



The University of Georgia

University Council
Athens, Georgia 30602

September 19, 2008

UNIVERSITY CURRICULUM COMMITTEE – 2008-2009

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Undergraduate Student Representative – Ms. Jamie Beggerly

Graduate Student Representative – Ms. Amrita Veliyath

Dear Colleagues:

The attached proposal to offer the major in Fisheries and Wildlife (B.S.F.R.) will be an agenda item for the September 26, 2008, Full University Curriculum Committee meeting.

Sincerely,

David E. Shipley, Chair
University Curriculum Committee

cc: Dr. Arnett C. Mace, Jr.
Professor Jere W. Morehead



The University of Georgia

Ronald L. Hendrick, Ph.D.
Daniel B. Warnell School of Forestry and Natural Resources
Forestry, Wildlife, Water and Soil Resources, Fisheries and Aquaculture,
Natural Resource Recreation and Tourism
Office of the Associate Dean for Academic Affairs

10 September, 2008

Prof. David Shipley, Chair
University Curriculum Committee
116B Franklin House
Campus

Dear Professor Shipley,

The Warnell School of Forestry and Natural Resources proposes a new undergraduate major in Fisheries and Wildlife. This new major will combine two existing undergraduate majors within Warnell—the BSFR in Fisheries and Aquaculture and the BSFR in Wildlife. The new, combined major will provide students a more integrated perspective on the management of vertebrate and invertebrate animal populations in both terrestrial and aquatic habitats than is currently provided by the two separate majors. Increasingly, fish and wildlife professionals face common challenges, including not only habitat management but also a variety of social, legal, and policy issues associated with developing management recommendations for land managers and owners and elected decision makers.

The subject matter areas for the proposed major represent professional disciplines recognized and certified by two professional societies—the American Fisheries Society (AFS) and The Wildlife Society (TWS). Accordingly, students will be allowed to specialize under the Fisheries and Wildlife Major by selecting one of two areas of emphasis—Aquatic Sciences or Wildlife Sciences. Upon completing their studies, students would receive a BSFR degree with a major in Fisheries and Wildlife, awarded through the Warnell School. The new major requires no additional faculty, staff, laboratory or classroom resources. We will submit the necessary paperwork to terminate the existing Fisheries and Aquaculture and Wildlife majors once the new joint major has been approved.

Please feel free to contact me if I can provide you with any additional information.

Sincerely,

Ronald Hendrick, Professor
Associate Dean for Academic Affairs

PROPOSAL

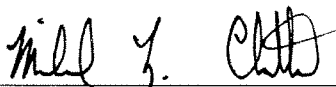
Activate a New Undergraduate Major in

Fisheries and Wildlife

at the University of Georgia Athens Campus

from

Warnell School of Forestry and Natural Resources



Michael L. Clutter, Dean
Warnell School of Forestry and Natural Resources

9-4-2008

Date

The University System of Georgia

PROPOSAL TO ACTIVATE A NEW UNDERGRADUATE DEGREE PROGRAM

Institution: **The University of Georgia** *Date:* **August 29, 2008**

Department/School/College: **Warnell School of Forestry and Natural Resources**

Name of Proposed Program: **N/A** *Degree:* **BSFR**

Major: **Fisheries and Wildlife** *Proposed Starting Date:* **Fall 2009**

Contacts:

Robert J. Warren, Professor, Warnell School of Forestry and Natural Resources
Ronald L. Hendrick, Associate Dean, Warnell School of Forestry and Natural Resources

Program description and objectives:

The Warnell School of Forestry and Natural Resources (Warnell School) at the University of Georgia (UGA) proposes a new undergraduate major in Fisheries and Wildlife. This major has no direct counterpart anywhere in Georgia and responds to continuing needs in the state, region, nation, and world for fisheries and wildlife professionals. The Fisheries and Wildlife Major will prepare students for careers in state and federal government agencies, consulting firms, professional organizations, and educational institutions. This new major will combine two existing undergraduate majors within the Warnell School—the BSFR in Fisheries and Aquaculture and the BSFR in Wildlife. The new, combined major would provide students a more holistic perspective on the management of vertebrate and invertebrate animal populations in both terrestrial and aquatic habitats than is currently provided by the two separate majors.

Students will be allowed to specialize under the Fisheries and Wildlife Major by selecting one of two areas of emphasis—Aquatic Sciences or Wildlife Sciences.

The Fisheries and Wildlife Major would prepare students to work in positions dealing with the assessment and management of fish and wildlife populations and their habitats. Whether in terrestrial or aquatic environments, the management of these resources requires fish and wildlife professionals to draw upon concepts from population ecology that are applicable to all animal populations and their habitats. Increasingly, there are challenges facing fish and wildlife professionals that are common to both disciplines. These include common ecological challenges associated with maximizing habitat availability and suitability for a particular species or an entire wildlife community. These also include common social, legal, and policy challenges associated with the development of management recommendations for the public and elected decision-makers.

The subject matter areas for this proposed new major represent professional disciplines recognized and certified by two professional societies—American Fisheries Society (AFS; www.fisheries.org) and The Wildlife Society (TWS; www.wildlife.org). Courses included within the Fisheries and Wildlife Major provide critical experiences and learning opportunities for students in a diverse group of subjects, all of

which are required for certification by AFS or TWS (see Appendix I), and which are essential for successful career placement, development, and advancement. The degree will require 123 hours to complete with the final two years of coursework performed on UGA's Athens campus. Students will transfer into the major following the completion of the Regents' core curriculum and specific courses currently required for majors in the Warnell School.

This new major would combine two existing majors at UGA; therefore, new faculty or other resources would not be required. There are no additional facility costs associated with the new major, because these requirements are currently being met by the two separate majors. Upon completion of their studies, students would receive a BSFR degree with a major in Fisheries and Wildlife, awarded through the Warnell School.

Justification and need for the program

1. Societal need for graduates prepared by this program.

Fish and wildlife resources have long provided a number of market and nonmarket values to American society. Early in the history of the United States, our courts established the legal authority and responsibility of our state and federal governments to manage and conserve fish and wildlife resources in trust for the public. State and federal agencies annually establish policies and regulations to help them to fulfill their public trust. The Wildlife Resources Division under the Georgia Department of Natural Resources (www.georgiawildlife.org) is responsible for the conservation and management of fish and wildlife resources at the state level. The U.S. Fish and Wildlife Service (www.fws.gov/georgia) is responsible for federal-level programs pertaining to fish and wildlife in Georgia. These agencies, as well as numerous conservation organizations, consulting firms, and private companies, frequently have need to employ professionally trained fish and wildlife biologists and managers. Here are the websites for three national jobs boards that list numerous positions available for graduates from the proposed new Fisheries and Wildlife Major:

<http://joomla.wildlife.org/jobs/>
<http://www.fisheries.org/afs/index.html#jobs>
<http://wfsc.tamu.edu/jobboard/index.htm>

2. Student demand for the program.

Georgia has many colleges and universities that graduate thousands of students with associate degrees, all of which fulfill the Board of Regents' criteria. A number of these associate degrees are designed to allow for transfer into a baccalaureate degree program. At least 23 of the colleges and universities in Georgia offer pre-forestry and pre-natural resource majors at the associate degree level, which could serve as preparation for the Warnell School's Fisheries and Wildlife Major at the Athens campus of UGA.

Furthermore, the recent enrollments of undergraduate students in the two separate majors are sufficient to justify the combined major. During the academic years of 2002–2006, the number of students majoring in Wildlife or Fisheries and Aquaculture has averaged 79/year, which represents an average of 56% of the professional student enrollments in the Warnell School. All future students who would have matriculated into the two separate majors will be required to enroll in the new Fisheries and Wildlife Major.

3. Additional reasons that make the program desirable.

The current fisheries and wildlife programs in the Warnell School are well-recognized regionally, nationally, and internationally. All of the fisheries and wildlife faculty members have active research programs, which include both on-campus studies with captive fish and wildlife, as well as extensive field research at sites throughout the state and region in both aquatic and terrestrial environments. Most of these faculty members also are involved in active service and outreach programs, which require them to advise and educate the general public (i.e., work within the context of the “real-world” challenges and opportunities facing fish and wildlife professionals). Thus, the education that our undergraduate students receive will benefit from exposure to the latest research findings and exposure to timely issues that are important to the general public. Hence, students in the Fisheries and Wildlife Major will be well-prepared for their careers as fish or wildlife professionals.

Furthermore, the subject area for this major is important to our state. Georgia has several professional and nongovernmental organizations that work actively in the areas of fish and wildlife conservation, which reflects the interests of our citizens and the value that they place on this disciplinary area. Indeed, the national headquarters for the nearly 50,000-member Quality Deer Management Association (www.qdma.org) is located in Bogart, Georgia, near UGA’s Athens Campus. Several of these organizations have even established endowed scholarships within the Warnell School to help support undergraduate students majoring in Fisheries and Aquaculture or Wildlife. Here is a list of some of these organizations:

- UGA Fisheries Society - www.uga.edu/ugafish
- UGA Chapter of TWS - <http://warnell.forestry.uga.edu/warnell/tws>
- Georgia Chapter of AFS - www.uga.edu/ugafish/ga-afs/home.htm
- Georgia Chapter of TWS - www.uga.edu/twsga
- Georgia Council of Trout Unlimited - www.georgiatu.org
- Georgia Bass Federation - www.gabassfed.org
- Georgia Wildlife Federation - www.gwf.org
- Georgia Ducks Unlimited - www.ducks.org/states/37/index.html
- Georgia Outdoor News - www.gon.com
- The Georgia Conservancy - www.gaconservancy.org
- Atlanta Audubon Society - www.atlantaaudubon.org

4. Reports of advisory committees and consultants.

Not available.

5. List all public and private institutions in the state offering similar programs.

There are no comparable programs to the proposed BSFR—Fisheries and Wildlife Major at UGA in the state. Abraham Baldwin Agricultural College (ABAC) offers a two-year, Wildlife Technology Degree in Tifton, Georgia (<http://www.abac.edu/ag/Degree%20Programs.cfm>). Also, North Georgia Technical College offers an Associate of Applied Technology Degree in Clarksville, Georgia, which includes coursework in fisheries and wildlife management (<http://www.northgatech.edu/programs/environmental/degree.html>). However, neither one of these programs meets the certification requirements of AFS or TWS (see Appendix I).

