory

BIO 3553. Economic Botany

BIO 4513. Plant Physiology

BIO 4522 AND BIO 4521, Wetland Plant Ecology and Laboratory

BIO 4542 AND BIO 4541, Mycology and Laboratory

BIO 4552 AND BIO 4551, Medical Mycology and Laboratory

BIO 4704. Plant Systematics

BIO 4714, Dendrology

Other courses approved by advisor

3-4

Zoology elective:

BIO 3303 AND BIO 3301, General Entomology and Laboratory

BIO 3313 AND BIO 3311, Economic Entomology and Laboratory

BIO 3302 AND BIO 3312, Comparative Anatomy and Laboratory

BIO 3322 AND BIO 3332, Invertebrate Zoology and Laboratory

BIO 4332 AND BIO 4342, Animal Histology and Laboratory

BIO 4333, Marine Biology

BIO 4343 AND BIO 4341, Animal Embryology and Laboratory

BIO 4354, Mammology

BIO 4362, Applied Aquaculture

BIO 4363 AND BIO 4361, Mammalian Neurobiology and Laboratory

BIO 4372, Applied Fisheries

BIO 4373 AND 4371, Animal Ecology and Laboratory

BIO 4382 AND BIO 4392, Parasitology and Laboratory

BIO 4403, Comparative Vertebrate Reproduction

BIO 4453 AND BIO 4451, Herpetology and Laboratory

BIO 4423 AND BIO 4421, Ornithology and Laboratory

BIO 4433, Field Experience in Marine Environments

BIO 4443 AND 4441, Comparative Animal Physiology and Laboratory

NOTE: An individual course cannot be used as both a required course and an elective.

3-5

Electives:

Choose from Botany and/or Zoology electives above.

NOTE: An individual course cannot be used as both a required course and an elective.

7-10

Sub-total 81

Total Required Hours: 120

REVISED VERSION:

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

Major in Wildlife, Fisheries and Conservation (cont.)

Bachelor of Science

Emphasis in Fisheries

A complete 8-semester degree plan is available at https://www.astate.edu/info/academics/degrees/

Botany elective:

BIO 3542 AND BIO 3541, Plant Pathology and Laboratory

BIO 3553. Economic Botany

BIO 4513. Plant Physiology

BIO 4522 AND BIO 4521, Wetland Plant Ecology and Laboratory

BIO 4542 AND BIO 4541, Mycology and Laboratory

BIO 4552 AND BIO 4551, Medical Mycology and Laboratory

BIO 4704. Plant Systematics

BIO 4714, Dendrology

Other courses approved by advisor

3-4

Zoology elective:

BIO 3303 AND BIO 3301, General Entomology and Laboratory

BIO 3313 AND BIO 3311, Economic Entomology and Laboratory

BIO 3302 AND BIO 3312, Comparative Anatomy and Laboratory

BIO 3322 AND BIO 3332, Invertebrate Zoology and Laboratory

BIO 4332 AND BIO 4342, Animal Histology and Laboratory

BIO 4333, Marine Biology

BIO 4343 AND BIO 4341, Animal Embryology and Laboratory

BIO 4354, Mammology

BIO 4362, Applied Aquaculture

BIO 4372, Applied Fisheries

BIO 4373 AND 4371, Animal Ecology and Laboratory

BIO 4382 AND BIO 4392, Parasitology and Laboratory

BIO 4403, Comparative Vertebrate Reproduction

BIO 4453 AND BIO 4451, Herpetology and Laboratory

BIO 4423 AND BIO 4421, Ornithology and Laboratory

BIO 4433, Field Experience in Marine Environments

BIO 4443 AND 4441, Comparative Animal Physiology and Laboratory

NOTE: An individual course cannot be used as both a required course and an elective.

3-5

Electives:

Choose from Botany and/or Zoology electives above.

NOTE: An individual course cannot be used as both a required course and an elective.

7-10

Sub-total 81

Total Required Hours: 120

CURRENT VERSION (pg. 429):

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

Select two of the following:

BIO 3673, Human Dimensions of Natural Resources

BIO 4613, Conservation Biology

POSC 4633, Environmental Law and Administration

6

Select two of the following:

BIO 4354, Mammalogy

BIO 4453 AND 4411, Herpetology and Laboratory

BIO 4423 AND 4421, Ornithology and Laboratory

8

Botany elective:

BIO 3501 AND BIO 3511, Wild Flowers of Arkansas and Laboratory.

BIO 3542 AND BIO 3541, Plant Pathology and Laboratory

BIO 3553. Economic Botany

BIO 4513. Plant Physiology

BIO 4522 AND BIO 4521, Wetland Plant Ecology and Laboratory

BIO 4542 AND BIO 4541, Mycology and Laboratory

BIO 4552 AND BIO 4551, Medical Mycology and Laboratory

BIO 4714, Dendrology

Other courses approved by advisor

3

Communication elective:

ENG 3063, Writing for STEM

See advisor for acceptable substitutions.

