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ATTACHMENT A

PROPOSAL FOR COURSE CHANGE

To: Curriculum Committee

From: Department of Biological Sciences

Date submitted: October 8, 2007

Request for: Course addition

Submitted by: Dr. Elisabeth Brennan, Assistant Professor of Wildlife Science

Approved by: Department Head: Charlin Hagen Allohoon Gammiz Aliodis Dean of School Reviewed by: Registrar:

Vice President:

I. Catalog description: (AS IT WILL APPEAR IN THE CATALOG).

Number: FW 4054/5054

Title for Catalog: Waterfowl Ecology and Management

*Title for Course Inventory (30 characters): Waterfowl Ecology & Management

Description: Ecology and management of North American waterfowl and their habitats. Laboratory exercises will focus on identification, life histories, sex and age determination, and abundance survey methods. Lectures and discussions will cover behavioral ecology, reproductive ecology, winter ecology, harvest management, and habitat management and conservation. Lecture three hours, laboratory two hours.

Prerequisites: BIOL/FW 3114 (Ecology)

Effective date or term: As soon as possible.

*Course fees: \$10.00 laboratory fee.

II. Justification and feasibility of course:

A. What is the need for this course? Who will take it?

This course was piloted as Advanced Topics in Fisheries and Wildlife (FW 4884/5884) during the spring semester 2007. We suggest that this course become a permanent 4-credit offering (FW 4054/5054) within the Fisheries and Wildlife Science (F&W) Program. It is designed for upper-level undergraduate and graduate

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students. One of the primary purposes of this class is to increase course options for students pursuing a Master's degree in the F&W program. Also, during program **assessment** and particularly the exit exam, many undergraduates have suggested the program would benefit from increasing the diversity of course offerings. Waterfowl are of major ecological and economic importance in Arkansas; however, currently there are no classes offered at universities within Arkansas that specialize in waterfowl ecology. This class will help address this deficiency and educate future resource managers and wildlife biologists on waterfowl ecology. Moreover, the class fulfills one of the certification requirements required for certification as a professional wildlife biologist (as administered by The Wildlife Society).

B. How does it relate to other work being offered by your department? Is there an overlap with other courses in the department?

The proposed course will build off of general concepts and ideas presented in Principles of Ecology (BIOL/FW 3114) and Wildlife Management (FW 4003) but will involve a more in-depth and specialized application of these ideas, particularly as they relate to waterfowl. The proposed course will not overlap with other classes offered by the department.

C. Is this course part of any general plan of development within your department? Explain.

Fisheries and Wildlife Program faculty recognized the need to offer additional graduate-level courses for M.S students since that program was approved in 2000. This course should help satisfy this need. Because of this need, the faculty specifically recruited a faculty member with an area of expertise that complimented those of existing faculty members. The proposed course offering fits directly into the developmental plan of the F&W program by increasing course offerings for F&W majors while providing an opportunity for specialized instruction in waterfowl ecology.

D. How often will the course be offered?

This course will be taught each spring semester.

E. How will the course be staffed?

A faculty member (e.g., Dr. Brennan) from the Fish and Wildlife program will teach this course.

F. How will this course change affect other departments' students and offerings? With what other departments have you specifically consulted?

This new course is not expected to have any impacts on other departments; however, it was considered to be particularly useful for students in the Fisheries and Wildlife Science Program.

III. Integration with Program Assessment

Faculty members in the F&W Program annually assess student learning by administering an exit exam (Major Field Tests, Educational Testing Service). In addition, the F&W faculty administers a comprehensive final exam to all graduating seniors as a part of program assessment. To integrate the proposed course into assessment procedures, new questions pertaining to waterfowl ecology and management will be developed and included in the comprehensive final exam. This class also requires student presentations, which F&W faculty will be invited to attend as part of overall measurement of proficiency identified in the assessment plan.

List Department Head/ Program Director Consulted: (Add to list as needed) Indicate Support for Proposal (yes)no)

AStoch

Date:

1. Dr. Joe Stoeckel, Director Fisheries and Wildlife Science Program

10/08/07

Waterfowl Ecology and Management (FW 4054/5054)

Instructor: Dr. Lisa Brennan (356-2018) ebrennan@atu.edu

Course Description: Ecology and management of North American waterfowl and their habitats. Laboratory exercises will focus on identification, life histories, sexing and aging techniques, and survey methods. Lectures and discussions will cover behavioral ecology, reproductive ecology, winter ecology, harvest management, and habitat management and conservation. Lecture 3 hours, Laboratory 2 hours.

- Lecture Text: Baldassarre, G. A. and E. G. Bolen. 2006. Waterfowl Ecology and Management, 2nd ed. Kreiger Publishing, Malabar, Florida. 567 pp.
- Laboratory Text: Bellrose, F. C. Ducks, Geese and Swans of North America, 3rd ed. Stackpole Books, Harrisburg, Pennsylvania. 540 pp.