Procedures used to develop the program

Initial discussions regarding the combined Fisheries and Wildlife Major were held with UGA's Senior Vice President for Academic Affairs and Provost. Thereafter, several faculty and administrators of the Warnell School developed this proposal, which was subsequently approved by the Warnell School faculty on August 15, 2008.

Curriculum (123 hours)

Major: Fisheries and Wildlife - See Appendix II for examples of the Pre-professional and Professional Programs of Study.

1. Pre-professional requirements (60 hours)
 - Area A – Essential Skills (9 hours)
 - English Composition I, ENGL 1101, 3 hours
 - English Composition II, ENGL 1102, 3 hours
 - Precalculus, MATH 1113, 3 hours
 - Area B – Institutional Options (4-5 hours)
 - Satisfied by electives selected by the student with approval of academic advisor
 - Area C – Humanities/Fine Arts (6 hours)
 - Satisfied by electives selected by the student with approval of academic advisor
 - Area D – Science, Mathematics, and Technology (12 hours)
 - Select two courses from the four-hour science course list, 8 hours (Recommend Principles of Biology I, BIOL 1107/1107L, 4 hours **and** Freshman Chemistry I, CHEM1211/1211L, 4 hours)
 - Select one course from the mathematics, science, or technology list, 4 hours (Recommend MATH 2200, 4 hours)
 - Area E – Social Sciences (12 hours)
 - Principles of Microeconomics, ECON 2106, 3 hours (recommended)
 - American Government, POLS 1101, 3 hours (unless met Georgia and US Constitution requirement) (recommended)
 - Select courses from Area E list, 6 hours
 - Area F – Courses Related to Major (18 hours)
 - Principles of Biology II, BIOL 1108/1108L, 4 hours
 - Freshman Chemistry I, CHEM 1211/1211L, 4 hours
 - Introduction to Public Speaking, SPCM 1100, 3 hours
 - Introductory Statistics, STAT 2000, 4 hours
 - Select one course with approval of academic advisor
2. Warnell School Core (25 hours)
 - Field Orientation, Measurements, and Sampling in Forestry and Natural Resources, FANR 3000/3000L, 4 hours
 - Soils and Hydrology, (FANR)CRSS 3060/3060L, 4 hours
 - Ecology of Natural Resources, FANR 3200/3200L, 4 hours
 - Economics of Renewable Resources, FANR 3300/3300D, 2 hours
 - Society and Natural Resources, FANR 3400/3400D, 2 hours
 - Spatial Analysis of Natural Resources, FANR 3800/3800L, 3 hours
 - Senior Project in Forestry and Natural Resources Management, FANR 4500, 4 hours; **or**
 - Senior Thesis in Forestry and Natural Resources, FANR 4600, 4 hours
 - Renewable Resources Policy, FANR 4800/6800, 2 hours

3. Fisheries and Wildlife Major Requirements (7 hours)
 - Introduction to Fish and Wildlife Management, WILD(FISH) 3000, 2 hours
 - Vertebrate Natural History, WILD(ECOL) 3580/3580L, 5 hours

4. Area of Emphasis Requirements (13-19 hours)
 - A. Aquatic Sciences Requirements (19 hours)
 - Limnology, ECOL(FISH)(WASR) 4310/6310-4310L/6310L, 4 hours
 - Ichthyology, ECOL 4050/6050-4050L/6050L, 4 hours
 - Invertebrate Zoology, ECOL 4070/6070-4070L/6070L, 4 hours
 - Environmental Biology of Fishes, FISH XXXX, 3 hours
 - Fisheries Management, FISH 5360/7360, 3 hours
 - Fisheries Management Laboratory, FISH 5360L/7360L, 1 hour

 - B. Wildlife Sciences Requirements (13-14 hours)
 - Dendrology, FORS 3010-3010L, 3 hours
 - Management of Wildlife Habitat, WILD 4000/6000-4000L/6000L, 4 hours
 - Herpetology, WILD(ECOL) 4040/6040-4040L/6040L, 4 hours; **or** Mammalogy, WILD(BIOL) 4050/6050-4050L/6050L, 3 hours; **or** Field Ornithology, WILD 4060/6060-4060L/6060L, 4 hours
 - Techniques in Wildlife Population Management, WILD 4700/6700-4700L/6700L, 3 hours

5. Restricted Electives (12-18 hours)
 - A. Aquatic Sciences Restricted Electives (12 hours)
 - Satisfied by electives selected by the student with approval of academic advisor

 - B. Wildlife Sciences Restricted Electives (18 hours)
 - Satisfied by electives selected by the student with approval of academic advisor

Inventory of faculty directly involved

There are currently five faculty members on the UGA campus that are involved with the current BSFR—Fisheries and Aquaculture Major (FISH). There are currently ten faculty members on the UGA campus that are involved with the current BSFR—Wildlife Major (WILD). These faculty members are:

<u>Unit</u>	<u>Name (last, first)</u>	<u>Rank</u>	<u>Phone</u>	<u>E-mail</u>
FISH	Bringolf, Robert	Asst. Prof.	542-1477	rbringolf@warnell.uga.edu
	Grossman, Gary	Professor	542-1160	grossman@uga.edu
	Peterson, Douglas	Assoc. Prof.	542-2944	dpeterson@warnell.uga.edu
	Shelton, Jay	Assoc. Prof.	542-3108	jshelton@uga.edu
	Wilde, Susan	Asst. Prof.	542-3346	swilde@warnell.uga.edu
WILD	Carroll, John	Professor	542-5815	jcarroll@warnell.uga.edu
	Castleberry, Steven	Assoc. Prof.	542-3929	scastle@warnell.uga.edu

Cooper, Robert	Professor	542-6066	rcooper@warnell.uga.edu
Hernandez-Divers, Sonia	Asst. Prof.	548-3414	SHernz@aol.com
Maerz, John	Asst. Prof.	542-9094	jmaerz@warnell.uga.edu
Mengak, Michael	Assoc. Prof.	583-8096	mmengak@warnell.uga.edu
Miller, Karl	Professor	542-1305	kmiller@warnell.uga.edu
Schweitzer, Sara	Professor	542-1150	schweitz@warnell.uga.edu
Warren, Robert	Professor	542-6474	warren@warnell.uga.edu
Yabsley, Michael	Asst. Prof.	542-1741	myabsley@uga.edu

Outstanding programs of this nature in other institutions

All states in the U.S. have at least one university that offers undergraduate degrees in fisheries and/or wildlife. Most of these programs are housed at the state's land-grant university. Attached in Appendix III is a detailed listing of all North American colleges and universities that offer undergraduate fisheries degrees or undergraduate wildlife degrees. Many of these universities offer a combined undergraduate fisheries and wildlife degree, as is being requested in this proposal for UGA. Six of the larger U.S. university programs that have a combined fisheries and wildlife program are listed here:

California:

Division of Environmental Sciences, College of Agricultural and Environmental Sciences, University of California, Davis, California 95616; Phone: (530) 754-9796; undergraduate major in Wildlife, Fish, and Conservation Biology; http://admissions.ucdavis.edu/academics/major_view.cfm?major=awfc

Michigan:

Department of Fisheries and Wildlife, College of Agriculture and Natural Resources, Michigan State University, East Lansing, Michigan 48824; Phone: (517) 355-4478; undergraduate major in Fisheries and Wildlife; <http://www.fw.msu.edu/undergraduates/index.htm>

Ohio:

School of Environment and Natural Resources, College of Food, Agricultural, and Environmental Sciences, Ohio State University, Columbus, Ohio 43210; Phone: (614) 292-2265; undergraduate major in Fisheries and Wildlife Management; <http://senr.osu.edu/undergrad/majors.html>

Pennsylvania:

School of Forest Resources, College of Agricultural Sciences, Penn State University, University Park, Pennsylvania 16802; Phone: (814) 863-7093; undergraduate major in Wildlife and Fisheries Science; <http://www.sfr.cas.psu.edu/Wildlife/WildlifeFisheries.html>

Texas:

Department of Wildlife and Fisheries Sciences, College of Agriculture and Life Sciences, Texas A & M University, College Station, Texas 77843; Phone: (979) 845-5768; undergraduate major in Wildlife and Fisheries Sciences; <http://wfscnet.tamu.edu/academics/undergrad/index.htm>

Virginia:

Department of Fisheries and Wildlife Sciences, College of Natural Resources, Virginia Tech University, Blacksburg, Virginia 24061; Phone: (540) 231-5573; undergraduate major in Fisheries and Wildlife Sciences; <http://www.fishwild.vt.edu/>

Inventory of pertinent library resources

No additional library, computer, or instructional resources are needed for this program because the curriculum is composed of existing classes taught on a regular basis.

Facilities

The Warnell School currently has adequate facilities, ample faculty office space, modern classrooms, computer classrooms, and laboratory spaces to offer this new, combined major. Outdoor classroom and laboratory facilities are available at the nearby Whitehall Forest to support the field instruction component of the Fisheries and Wildlife Major. The existing Warnell School Motor Pool has a sufficient number of vans to transport students for required field trips.

Administration

The Fisheries and Wildlife Major will be run under the current administration of the Warnell School of Forestry and Natural Resources.

Assessment

Since this will be a professional degree, the ultimate measure of success will be the effective job placement of graduates from this major.

Accreditation

The professional societies that represent the Fisheries and Wildlife Major (AFS and TWS) do not have established accreditation standards for this major. Both societies have established certification standards for individual graduates, which are detailed in Appendix I. The proposed Fisheries and Wildlife Major will enable our graduates to meet the educational requirements for certification by AFS or TWS.

Affirmative Action impact

The Fisheries and Wildlife Major should have a positive impact on diversity within the Warnell School. Many students interested in this major would originate from urban and suburban communities within Georgia. Thus, the major could provide a positive incentive for women and minority students to enter into the School.

Degree inscription

Upon completion of this program of study, students will receive a BSFR degree with a major in Fisheries and Wildlife, awarded through the Warnell School. (Be sure to include the CIP code for the program.)