3

Zoology electives:

BIO 3303 AND BIO 3301, General Entomology and Laboratory

BIO 3313 AND BIO 3311, Economic Entomology and Laboratory

BIO 3302 AND BIO 3312, Comparative Anatomy and Laboratory

BIO 3322 AND BIO 3332, Invertebrate Zoology and Laboratory

BIO 4332 AND BIO 4342, Animal Histology and Laboratory

BIO 4333, Marine Biology

BIO 4343 AND BIO 4341, Animal Embryology and Laboratory

BIO 4354, Mammology

BIO 4362, Applied Aquaculture

BIO 4363 AND BIO 4361, Mammalian Neurobiology and Laboratory

BIO 4372, Applied Fisheries

BIO 4382 AND BIO 4392, Parasitology and Laboratory

BIO 4403, Comparative Vertebrate Reproduction

BIO 4453 AND BIO 4451, Herpetology and Laboratory

BIO 4423 AND BIO 4421, Ornithology and Laboratory

BIO 4433, Field Experience in Marine Environments

BIO 4443 AND 4441, Comparative Animal Physiology and Laboratory

An individual course cannot be used as both a required course and an elective.

4-5

Sub-total 81

Total Required Hours: 120

REVISED VERSION:

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

Select two of the following:

BIO 3673, Human Dimensions of Natural Resources

BIO 4613, Conservation Biology

POSC 4633, Environmental Law and Administration

6

Select two of the following:

BIO 4354, Mammalogy

BIO 4453 AND 4411, Herpetology and Laboratory

BIO 4423 AND 4421, Ornithology and Laboratory

8

Botany elective:

BIO 3501 AND BIO 3511, Wild Flowers of Arkansas and Laboratory.

BIO 3542 AND BIO 3541, Plant Pathology and Laboratory

BIO 3553. Economic Botany

BIO 4513. Plant Physiology

BIO 4522 AND BIO 4521, Wetland Plant Ecology and Laboratory

BIO 4542 AND BIO 4541, Mycology and Laboratory

BIO 4552 AND BIO 4551, Medical Mycology and Laboratory

BIO 4714, Dendrology

Other courses approved by advisor

3

Communication elective:

ENG 3063, Writing for STEM

See advisor for acceptable substitutions.

3

Zoology electives:

BIO 3303 AND BIO 3301, General Entomology and Laboratory

BIO 3313 AND BIO 3311, Economic Entomology and Laboratory

BIO 3302 AND BIO 3312, Comparative Anatomy and Laboratory

BIO 3322 AND BIO 3332, Invertebrate Zoology and Laboratory

BIO 4332 AND BIO 4342, Animal Histology and Laboratory

BIO 4333, Marine Biology

BIO 4343 AND BIO 4341, Animal Embryology and Laboratory

BIO 4354, Mammology

BIO 4362, Applied Aquaculture

BIO 4372, Applied Fisheries

BIO 4382 AND BIO 4392, Parasitology and Laboratory

BIO 4403, Comparative Vertebrate Reproduction

BIO 4453 AND BIO 4451, Herpetology and Laboratory

BIO 4423 AND BIO 4421, Ornithology and Laboratory

BIO 4433, Field Experience in Marine Environments

BIO 4443 AND 4441, Comparative Animal Physiology and Laboratory

An individual course cannot be used as both a required course and an elective.

4-5

Sub-total 81

Total Required Hours: 120

CURRENT VERSION (pg. 473):

**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.

**BIO 4302. Aquatic Entomology Laboratory** Four hours per week. Special course fees may apply. To be taken concurrently with BIO 4301.

**BIO 4311. Fisheries 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.

**BIO 4312. Fisheries Biology Laboratory** Four hours per week. To be taken concur­rently with BIO 4311. Special course fees may apply.

**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.

**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 instructor permission. Dual listed BIO 5333. Spring.

**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.

**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 4354. Mammalogy** Evolution, phylogenetics, biogeography, structure, ecology, taxonomy, and field techniques of mammals. Special course fees may apply. Lecture three hours and lab three hours per week. Prerequisites, “C” or better in both BIO 1301 and BIO 1303.

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

**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.

**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 instructor permission.

**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.

**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.

REVISED VERSION:

**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.

**BIO 4302. Aquatic Entomology Laboratory** Four hours per week. Special course fees may apply. To be taken concurrently with BIO 4301.

**BIO 4311. Fisheries 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.

**BIO 4312. Fisheries Biology Laboratory** Four hours per week. To be taken concur­rently with BIO 4311. Special course fees may apply.

**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.

**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 instructor permission. Dual listed BIO 5333. Spring.

**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.

**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 4354. Mammalogy** Evolution, phylogenetics, biogeography, structure, ecology, taxonomy, and field techniques of mammals. Special course fees may apply. Lecture three hours and lab three hours per week. Prerequisites, “C” or better in both BIO 1301 and BIO 1303.

**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.

**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.

**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.