Course Justification: This course is designed as an upper-level elective for Fisheries and Wildlife Majors. Pre-requisites include successful completion of BIOL/FW 3114 (Ecology).

Bibliography:

- Batt, B.D., A. D. Afton, M.G. Anderson, C.D. Ankney, D.H. Johnson, J.A. Kadlec, and G.L Krapu. 1992. Ecology and Management of Breeding Waterfowl. University of Minnesota Press, Minneapolis, Minnesota. 634 pp.
- Carney, S.M. 1992. Species, Age and Sex Identification of Duck Wings Using Wing Plumage. U. S. Fish and Wildlife Servive, Department of the Interior. 144 pp.
- Smith, L.M, R.L. Pederson, and R.M. Kaminski. 1989. Habitat Management for Migrating and Wintering Waterfowl in North America. Texas Tech University Press, Lubbock, Texas. 560 pp.

Weller, M.W. 1988. Waterfowl in Winter. University of Minnesota Press, Minneapolis, Minnesota. 624 pp.

Course Objectives: Upon successful completion of this course, students will be able to:

1) Understand the basic principles of waterfowl ecology, management, and conservation

2) Identify most species of North American waterfowl by sight, sound or wing.

3) Incorporate broader ecological principles into the management and conservation of waterfowl

4) Understand how management techniques can be used to enhance wetlands to meet the behavioral and physiological of waterfowl throughout their annual cycle **Assessment Methods**: Grades will be computed based on approximately 575 points from three lecture exams (including the final exam), two lab exams, homework/computer assignments, and a student presentation and discussions in lab. Grades will be determined as a straight percentage; i.e. 90-100 A, 80-90 B, 70-80 C, 60-70 D, <60 F.

Total	575 points
Presentations	50
Participation	25
Homework	50
Lab Exam II	75 points
Lab Exam I	75 points
Final Exam	100 points
Exam II	100 points
Exam I	100 points

Student presentations: You will each be responsible for giving a 15 minute presentation on an in-depth topic of waterfowl ecology. You should clear the topic with me. You will choose a scientific paper on your topic for the class to read and after your presentation, lead a 10 minute class discussion on the paper and topic. Grades will be assessed based on your professional performance in the presentation/discussion and by the evaluation of your class members (as well as myself).

Example Lecture Schedule:

Month	Day	Торіс	Chapter Reading
January	19	Phylogeny and Classification	2
	22	Survey of Anseriformes	
	26	Survey of Anseriformes	
	29	Biogeography and distribution	
February	2	Mating systems	3
	5	Pairing and courtship	3
	9	Spacing patterns	
	-12	Reproductive ecology	4
	16	Foraging ecology	5
	19	Foraging ecology	5
	23	LECTURE EXAM 1	
	26	Incubation	6
March	2	Brood care	6
	5	Brood parasitism	Handout
	9	Molts and plumage	
	12	Migration and movements	Handout
	19	Important wintering areas	7
	23	Winter behavior	
	26	No class – Spring Break	
	30	No class – Spring Break	
April	2	Winter foraging ecology	7
	6	LECTURE EXAM 2	
	9	Waterfowl diseases and parasites	8
	16	Harvest management	8
	20	Moist-soil management	Handout
	23	Greentree Reservoir Management	Handout
	27	Waterfowl policy	11
	30	The Mississippi Alluvial Valley	Handout
May	3	Current Issues in Waterfowl Management	

Example: Lab Schedule

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Month	Day	Торіс	
January	18	Introduction, functional morphology	
	25	Swans, Whistling ducks, Geese	
February	1	Field trip	
	8	Field trip	
	15	Anatini, Aythini	(Presentation topic due)
	22	Oxyurini, Mergini	
March	1	1 FIRST LAB EXAM	
8 Methods lab: trappin		Methods lab: trapping, marking & m	easuring
	15	No class – Wildlife Conclave	
	22	Wing I.D.	
	29	No class – Spring Break	
April	5	Wing I.D.	
	12	SECOND LAB EXAM	
	19	Student Discussions	
	26	Student Discussions	
May	3	Computer Lab	

Karen Riddell

From: Sent: To: Cc: Subject: Charlie Gagen [cgagen@atu.edu] Monday, November 26, 2007 10:52 AM kriddell@atu.edu 'Lisa Brennan' FW 4054

26NOV07

Karen;

This is to confirm the course format for a new FW course, numbered 4054 in waterfowl ecology and management. The format was changed after the original proposal, so to clarify and ink our phone conversation for the new undergraduate catalog draft, our "final answer" is:

Lecture two hours, laboratory four hours.

Thank you for checking.

Charlie

e.c. Dr. Brennan