Fiscal and enrollment impact, and estimated budget

I.	ENROLLMENT PROJECTIONS	FY2009		FY 2010		FY 2011	
		First Year		Second Year		Third Year	
A.	Student majors						
	1. Shifted from other programs	105		0		0	
	2. New to institution	5		5		6	
	TOTAL MAJORS	110		115		121	
B.	Course sections satisfying program requirements						
	1. Previously existing	77		78		78	
	2. New	1		0		0	
	TOTAL PROGRAM COURSE SECTIONS	78		78		78	
C.	Credit hours generated by those courses						
	1. Existing enrollments	3308		3466		3623	
	2. New enrollments	158		158		189	
	TOTAL CREDIT HOURS	3466		3623		3812	
D.	Degrees awarded	47		49		52	
II.	COSTS	EFT	\$	EFT	\$	EFT	\$
A.	Personnel--reassigned or existing positions						
	1. Faculty	0	0	0	0	0	0
	2. Part-time faculty	0	0	0	0	0	0
	3. Graduate assistant	0	0	0	0	0	0
	4. Administrators	0	0	0	0	0	0
	5. Support staff	0	0	0	0	0	0
	6. Fringe benefits		0		0		0
	7. Other personnel costs		0		0		0
	TOTAL EXISTING PERSONNEL COSTS		0		0		0
B.	Personnel--new positions						
	1. Faculty	0	0	0	0	0	0
	2. Part-time faculty	0	0	0	0	0	0
	3. Graduate assistant	0	0	0	0	0	0
	4. Administrators	0	0	0	0	0	0
	5. Support staff	0	0	0	0	0	0
	6. Fringe benefits		0		0		0
	7. Other personnel costs		0		0		0
	TOTAL NEW PERSONNEL						

	COSTS	0	0	0
C.	Start-up costs (one-time expenses)			
	1. Library/learning resources	0	0	0
	2. Equipment	0	0	0
	3. Other (revised recruitment brochures)	200	0	0
D.	Physical facilities: construction or major renovation	0	0	0
	TOTAL ONE-TIME COSTS	200	0	0
E.	Operating costs (recurring costs--base budget)			
	1. Supplies/expenses	0	0	0
	2. Travel	0	0	0
	3. Equipment	0	0	0
	4. Library/learning resources	0	0	0
	5. Other (_____)	0	0	0
	TOTAL RECURRING COSTS	0	0	0
	GRAND TOTAL COSTS	200	0	0
III.	REVENUE SOURCES			
A.	Source of funds			
	1. Reallocation of existing funds	0	0	0
	2. New student workload	0	0	0
	3. New tuition `	0	0	0
	4. Federal funds	0	0	0
	5. Other grants	0	0	0
	6. Student fees	0	0	0
	7. Other (_____)	0	0	0
	Subtotal	0	0	0
	New state allocation requested	0	0	0
	GRAND TOTAL REVENUES	0	0	0
B.	Nature of funds			
	1. Base budget	_____	_____	_____
	2. One-time funds	_____	_____	_____
	GRAND TOTAL REVENUES	_____	_____	_____

APPENDIX I

Attached, as Appendix I, are the detailed requirements for the certification programs of the American Fisheries Society and The Wildlife Society.

http://www.fisheries.org/afs/docs/edu_professionalcertificationprogram

<http://joomla.wildlife.org/documents/certbook.pdf>

To become certified under these professional programs, a person must meet specific educational and work experience requirements, after which they will be awarded the title Fisheries Professional-Certified (FP-C) or Certified Wildlife Biologist (CWB). A person who has met the educational requirements for certification, but who has not yet met the work experience requirements, can be certified as a Fisheries Professional-Associate (FP-A) or Associate Wildlife Biologist (AWB). The curriculum specified in this proposal for the new Fisheries and Wildlife Major would enable students under the Aquatic Sciences area of emphasis to meet the educational requirements for FP-A. Also, the curriculum specified in this proposal for the new major would enable students under the Wildlife Sciences area of emphasis to meet the educational requirements for AWB.

AMERICAN FISHERIES SOCIETY CERTIFICATION PROGRAM - 2008

Revised Professional Certification Program Table of Contents

Introduction

Program History

Certification Description

Minimum Degree and Experience Requirements for Certified Fisheries Professionals

Education Requirements (Required for FP-A and FP-C status)

Description of Course Categories

Professional development (required for new and renewing FP-Cs)

Category I. Continuing education—fisheries

Category II. Continuing education—nonfisheries

Category III. Oral communications in fisheries and nonfisheries subjects

Category IV. Written communications

Category V. Service

Certification Renewal

Reference

Acknowledgements

Introduction

A fisheries professional is an individual with specialized education in the sciences and technologies involving the structure, dynamics, and interactions of habitat, aquatic organisms, and humans. He or she may be a generalist in fisheries resource management or a specialist in one or more allied disciplines, such as aquatic biology, limnology, oceanography, aquaculture, biometrics, physiology, pathology, genetics, economics, and engineering among others. Although areas of specialization may be varied, the individual's professional responsibilities must involve fish. Fisheries professionals are dedicated to high quality service and the achievement of specific goals and objectives. They promote conservation--optimization of benefits for society while maintaining the integrity, diversity, and sustainability of aquatic systems--through research, education, management, and administration. Fisheries professionals strive for high standards of competence and integrity in order to establish mutual confidence and respect and to bring credit to their profession, employer, and community.

Certification is widely practiced by the professions as one means of setting standards and guidelines for professional competence. It serves to upgrade the professional image and is a mark of accomplishment. Certification also is a mechanism to demonstrate responsible peer evaluation. The specific objectives of certification are as follows: (1) to provide governmental and nongovernmental agencies and organizations, private firms, courts, and the general public with a definitive standard of experience and education for fisheries professionals; and (2) to foster broader recognition of fisheries professionals as well-educated and experienced, acting in the best interest of the public.

The American Fisheries Society has worked to advance conservation of fishes and aquatic resources in North America for more than a century. With more than 8,000 members, the society promotes educational, scientific, and technological development of all facets of fisheries science and management.

Program History

The Certification Program of the American Fisheries Society got its start at the AFS 93rd Annual Meeting in 1963, when attendees approved suggested standards developed by the Professional Standards

AMERICAN FISHERIES SOCIETY CERTIFICATION PROGRAM - 2008

Committee. Although the Certification Program has been modified and refined several times (Hutchcroft 1999), the most significant changes were adopted by the AFS Governing Board at its midyear meeting in March 1997 (Adelman et al. 1997). These changes included the integration of a re-certification requirement for all FP-C professionals. Program implementation began July 1, 1998 and was complete on July 1, 2002. This document describes the current certification program, including minor changes adopted by the AFS Governing.

Certification Description

The American Fisheries Society (AFS) offers professional certification to anyone who meets specific education and experience requirements. Three tiers of certifications are available:

{mospagebreak}

Tier I - Fisheries Professional Associate (FP-A) - an applicant who satisfies coursework degree requirements (indicated below) but has insufficient or no experience may become an Associate Fisheries Professional;

Tier II - Fisheries Professional Certified (FP-C) - in addition to satisfying coursework and degree requirements, an applicant must have the requisite number of years of qualifying experience and the requisite number of professional development quality points (PDQPs) to become a Certified Fisheries Professional;

Tier III - Fisheries Professional Emeritus (FP-E) - an applicant who has held the FP-C designation for at least twenty (20) years (need not be consecutive) and is employed less than full time or is retired, may become a Fisheries Professional Emeritus (FP-E). This allows them to maintain their FP-C status without the renewal requirement.

Although the same application form is used for FP-A or FP-C, applicants must designate their choice of the certification for which they are applying. If uncertain (because of coursework variances, questions about qualifying/non-qualifying experience, professional development, etc.) as to the tier for which they qualify, a third choice may be indicated. This choice means that the applicant accepts the level of certification (FP-A or FP-C) granted by the AFS after its review.

There is a separate application for FP-E. Applicants for FP-E must verify their employment status and information on their status as FP-C.

Associate Fisheries Professional certification may be retained for a maximum of eight (8) years, at which time the requirements for a Certified Fisheries Professional must be met and applied for in order to retain any AFS certification. The FP-A must submit a new application with all requested information, with the exception of the course list and transcripts (unless further education has been acquired).

Certification renewal was added to the program with the 1998 revision. To retain competency in any field, professionals must remain active in that field and stay abreast of current developments. Most other professional fields that have a certification or licensing program require periodic recertification to demonstrate continued professional competency. Therefore, through renewal, certified fisheries professionals are required to demonstrate continued enhancement of knowledge and skills throughout their career. Every five years an FP-C must submit evidence of continued activity and professional development to maintain their certification.

Minimum Degree and Experience Requirements for Certified Fisheries Professionals

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The number of years of full-time qualifying experience required is dependent on the highest level of education acquired by the applicant.

Degree	Experience Requirements
Bachelor of Science, Bachelor of Arts or equivalent degree	five years of full-time qualifying experience, post-bachelor's degree.
Master of Science, Master of Arts or equivalent degree	four years of full-time qualifying experience, post-bachelor's degree.
Doctor of Philosophy or equivalent degree	two years of full-time qualifying experience, post-bachelor's degree.

Qualifying experience is that in which the candidate applies current knowledge in the fisheries sciences within the context of fisheries management, research, education, or administration. Qualifying experience generally requires that the candidate use independent judgment and action. Because the fisheries profession is so varied in specialization, identifying qualifying experience cannot be easily generalized. Below are types and examples of qualifying experience in each area:

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Management involves the application of fisheries science principles (e.g. population dynamics, aquatic biology, limnology, habitat assessment and manipulation, human dimensions, fish culture, biometrics) toward the accomplishment of specific fisheries management goals and objectives. The candidate should have responsible charge or supervision over the planning, implementation, and assessment of projects. Responsible charge or supervision is defined as the direction of work such that the successful completion of the work is dependent on decisions made by the professional with limited oversight, direction, or approval of others. Projects include recreational and commercial fisheries investigations and management, fish culture, environmental assessment, habitat restoration or enhancement, and fish disease management. Qualifying experience requires that the candidate use independent judgment and action.

Research involves responsible charge or supervision of field or laboratory fisheries research projects. Qualifying experience includes oversight responsibility for design, implementation, analysis, and report writing. Research projects should either be published in a recognized peer reviewed journal or used by the employer for the purpose of improved scientific methodology, regulatory decision-making, or resource management practices.

Education involves college-level teaching of various facets of fisheries management, research, and administration. Education may also involve development and delivery of educational programs in fisheries for dissemination to the general public or particular stakeholders.

Administration involves direct-line authority over other fisheries professionals engaged in activities or programmatic responsibilities over activities that qualify for certification described under headings of management, research, and education given above. Candidates must have responsibility and decision-making authority of such magnitude as district, regional, statewide, or national fisheries programs. Independent judgment and consequences of actions must be present.

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Education Requirements (Required for FP-A and FP-C status)

Subject Area	Graduate before July 1, 2002*	Graduate after July 1, 2002
A. Fisheries and Aquatic Sciences.	Four (4) courses; two of which must be directly related to fisheries science.	Four (4) courses; two of which must be directly related to fisheries science and at least one must cover principles of fisheries science and management. 12 semester or 18 quarter hours
B. Other Biological Sciences.	When added to the above courses must total 30 semester or 45 quarter hours.	When added to the above courses must total 30 semester or 45 quarter hours.
C. Physical Sciences.	Must total 15 semester or 22 quarter hours.	Must total 15 semester or 22 quarter hours.
D. Mathematics and Statistics.	Must include college algebra or calculus and one course in statistics. 6 semester or 9 quarter hours.	Must include one calculus and one statistics or two statistics courses. 6 semester or 9 quarter hours.
E. Communications.	Must total 6 semester hours.	Must total 9 semester or 13 quarter hours. Three semester or five quarter hours may be taken in communication intensive courses if officially designated as such by the college or university.
F. Human Dimensions.		6 semester or 9 quarter hours

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* The revised educational requirements for certification apply to those who complete their B.S./ B.A. (or equivalent) degree on or after July 1, 2002. Those who graduated prior to that date will be evaluated based on the earlier criteria regardless of when they apply for certification. Those graduating on or after July 1, 2002 may only apply under the new criteria. Applicants who graduated prior to July 1,2002 may choose to apply under either criteria. In no case may applicants select parts from each system.

A minimum grade of C is required to receive credit. If courses are taken as pass/fail (S/N or P/F), the applicant must provide a course syllabus that indicates that an S or P grade is equivalent to a C or better.

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Because university programs at non-U.S. institutions sometimes differ in the structure of their courses and curricula, applicants with courses from such institutions will be evaluated on an individual basis. There may be occasions when the Certification Board will not be able to accept these courses from non-U.S. institutions.

Individuals who have established themselves as active fisheries professionals may become Certified Fisheries Professionals without satisfying the minimum course requirements. In such cases, qualification for the FP-C is based solely on experience and professional development. The experience requirement is five years of full-time qualifying experience with a Ph.D. (or equivalent), seven years with an M.S. or M.A. (or equivalent) or nine years with a B.S. or B.A. (or equivalent). The professional development requirement is 40 PDQPs over the previous two years or 100 PDQPs over the five years prior to application. The education-dependent experience requirement was implemented July 1, 1998, before then it required 20 years of full-time qualifying experience to waive coursework requirements.

Description of Course Categories

The Fisheries and Aquatic Sciences category must include four (4) courses related to understanding or manipulating aquatic ecosystems. Courses such as fisheries science, limnology, oceanography, fisheries management, ichthyology, aquaculture or fish culture, taxonomy of aquatic organisms, and aquatic ecology are acceptable. Courses such as vertebrate biology, wildlife management, ornithology, general ecology, etc. do not belong in this category. The course designated as fulfilling the principles of fisheries science/management requirement must include fisheries population dynamics and habitat assessment and management. It must be an upper division course (i.e. junior, senior, or graduate level), must be at least 3 semester or 4 quarter hours. All combined fisheries and wildlife courses, count as if they were 100% fisheries.

Physical Sciences category courses include chemistry, physics, soils, geology, hydrology, earth science, astronomy, and meteorology.

Mathematics and Statistics category courses must include one course each in calculus and statistics or two statistics courses.

The Communications category includes courses such as composition, technical writing, and verbal communication. Literature, foreign language, other humanities courses, and seminars do not count. Communications-intensive courses are defined as those whose primary subject matter is not communications but which have intensive communications requirements and are officially designated as such by the university. "Officially designated" means that the university has a formal listing of courses as "communications intensive" or a similar title, and that certain criteria have been met by those courses to receive such designation. Officially designated communications-intensive courses, credited in this category, may also be counted in another category. For example, if a fisheries management course is designated as communications intensive, the course may count for full credit in both the Fisheries and Aquatic Science category and the Communications category.

Human Dimensions category courses deal with social aspects of natural resource science and management. They include courses such as named courses in human dimensions of natural resources and

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courses in policy, planning, administration, law, ethics, public relations, leadership, conflict resolution, natural resource economics, etc. if related to natural resource management. Introductory social science courses, such as sociology and psychology, do not qualify. Courses in this group may be double-counted as fulfilling course requirements in the Fisheries and Aquatic Sciences category but the credit hours must be apportioned between the two categories based on the percentage time devoted to the human dimensions topic.

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Professional development (required for new and renewing FP-Cs)

Professional development is required of all FP-Cs to keep abreast of developments in the field and to ensure continued enhancement of knowledge and skills throughout their career. Consequently, an FP-C must submit evidence of professional development activities to achieve and maintain certification.

A point system is used to evaluate professional development. Prior to initial certification as an FP-C and every five years thereafter, an FP-C must submit evidence of continued activity and development by accumulating a minimum number of professional development quality points (PDQPs). Whereas a minimum number of PDQPs must be obtained in activity Categories I and II (continuing education), the remaining PDQPs must be distributed among at least two of the remaining three activity categories. These categories and specific activities within the categories are listed below.

Summary of PDQP distribution among categories for certification renewal.

Category	PDQP Requirements
I or II	Minimum 35, maximum 60, combined
III	Maximum 35
IV	Maximum 35
V	Maximum 35
Total	Minimum 100

Professional development should be undertaken through a variety of activities. The minimum requirement in Category I or II combined is to insure that a portion of the PDQPs are acquired through continuing education as opposed to professional activities. The maximum requirements in the other categories insure that some PDQPs are obtained in at least three categories.

PDQPs are required to both achieve and maintain status as an FP-C. PDQPs are not required to achieve FP-A status because only formal education is needed. At the time of application for the initial FP-C, the

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candidate must have accumulated 30 PDQPs during the previous two years. These must be accumulated in at least two of the five categories. If the first-time applicant for the FP-C category is an established professional (education requirements waived), then she/he must accumulate 40 PDQPs during the previous two years in at least two categories or 100 PDQPs over the previous five years, distributed as per the table above. To maintain FP-C status, 100 PDQPs must be accumulated, as per the table above, during the previous five years and an application for certification renewal must be submitted during the fifth year after previous certification.

Category I. Continuing education—fisheries

Includes subjects directly related to fisheries science or management. Examples include fisheries management, habitat management, fisheries economics, fish diseases, aquaculture or fish culture, fisheries policy and law, aquatic ecology, etc.

The following activities all count for 0.5 PDQPs per hour

Participation in short-courses or training programs sponsored or conducted by commercial organizations, professional organizations/agencies, employers, or universities.

Attendance at annual or semiannual meetings or special conferences of professional societies, educational organizations, etc.

Attendance at in-house meetings of employer involving education on new techniques or developments in the profession.

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Completion of self-instruction audiovisuals.

Attendance at seminars conducted by experts in the subject.

Category II. Continuing education—nonfisheries

Includes subjects that are not primarily fisheries oriented but are professionally enriching to the individual. Examples include computer science and statistics, managerial and leadership skills, public speaking, problem-solving, public relations, marketing, planning, and other related natural resource disciplines such as forestry, wildlife, etc.

The following activities all count for 0.5 PDQPs per hour

Participation in short courses or training programs sponsored or conducted by commercial organizations, professional organizations/agencies, employers, or universities

Attendance at annual or semi-annual meetings or special conferences of professional societies, educational organizations, etc.

Attendance at in-house meetings of employers involving education on new techniques or developments in the profession

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Completion of self-instruction audiovisuals

Attendance at seminars conducted by experts in the subject

Category III. Oral communications in fisheries and nonfisheries subjects

Includes the development, preparation, and presentation of activities such as those described in categories I and II. Context is any public meeting that is open to the general public or a select group of invited participants. For fisheries subjects, the audience need not be fisheries professionals. For nonfisheries subjects, the audience must be fisheries professionals. Multiple presentations of the same or similar subject matter can only be credited once during a certification renewal period.

Activity	PDQPs
Author/coauthor of an oral or poster presentation at a professional meeting	7
Author/coauthor of an oral or poster presentation to a nonprofessional audience	7
Organizer/instructor of a short course or workshop	20
Instructor of a quarter- or semester-length course	10 points per credit, maximum 30
Author/producer of self-instruction audiovisuals in fisheries	20

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Category IV. Written communications

Developing, writing, editing, reviewing, and publishing fisheries-oriented materials. The written material need not be published, but it must be readily available to professional and nonprofessional audiences.

Activity	PDQPs
Author/coauthor of peer-reviewed article or book chapter	15
Author/coauthor of a book/monograph	30
Editor/coeditor of a book/monograph	15

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Author/coauthor of non-peer-reviewed article in a magazine, brochure, newspaper, etc.	7
Author/coauthor of an agency publication or report	10
Reviewer or editor of an article that has been submitted for publication	3
Book reviewer for a professional publication	

Category V. Service

Involves membership and active participation in fisheries or aquatic professional societies and organizations, and community service that draws on the individual's professional expertise in fisheries. Community service may include contributions of professional expertise to civic groups, environmental organizations, government, etc. Points are given for each year served in multiple-year appointments.

Activity	PDQPs
Holding the highest office in an organization (including subdivisions), (e.g., president, director, chair, journal editor, etc.)	15
Holding the other offices in an organization (including subdivisions), (e.g., secretary, treasurer, associate editor, newsletter editor, Committee chair, etc.)	10
Committee member	4
Mentor in the Hutton Junior Fisheries Biology Program	10

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Certification Renewal

FP-C applicants will be provided with a Professional Development Activity Form for documenting professional development activities for certification renewal. Notification of the need for certification renewal will be sent to each FP-A and FP-C not less than 12 months prior to the renewal date. Applicants are responsible for maintaining their own records and for verifying the accuracy of these records if requested to do so. Copies of meeting agendas, certificates, registrations, etc. should be retained, so they can be supplied if requested. Applicants are encouraged to document activities which they believe most clearly fit the criteria, up to a maximum of 125 points. While the AFS Professional Code of Ethics is

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operative in maintaining the integrity of documentation, the AFS may request verification to insure process validity. Denial of certification renewal may be appealed to the Board of Appeals. The applicant should prepare an appeal only if additional information or further clarification of previously stated facts is provided.

In July 1998, all certified fisheries professionals were notified regarding their date for certification renewal. One-third was required to renew in 2001, one-third in 2002, and one-third in 2003. Currently, the program is fully implemented with all certified fisheries professionals having to renew every five years. The application for renewal must be submitted in the calendar year the current certification expires. If not renewed by the end of the expiration year, a \$10 per year fee will be added to the renewal fee for each year that certification has lapsed. Renewal will be based on the most recent 5 years.

Reference

Adelman, I. R., M. L. Armstrong, T. L. Close, W. J. Daley, H. L. Forsgren, P. C. Jacobson, S. L. McMullin, R. A. Rosen, C. G. Scalet, and A. V. Zale. 1997. The revised American Fisheries Society Professional Certification Program. *Fisheries* 22(8):11-15.

Hutchcroft, L. The AFS Certification Program: History and Evolution. *Fisheries* 24(8):30.

Acknowledgements

This article is a revision of the original Adelman et al. (1997) article. As such, most of the credit for authorship should be given to them. We have simply updated that article to reflect minor changes in the program made since that time. We appreciate a review provided by J. Kershner.

THE WILDLIFE SOCIETY CERTIFICATION PROGRAM - 2008

**The Wildlife Society
PROGRAM FOR CERTIFICATION OF
PROFESSIONAL WILDLIFE BIOLOGISTS**

(Valid thru 31 December 2008)

The Wildlife Society, a nonprofit, scientific and educational organization devoted to stewardship and enlightened appreciation of wildlife and its environments, is committed to the premise that these objectives can be achieved best with the guidance of well-educated, experienced, and dedicated wildlife biologists. The Wildlife Society has sought to promote and strengthen professional standards in all activities devoted to wildlife resources. To this end, the Society has developed a professional certification program designed to evaluate the education and professional experience of wildlife biologists.

A professional wildlife biologist is a person with demonstrated expertise in the art and science of applying the principles of ecology to the sound stewardship and management of the wildlife resource and its environment. An applicant for professional certification who demonstrates this expertise through education and experience and is judged to be able to represent the profession as an ethical practitioner will be designated as a Certified Wildlife Biologist.

Many professional disciplines have contributed to the creation of today's wildlife biologist, and certification requirements need to encompass the full breadth of the wildlife field. However, it is vital that those criteria distinguish a wildlife biologist from professionals in other fields, including those disciplines that have a stake in wildlife resources. Some natural resource professionals do not meet the criteria for certification as wildlifers, but this fact does not diminish their important contributions.

Strict application of rigidly defined criteria would be detrimental to the continuing evolution of the wildlife biologist profession. The certification requirements are structured to demonstrate the special expertise required to practice as a wildlife professional. If an applicant does not meet the specified minimum requirements, a Certification Review Board (CRB), composed of highly qualified wildlife biologists, *must* determine whether the applicant's education, experience, and professional contributions satisfy the *intent* of the established minimum requirements.

The program for certification of wildlife biologists is a service provided by The Wildlife Society for its members, as well as nonmembers and the public, who may desire a peer evaluation statement. Certification constitutes recognition by The Wildlife Society that, to its best knowledge, an applicant meets the minimum educational, experience, and ethical standards adopted by the Society for professional wildlife biologists. Certification does not constitute a guarantee that the applicant meets a certain standard of competence or possesses certain knowledge.

The Wildlife Society has established the following objectives, rules, and procedures for certification and the administration of the program. The Society will maintain, annually update, and disseminate a registry of Certified Wildlife Biologists. An appropriate schedule of fees ensures that the program is financially self-sustaining. Certification applications are available from: The Wildlife Society, Inc.,
5410 Grosvenor Lane, Bethesda, MD 20814-2144; 301-897-9770.

<http://www.wildlife.org/>

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I – OBJECTIVES

The primary objective of The Wildlife Society certification program is to provide public and private clients and employers more positive access to professional advice in matters concerning wildlife resources. Specific goals include:

- To guide biologists, governmental agencies, courts, and the public in defining minimum standards of education and experience for professional wildlife biologists, and to encourage all practicing wildlife biologists to meet such standards.
- To create and maintain public confidence in the advice and opinions of Certified Wildlife Biologists as well educated and experienced professionals who have pledged to uphold the Code of Ethics and the Standards for Professional Conduct of The Wildlife Society and to act in the best interest of wildlife resources and the public.
- To assist the public in evaluating wildlife biologists by establishing a procedure for critical peer evaluation based upon defined minimum educational, experience, and ethical requirements.

II - CERTIFICATION CATEGORIES

Application for certification may be made in one of two categories:

Certified Wildlife Biologist (CWB)--Persons who have completed acceptable educational and experience requirements.

Associate Wildlife Biologist (AWB)--A preliminary step designed for persons who have completed the educational requirements, but not the experience requirements.

III - REQUIREMENTS FOR ELIGIBILITY

A. Education

The educational requirements were approved initially by The Wildlife Society membership. Subsequent educational requirements were approved by the Council of The Wildlife Society.

The Council shall review the educational requirements at least once every five (5) years and may revise the requirements as necessary. Once certified, wildlife biologists currently are not required to conform to changes in educational requirements resulting from future revisions.

However, all applicants for Certified Wildlife Biologist status after 31 December 1999 (except Associate Wildlife Biologists upgrading to Certified Wildlife Biologist) must renew their certification every 5 years by completing a minimum of 80 hours of Organized Activities (Category I) in The Wildlife Society's Professional Development Program.

It is the applicant's responsibility to provide full documentation of education. Each applicant must submit original or certified transcripts documenting completion of the educational requirements.

All courses must be taken for credit and passed (i.e., D or better or a "Pass" in the case of pass-fail). When course titles do not describe content, a written description or course syllabus must be provided. In addition, applicants must provide catalog or

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own word course description wherever specified and as needed to demonstrate content relevant to the requirement category.

Applicants who do not clearly meet the stated minimum educational requirements, but believe they satisfy their intent, must submit detailed documentation of comparable qualifications. For continuing education or professional experience to substitute for educational requirements, the applicant must have at least one college or university course (at least 3 semester hours documented on a college transcript) in that educational category. To meet requirements, applicants may split and distribute credits in a course with broad coverage to two (2) categories where course content is appropriate; for example, 5 credit hours in general biology may be used to satisfy up to 2.5 credit hours in zoological courses and up to 2.5 credit hours in botany. Similarly, 4 credit hours in general genetics may be used to satisfy up to 2 credit hours in zoological courses and up to 2 credit hours in botany.

The smallest unit of credit that may be distributed is one semester hour and applicants must provide documentation supporting the credit distribution for each course that is split. Full course credits can not be listed or counted in more than one category.

College credits taken outside the United States often vary from the American system. Canadian and other non-U.S. applicants must organize and present course titles, credits, and contents in the format listed below to facilitate evaluation. When the educational program differs considerably from the American system, applicants must present a detailed description of courses taken and the credits obtained. Wildlife graduates and scientists from all countries are invited to apply for certification.

Applicants must have completed a course of study in a college or university leading to a Bachelor of Science, or Bachelor of Arts, or equivalent, or higher degree, and should have the following, or equivalent, course work (see paragraphs 2, 3, and 4 on Page 1) listed below:

1. Biological Sciences: Thirty-six (36) semester hours* in biological sciences are required and must include courses in the following subcategories (Note: the sum of hours required in subcategories a-e is 33; the remaining 3 hours may be in any of these five subject areas):
 - a. Wildlife Management: Courses emphasizing the principles and practices of wildlife management. **Course descriptions are required** and should demonstrate training in understanding and manipulating habitat relationships and population dynamics in the context of objectives and influences established by human concerns and activities. Conservation biology courses count if they contain a specific focus on management and decision making (6 hours).
 - b. Wildlife Biology: Courses in the biology and behavior of birds, mammals, reptiles, or amphibians. **Course descriptions are required**. Courses should demonstrate training in understanding the biology of wildlife species and their habitat relationships as the basis for management and must include at least one course dealing **solely** with the science of mammalogy, ornithology, or herpetology. Ichthyology, marine biology (except courses focusing on marine mammals or reptiles), microbiology, entomology, or related courses will not count in this category, but will qualify in the Zoology category (6 hours).

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- c. Ecology: Courses in general plant or animal ecology (excludes human ecology). **Course descriptions are required** (3 hours).
 - d. Zoology: Courses in the taxonomy, biology, behavior, physiology, anatomy, and natural history of vertebrates and invertebrates. **Course descriptions are required.** Courses in genetics, nutrition, physiology, disease, and other biology or general zoology courses are accepted. Ichthyology or fisheries biology courses are accepted (9 hours).
 - e. Botany: Courses in general botany, plant genetics, plant morphology, plant physiology, or plant taxonomy (9 hours). **Course descriptions are required. At least one course must deal with plant taxonomy or identification.**
2. Physical Sciences: Nine (9) semester hours in physical sciences such as chemistry, physics, geology, or soils, with at least two disciplines represented.
 3. Quantitative Sciences: Nine (9) semester hours in quantitative sciences that must include:
 - a. Basic Statistics: A course in basic statistics (3 hours). **Course description is required.**
 - b. Quantitative Sciences: Courses in calculus, biometry, advanced algebra, systems analysis, mathematical modeling, sampling, computer science, or other quantitative science. **Course descriptions are required.** Introductory GIS courses and introductory personal computing courses do not count in this category (6 hours).
 4. Humanities and Social Sciences: Nine (9) semester hours in humanities and social sciences, such as economics, sociology, psychology, political science, government, history, literature, or foreign language.
 5. Communications: Twelve (12) semester hours in courses designed to improve communication skills such as English composition, technical writing, journalism, public speaking, or use of mass media. **Course descriptions are required.** A maximum of three (3) semester hours each will be allowed for a completed Master's thesis and Ph.D. dissertation. Courses in literature interpretation, foreign languages, classes requiring a term paper, class projects, and seminars in non-communication courses will not count toward this category.
 6. Policy, Administration, and Law: Six (6) semester hours in courses that demonstrate significant content or focus on natural resource policy and/or administration, wildlife or environmental law, or natural resource/land use planning will apply; as will courses that document contributions to the understanding of social, political and ethical decisions for wildlife or natural resource management. **Course descriptions are required.** Up to three (3) semester hours in classes dealing with human dimension issues may count in this category depending on course content. Conservation Biology courses that effectively integrate legal and policy aspects of conservation planning will count toward this category. Courses that are tools supporting professional practice, e.g., photogrammetry, Land-Sat mapping, GIS techniques, or more general courses such as environmental science, resource management, law

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enforcement, criminology, political science, and introductory survey courses in conservation will not apply.

Credit Hours. The educational requirements are expressed in semester hours. One semester hour usually reflects one lecture hour or 3 laboratory hours of instruction per week for a 16- week term. One quarter hour normally equals 0.67 semester hours. Applicants for certification who attended educational institutions that grant credits in different units must convert their credits to semester hours according to definitions above. For example, in many Canadian universities a one-credit course meets 3 hours per week for 2 terms and thus equals 6 semester hours. The Certification Board recognizes that the minimum number of credit hours may not be met exactly in some cases because of differing credits awarded to the same subject at different institutions and/or because of uneven conversions from quarter hours to semester hours.

Professional experience may be used to satisfy the educational requirements where specific deficiencies exist. Examples may include published papers or a completed thesis to meet course requirements in English composition or technical writing. Also, documentation of demonstrated professional competence through experience may meet the requirements for such courses as botany, resource policy, administration, land use planning, or public speaking.

Such documentation should be supported by letters of reference from professional wildlife biologists. In many cases candidates would be best served by preparing a written explanation of why they feel that their formal and continuing education course work and work experience, taken as a whole, qualify them to be certified as a wildlife biologist. In unusual cases a special examination may be required. The form, content, and administration of such an examination shall be at the discretion of the CRB and shall be conducted without discrimination. The CRB shall evaluate the examination and shall determine, in its sole discretion, to grant or deny certification.

B. Experience

In addition to the educational requirements, the Certified Wildlife Biologist must have a minimum of five (5) years of professional experience gained within the ten (10) years prior to applying for certification.

Potentially relevant experience begins following completion of the education requirements which usually coincides with the conferral of the first wildlife-oriented degree at a baccalaureate or higher level. Information regarding pre-degree experience is of interest and value to document the applicant's "intent" to pursue a career as a wildlife biologist; however, it is not creditable for experience as a "practicing professional wildlife biologist."

Professional experience must demonstrate the application of current biological knowledge to problems and programs dealing directly with the wildlife resource (administration, education, research, or management) as a significant portion of job responsibilities. Professional experience provides demonstrated expertise in making decisions in the application of ecology to stewardship and management of the wildlife resource and its environment.

Technician-level work, such as data collection, surveys, and habitat manipulation conducted under existing protocol or under the specific direction of another, is not considered professional-level experience. Identification of professional-level experience will require careful evaluation of each application. Therefore, it is the

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applicant's responsibility to fully document for each experience the percentage of time devoted specifically to activities of a professional wildlife biologist.

Time spent obtaining advanced academic degrees apply toward professional experience subject to the following guidelines:

1. Experience credit normally will be given only upon completion of a degree judged by the CRB as relevant to the wildlife profession.

2. A maximum of one (1) year's credit for a Master's degree, a maximum of two (2) year's credit for the Ph.D., and a maximum of three (3) year's credit for a Master's and a Ph.D.

3. When time intervals for education and employment overlap, a detailed explanation must be provided.

Time credited as experience for practicing professional wildlife biologists is based upon the following guidelines:

1. Partial credit may be granted for experience gained in positions peripheral to wildlife such as forester, range conservationist, soil conservationist, naturalist, environmental specialist, and consultant when a significant portion of the job responsibilities are those expected of a professional wildlife biologist, based upon the following:

a. Applicant's estimate of percent of time devoted specifically to professional wildlife work. (Full-time positions are defined as 40 hours/week.)

b. The smallest component of creditable time is one (1) month.

c. Description of specific duties, responsibilities, and accomplishments as a professional wildlife biologist. A "general job description" will not be acceptable.

d. Working on two (2) or more jobs at the same time does not result in double credit.

2. Experience credit will not be granted for positions such as high school biology teachers, park managers, fisheries biologists, or field or laboratory technicians.

Experience credit also will not be granted for wetland delineation work unless it specifically addresses wildlife management.

3. Up to 12 months of volunteer experience will be credited toward the 5 year experience requirement provided that the position constitutes professional wildlife duties described in this section and is supported by a letter from the supervisor.

4. Experience must be gained within the ten (10) years prior to the date the application is signed.

Certification as an Associate Wildlife Biologist (AWB) is available to an applicant who meets the educational requirements, but not the experience requirements. AWB status may be retained for a maximum of ten (10) years before application for

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certification as a Certified Wildlife Biologist is required. AWB certification will terminate on the tenth anniversary of the date such certification was conferred.

C. Ethical Requirements

All applicants must pledge to uphold and conduct their activities in accordance with the Code of Ethics and the Standards for Professional Conduct as prescribed by The Wildlife Society.

In the event any applicant has engaged in past activity or conduct that the CRB determines violates a provision of the Code of Ethics or Standards for Professional Conduct, or has a criminal record, the CRB shall request The Wildlife Society Council to thoroughly investigate such activity, conduct, or criminal record to determine whether such past activity, conduct, or record shows either a propensity on the part of the applicant to act contrary to the provisions of the Code of Ethics and Standard for Professional Conduct, or a likelihood that such person will act contrary to said Code and Standards in the future, and thereby constitutes grounds for denying certification.

IV - ETHICS AND PROFESSIONAL CONDUCT FOR WILDLIFE BIOLOGISTS

Associate and Certified Wildlife Biologists shall conduct their activities in accordance with the Code of Ethics and the Standards for Professional Conduct as prescribed by The Wildlife Society outlined below.

A. Code of Ethics

Associate and Certified Wildlife Biologists have a responsibility for contributing to an understanding of mankind's proper relationship with natural resources, and in particular for determining the role of wildlife in satisfying human needs. Certified individuals will strive to meet this obligation through the following professional goals: They will subscribe to the highest standards of integrity and conduct.

They will recognize research and scientific management of wildlife and their environments as primary goals. They will disseminate information to promote understanding of, and appreciation for, values of wildlife and their habitats. They will strive to increase knowledge and skills to advance the practice of wildlife management.

They will promote competence in the field of wildlife management by supporting high standards of education, employment, and performance. They will encourage the use of sound biological information in management decisions. They will support fair and uniform standards of employment and treatment of those professionally engaged in the practice of wildlife management.

B. Standards for Professional Conduct

The following tenets express the intent of the Code of Ethics as prescribed by The Wildlife Society and traditional norms for professional service.

Wildlife biologists shall at all times:

1. Recognize and inform prospective clients or employers of their prime responsibility to the public interest, conservation of the wildlife resource, and the environment. They shall act with the authority of professional judgment, and avoid actions or omissions that may compromise these broad responsibilities. They shall respect the competence, judgment, and authority of the professional community.

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2. Avoid performing professional services for any client or employer when such service is judged to be contrary to the Code of Ethics or Standards for Professional Conduct or detrimental to the well-being of the wildlife resource and its environment.
3. Provide maximum possible effort in the best interest of each client/employer accepted, regardless of the degree of remuneration. They shall be mindful of their responsibility to society, and seek to meet the needs of the disadvantaged for advice in wildlife-related matters. They should studiously avoid discrimination in any form, or the abuse of professional authority for personal satisfaction.
4. Accept employment to perform professional services only in areas of their own competence, and consistent with the Code of Ethics and Standards for Professional Conduct described herein. They shall seek to refer clients or employers to other natural resource professionals when the expertise of such professionals shall best serve the interests of the public, wildlife, and the client/employer. They shall cooperate fully with other professionals in the best interest of the wildlife resource.
5. Maintain a confidential professional-client/employer relationship except when specifically authorized by the client/employer or required by due process of law or this Code of Ethics and Standards to disclose pertinent information. They shall not use such confidence to their personal advantage or to the advantage of other parties, nor shall they permit personal interests or other client/employer relationships to interfere with their professional judgment.
6. Refrain from advertising in a self-laudatory manner, beyond statements intended to inform prospective clients/employers of qualifications, or in a manner detrimental to fellow professionals and the wildlife resource.
7. Refuse compensation or rewards of any kind intended to influence their professional judgment or advice. They shall not permit a person who recommends or employs them, directly or indirectly, to regulate their professional judgment. They shall not accept compensation for the same professional services from any source other than the client/employer without the prior consent of all the clients or employers involved.

Similarly, they shall not offer a reward of any kind or promise of service in order to secure a recommendation, a client, or preferential treatment from public officials.
8. Uphold the dignity and integrity of the wildlife profession. They shall endeavor to avoid even the suspicion of dishonesty, fraud, deceit, misrepresentation, or unprofessional demeanor.

V - CERTIFICATION REVIEW BOARD

A Certification Review Board (CRB) shall be comprised of at least five (5) members, chosen to provide equitable representation of The Wildlife Society sections and professional disciplines.

The Board shall determine eligibility of applicants, by majority vote if necessary, and shall have the authority to confer certification as an Associate or Certified Wildlife Biologist.

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Members of the CRB will be appointed or reappointed by the Council of The Wildlife Society for three-year terms. Appointments will be made in successive years to ensure continuity of standards. CRB members normally shall be ineligible for reappointment after two (2) consecutive full terms, except under unusual circumstances when a third term is needed to maintain Board continuity.

Individuals appointed to the Board must exemplify high standards of professional judgment, competence, and integrity, and shall be Certified Wildlife Biologists. The Council shall strive to achieve a balance in the Board's membership which equitably represents the private and public employment, educational, management, research, and international components of the Society's membership. Appointments shall take effect 1 October. Council shall fill vacancies immediately for unexpired terms. Appointees to fill vacant terms will be from Sections of The Wildlife Society and/or from professional disciplines currently not represented on the Board.

The Certification Review Board shall meet at least once annually or more frequently at the request of a majority of the CRB and with approval by the Executive Committee of The Wildlife Society. All reasonable expenses of CRB members shall be reimbursed. A chairman shall be elected annually, prior to 1 October, by majority vote of CRB members. The CRB shall report progress and problems annually to the Council. Board members shall correspond as necessary to ensure equitable and timely evaluation of each applicant. No member of the Board shall discuss at any time a particular application with any person other than a member of the CRB, except to clarify or verify the contents of the application.

Certification normally will be confirmed or denied within six (6) months from the date a complete application is received unless the Board advises the applicant that additional time is needed for review.

An applicant who is denied certification shall be notified in writing by the chairman of the CRB, which notice shall set forth the reasons for denial, and the applicant shall be reimbursed 25 percent of the application fee. Unsuccessful applicants may reapply twelve (12) months after the filing of their previous application.

VI - SCHEDULE OF FEES

Certification is a service extended to qualified wildlife biologists. However, the certification procedure was developed and is administered by The Wildlife Society. Members of the Society subsidize this effort with their volunteer efforts to maintain a viable scientific and educational organization. Nonmembers contribute nothing in this regard; therefore, there is a differential fee for certification. In addition, a monetary incentive is provided to students or recent graduates to apply for certification as an Associate Wildlife Biologist. Once the certification educational requirements are met, applicants for Associate Wildlife Biologist are eligible for the reduced fee structure if they meet one or more of the following criteria:

1. application within six (6) months after graduation with (conferral of) a bachelor's degree that fulfills the certification education requirements,
2. application within six (6) months after the time the degree and certification education requirements have been completed, although the degree has not been conferred,*

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3. application after the bachelor's degree has been awarded but within six (6) months after specific course work requirements for Associate Wildlife Biologist certification have been completed,
4. application during a period of continuous student status in pursuit of an advanced degree beyond a baccalaureate that fulfills the certification educational requirements, and/or
5. application within six (6) months after graduation with the graduate degree or completion of the graduate degree program, although the degree has not been conferred.*

* A confirming letter is required from an appropriate academic official.

The fee structure for certification is:	Member	Nonmember
Certified Wildlife Biologist	\$130	\$500
Associate Wildlife Biologist	\$90	\$300
Associate Wildlife Biologist (meeting fee incentive requirements listed above)	\$70	\$250

To receive the lower fee for members applying for certification as a Certified Wildlife Biologist, the applicant must have been a member of The Wildlife Society for the previous two (2) consecutive calendar years prior to the year of application, as well as a current member of The Wildlife Society in the year of application. Retroactive membership purchase is available. To receive the lower fee for members when applying for certification as an Associate Wildlife Biologist, the applicant currently must be a member of The Wildlife Society.

An Associate Wildlife Biologist may apply for certification as a Certified Wildlife Biologist within the 10-year limit by submitting a fee equal to the difference between the current CWB fee and the AWB fee previously paid. However, no refund will be made to the applicant if the initial AWB fee paid exceeded the CWB fee in effect at the time of application for certification as a CWB.

Fees shall be reviewed periodically and set by the Council of The Wildlife Society at levels sufficient to sustain the program.

VII - APPEALS OF CERTIFICATION DENIAL

Any applicant may appeal the decision of the CRB by submitting a written appeal to the Council of The Wildlife Society (5410 Grosvenor Lane, Bethesda, MD 20814-2144), documenting charges of discrimination or arbitrary and capricious action by the CRB. The Board of Inquiry of The Wildlife Society shall investigate, review its findings with the CRB, and submit a recommendation to the Council. The Council shall decide the final disposition, and so inform the applicant by written notice.

Appeals must be made within one (1) year from the date of denial. Only information on education and experience previously submitted to the CRB will be subject to review by the Board of Inquiry. Submission of new information or additional documentation may invalidate an appeal and require the applicant to file a new application for certification. Therefore, it is incumbent on applicants to fully and completely document their education and experience in their original applications.

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VIII - VIOLATIONS OF PROFESSIONAL STANDARDS

Censure and suspension or revocation of certification for violation of the Code of Ethics or Standards for Professional Conduct as prescribed by The Wildlife Society is a serious matter that reflects unfavorably on the entire profession. Considerable effort must be expended to ensure equitable treatment of all concerned.

The Wildlife Society assumes no liability for charges of misconduct filed by or against an Associate or Certified Wildlife Biologist and the Society provides no financial or legal assistance to either the person(s) bringing a charge of misconduct or the individual charged with misconduct.

A. A charge of misconduct against an Associate or Certified Wildlife Biologist (hereafter referred to as a certified wildlife biologist) may be filed by transmitting to the Board of Inquiry of The Wildlife Society (5410 Grosvenor Lane, Bethesda, MD 20814-2144) a sealed statement of the charge. Such statement shall be accompanied by an affidavit of the complainant setting forth the allegations on which the charge is based, including dates, and the specific conduct involved. The Chairman of the Board of Inquiry shall transmit copies of the charge, affidavit, and supporting documentation to the CRB. The CRB shall review the charge and, within ten (10) days from receipt of the charge, report to the Board of Inquiry its opinion as to whether the charge should be further investigated. The Board of Inquiry shall determine, within twenty (20) days from receipt of the charge, whether an investigation of the charge will be made.

B. If the Board of Inquiry determines that an investigation of the charge should be made, the Chairman of the Board of Inquiry shall notify the certified wildlife biologist of the specific charges filed by forwarding to him/her copies of the charge, affidavit, and all supporting documentation and request him/her to file a written answer with the Board of Inquiry within thirty (30) days. Upon receiving the written answer of the accused certified wildlife biologist, the Chairman shall forward copies of the answer and any supporting documents to the person who filed the charge and request him/her to file a response within thirty (30) days. Upon receipt of a written response from the person filing the charge, the Board of Inquiry shall deliberate and within thirty (30) days from receipt of said response either dismiss the charge or issue a complaint against the accused certified wildlife biologist detailing the charge.

C. If the Board of Inquiry shall issue a complaint, copies shall be sent by certified mail to the certified wildlife biologist and the person who filed the charge. Copies also shall be sent to the President of The Wildlife Society, the President of the Section where the certified wildlife biologist resides, and the Executive Director of The Wildlife Society.

D. Within twenty (20) days of receipt of the complaint, the certified wildlife biologist shall file an answer to the Board of Inquiry. Each allegation in the complaint shall be admitted or denied in the answer. If an allegation is denied, the answer also may include a statement of the certified wildlife biologist's account of the occurrence or circumstances. If the certified wildlife biologist fails to timely answer the complaint, the allegations shall be deemed admitted, unless the certified wildlife biologist shows extenuating circumstances warranting an extension of time. A copy of the answer shall be forwarded by the Board of Inquiry by certified mail to the person filing the charge.

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E. If the certified wildlife biologist's answer denies the allegations and charge in the complaint, the Board of Inquiry, upon thirty (30) days written notice to the person filing the charge and to the certified wildlife biologist, shall hold a hearing at which time the person filing the charge and the certified wildlife biologist may testify and present witnesses to testify and document evidence for consideration by the Board of Inquiry. The person filing the charge and the certified wildlife biologist shall have the right to cross-examine and to be represented by attorneys. After the hearing, the Board of Inquiry shall review the evidence and find the Certified Wildlife Biologist guilty as charged or dismiss the complaint within sixty (60) days. The Board of Inquiry will send written notice of its decision and any disciplinary action to be taken by certified mail to the person filing the charge, the President of The Wildlife Society, the President of the Section where the certified wildlife biologist resides, and the Executive Director of The Wildlife Society. In the event the charge of complaint is dismissed at any stage of these procedures, the certified wildlife biologist may request public disclosure of the dismissed charges and/or removal of all statements and procedural correspondence dealing with the charges and their deliberation from the files of The Wildlife Society. All such documents are to be returned to their respective origins.

F. The certified wildlife biologist shall have the right to appeal the decision of the Board of Inquiry to the Council of The Wildlife Society by filing a written notice of appeal with the Council (5410 Grosvenor Lane, Bethesda, MD 20814-2144) within thirty (30) days from the date of the decision of the Board of Inquiry. The Council shall mail a copy of the notice of appeal to the Board of Inquiry and the person who filed the charge. The Board of Inquiry shall deliver to the Council, within ten (10) days from receipt of the notice of appeal, other evidence submitted to it by the person filing the charge and copies of the answer, documentation, transcript of witnesses' testimony, if any, and any other evidence or memoranda submitted to it by the certified wildlife biologist.

G. The certified wildlife biologist shall file with the Council of The Wildlife Society a memorandum in support of his/her appeal within thirty (30) days from the date he/she filed the notice of appeal. The Council shall forward a copy of the memorandum filed by the certified wildlife biologist to the person filing the charge. The latter may, but is not required to, file a memorandum in opposition to the appeal within thirty (30) days from the date the memorandum of the certified wildlife biologist was mailed to him/her. Upon receipt of the response filed by the person who filed the charge, the Council of The Wildlife Society shall mail a copy to the certified wildlife biologist who shall have twenty (20) days to answer the response from the date it was mailed to him/her. The Council, in its discretion, upon fifteen (15) days written notice, after all memoranda have been filed or time for filing has expired, may hold a hearing at which time the certified wildlife biologist and the person filing the charge, or their counsel, may present oral argument to the Council.

H. The Council within sixty (60) days after the time to file all memoranda has expired, or within sixty (60) days after the presentation of oral argument, whichever shall last occur, shall issue a decision affirming or reversing the decision of the Board of Inquiry and shall mail by certified letter a copy of its decision to the Board of Inquiry, the person filing the charge, and the certified wildlife biologist. If the decision of the Council is to deny the appeal and

THE WILDLIFE SOCIETY CERTIFICATION PROGRAM - 2008

affirm the decision of the Board of Inquiry, the Council also shall set forth in its written decision the disciplinary action to be taken.

I. The disciplinary action that may be taken by the Board of Inquiry or the Council against a certified biologist who has been found by the Board or the Council to demonstrate consistent incompetence and/or be in violation of provisions of the Code of Ethics or the Standards for Professional Conduct of The Wildlife Society shall be censure, suspension of certification for a specified time, or permanent revocation of certification.

Certification Changes

On 1 January 2000 a new certification requirement went into effect. Applicants after 31 December 1999 are required to complete the professional development/certification renewal requirements every 5 years to maintain their certification. Applicants before 31 December are not required (but are encouraged) to periodically complete certification renewal.

Certification Renewal requires the completion of a minimum of 80 contact hours of organized activities (seminars, symposia, short courses, distant learning courses, workshops, training sessions, technical sessions at professional meetings, and regular college courses) during a 5-year period. These organized activities can be in wildlife, related natural resource areas such as forestry or range management, or in other professionally enriching areas.

Specifically, here is how the change affects applicants:

Anyone who applied for certification as a CERTIFIED WILDLIFE BIOLOGIST by 31 December 1999 (and is approved) will not be required, but encouraged, to apply for certification renewal on a voluntary basis.

Anyone who applied for certification as a CERTIFIED WILDLIFE BIOLOGIST by 31 December 1999 (and was approved) will not be required, but encouraged, to apply for certification renewal on a voluntary basis.

Anyone who applies for certification as a CERTIFIED WILDLIFE BIOLOGIST after 31 December 1999 must complete the Professional Development program and apply for certification renewal every 5 years to maintain certification.

Anyone who applied for certification as an ASSOCIATE WILDLIFE BIOLOGIST by 31 December 1999 (and was approved) will have up to 10 years to upgrade to Certified Wildlife Biologist status AND then will be encouraged, but not required, to apply for recertification on a voluntary basis.

Anyone who applies for certification as an ASSOCIATE WILDLIFE BIOLOGIST after 31 December 1999 will have up to 10 years to upgrade to Certified Wildlife Biologist status and then must complete the Professional Development program and apply for certification renewal every 5 years to maintain certification.

APPENDIX II

Attached, as Appendix II, are examples of the Program of Study for the Pre-professional and Professional programs leading to a B.S.F.R. in Fisheries and Wildlife with an Area of Emphasis in Aquatic Sciences or Wildlife Sciences.

Pre-Professional Program of Study

Name:
Intended Major(s):

Student ID:
Email:

Course ID	Requirement	Actual	Grade	Hrs						
Area I: Foundation Courses (9 hours required)										
ENGL 1101	English Composition I			3						
ENGL 1102	English Composition II			3						
MATH 1113	Precalculus			3						
Area II: Sciences (8 hours required)										
CHEM 1211+L	Chemistry I			4						
BIOL 1107+L	Biology I			4						
Area III: Quantitative Reasoning (4 hours required)										
MATH 2200+L	Calculus			4						
Area IV: World Languages and Culture, Humanities and the Arts (12 hours required)										
	World Lang/ Culture Elective			3						
	World Lang/ Culture Elective			3						
	World Lang/ Culture Elective			3						
	Humanities/ Arts Elective			3						
Area V: Social Sciences (9 hours required)										
ECON 2106	Microeconomics			3						
	Elective (rec. HIST 2111/2)			3						
	Elective (rec. POLS 110 1)			3						
Area VI: Courses Related to Major (18 hours required)										
CHEM 1212+L	Chemistry II			4						
BIOL 1108+L	Biology II			4						
SPCM 1100	Public Speaking			3						
STAT 2000	Statistics			4						
	Elective*			3						

*Any course with degree credit for Intended Fisheries, Forestry, and/or Wildlife majors; PHYS 1111+L (Physics I) *required* for Intended Water and Soil Resources majors.

Graduation Requirements	
<input type="checkbox"/>	US Constitution
<input type="checkbox"/>	GA Constitution
<input type="checkbox"/>	History
<input type="checkbox"/>	Phys Ed
<input type="checkbox"/>	English 110 1
<input type="checkbox"/>	English 110 1/ 1102
<input type="checkbox"/>	Regents' Essay
<input type="checkbox"/>	Regents' Reading
<input type="checkbox"/>	Min 2.00 UGA GPA
<input type="checkbox"/>	High School CPC
<input type="checkbox"/>	Cultural Diversity

Notes:

Other Credits:

Registration Time:

Academic Standing:

www.bulletin.uga.edu
www.uga.edu/blacktie (The Key)

Term to Enter Prof Program :

Date to Apply for Prof Program :

July 21, 2008

Advisor: Matthew Head, mhead@smokey.forestry.uga.edu, 542-1133

FISHERIES AND WILDLIFE MAJOR – B.S.F.R.
Warnell School of Forestry and Natural Resources
Approved by Undergraduate Fisheries and Wildlife Faculty - May 12, 2008

I. Required Warnell School Core Courses	Semester Hours
Field Orientation, Measurements, & Sampling	4
Ecology of Natural Resources	4
Soils and Hydrology	4
Spatial Analysis of Natural Resources	3
Economics of Renewable Resources	2
Society and Natural Resources	2
Renewable Resources Policy	2
Senior Project/Thesis	4
Total Warnell Core Credits	25



II. Required Fisheries and Wildlife Courses	Semester Hours
Fish and Wildlife Management	2
Vertebrate Natural History	5
Total Fisheries and Wildlife Courses	7



III. Select an Area of Emphasis
A. WILDLIFE SCIENCES
B. AQUATIC SCIENCES

A. WILDLIFE SCIENCES – AREA OF EMPHASIS:

Required Wildlife Sciences Courses	Hours
Wildlife Management Techniques	3
Ornithology or Mammalogy or Herpetology	3 or 4
Dendrology	3
Wildlife Habitat Management	4
Total Wildlife Sciences Courses	13 or 14

Restricted Elective – Wildlife Biology (select one course, NOT taken above)	
Wildlife Physiology and Nutrition	3
Wildlife Diseases	3
Herpetology	4
Ornithology	3
Mammalogy	3
Animal Behavior	4

Restricted Elective – Habitat (select one course)	
Silviculture	4
Introduction to Wetlands	3
Wildlife Management & Agriculture *	3
Limnology	4

* This course is offered in alternate years only.

Restricted Elective – Population (select one course)	
Wildlife Damage Management	3
Applied Population Dynamics *	3
Nongame & Endangered Species Management *	3
Conservation Genetics	3

Restricted Elective – Field Experience (select one course)	
Field Methods in Wildlife Health, Mgmt. & Res.	2**
Prescribed Fire	2**
Forestry and Natural Resources Internship	3
Field or Research Practicum in For. & Nat. Res.	3
Warnell School Study Abroad/Field Course	3

** If a 2-hour course is selected here, then a 4-hour course is required for another restricted elective.

Restricted Elective – Fisheries (select one course)	
Fisheries Management - Lecture	3
Environmental Biology of Fishes - Lecture (NEW)	3
Conservation Aquaculture (NEW) *	4

Restricted Elective	
Any advisor-approved course	3

B. AQUATIC SCIENCES – AREA OF EMPHASIS:

Required Aquatic Sciences Courses	Hours
Fisheries Management - Lecture	3
Fisheries Management - Lab	1
Ichthyology	4
Invertebrate Zoology	4
Limnology	4
Environmental Biology of Fishes - Lecture (NEW)	3
Total Aquatic Sciences Courses	19

Restricted Elective –Specialized Topic (select one course)	
Conservation Aquaculture (NEW) *	4
Conservation Genetics	3
Ecotoxicology *	3
Applied Population Dynamics *	3

* This course is offered in alternate years only.

Restricted Elective – Wildlife (select one course)	
Wildlife Management Techniques	3
Wildlife Habitat Management	4
Wildlife Damage Management	3
Nongame & Endangered Species Management *	3
Wildlife Physiology and Nutrition	3
Wildlife Diseases	3
Wildlife Management & Agriculture *	3
Herpetology	4
Ornithology	3
Mammalogy	3
Animal Behavior	3

Restricted Elective Courses	
Any advisor-approved courses	6

SUMMARY: B.S.F.R. - FISHERIES AND WILDLIFE

MINIMUM REQUIREMENTS	Area of Emphasis	
	Wildlife Sciences	Aquatic Sciences
Warnell Core Courses	25	25
Required Fisheries and Wildlife Major Courses	7	7
Required Wildlife or Aquatic Sciences Courses	13	19
Restricted Elective Courses	18	12
Subtotal – Professional Courses	63	63
Subtotal – Pre-professional Courses	60	60
TOTAL – Semester Hours with Regents Core	123	123

APPENDIX III

Attached, as Appendix III, are detailed lists of all North American colleges and universities that offer undergraduate fisheries degrees or undergraduate wildlife degrees, as posted on the websites for the American Fisheries Society or The Wildlife Society:

http://www.fisheries.org/afs/docs/edu_evaluatingfisheriesprograms.pdf.

http://joomla.wildlife.org/index.php?option=com_content&task=view&id=144.

NORTH AMERICAN UNIVERSITY FISHERIES PROGRAMS - 2008

Criteria for Evaluating University Fisheries Programs

Fisheries science as a profession is fundamentally based in biological science but also involves many other disciplines. All fisheries professionals must have a broad understanding of the aquatic environment, the functioning of individual animals and their populations, the role of users of aquatic resources, and the responsibilities of fisheries professionals. In addition, competence in oral and written communication, an ability to work well with others, and an understanding of natural resource conservation in the context of other human activities is essential. This brochure has been produced by the American Fisheries Society to help students select university programs that will enable them to qualify for entry-level positions in fisheries. Students desiring to become fisheries professionals should evaluate prospective university programs by how well they address the indicated requirements for entry into the profession.

BASIC QUALIFICATIONS FOR FISHERIES JOBS

All high-quality universities should provide you with a broad education in the humanities and basic sciences, enhance your abilities to be an independent and creative individual, and leave you with a continuing desire for additional education. In addition you should select a university program that provides instruction or experience with the following topics that are desired by employers of entry-level fisheries professionals. All topics listed are not equal; some may be acquired in one lecture or hour of experience, others are acquired over an entire college career. Although the list seems formidable, most high-quality university fisheries programs cover these topics:

- * Physical, chemical, and biological processes (including population, community, and ecosystem processes) in aquatic environments (limnology or marine science, stream ecology)
- * Concepts of natural resources management and related social and economic issues
- * The scientific method, experimental design, and sampling procedures
- * Fish ecology and biology, especially to understand fish growth, environmental requirements, food resources, reproduction, mortality, life history, movement, and distribution
- * Estimation of fish population characteristics and assessment of the impact of fishing on fish populations
- * Fish anatomy/morphology in order to identify species, sexes, and stomach contents; to mark fish; and to use anatomical structures for determining age
- * Fish-sampling methods such as netting, electrofishing, marking/tagging
- * Routine analysis of fish samples for length, weight, age, and sex
- * Routine water-quality analysis and interpretation
- * Identification of common aquatic invertebrates, algae, and vascular plants
- * Library research and information retrieval
- * Oral and written communication, public speaking, and public relations
- * Basic statistics, word processing and computer analysis, management, and summarization of data
- * Fundamentals of budget preparation, management, and employee supervision

Students who satisfy these requirements will qualify for most entry-level fisheries positions requiring a bachelor's degree. Some of this education and training may be obtained in course work, laboratory exercises, university-sponsored intern programs with employers, and part-time employment. You should select a university that provides field courses in the curriculum and promotes the opportunity for students

NORTH AMERICAN UNIVERSITY FISHERIES PROGRAMS - 2008

to work with faculty and graduate students on research projects and with agencies on internships.

OTHER QUALIFICATIONS

Many employers also look for other important skills not typically obtained as part of the university education:

- * Operation, routine maintenance, and simple repairs of vehicles, boats, and boat motors
- * Construction skills (electrical, mechanical, carpentry, plumbing)
- * Fishing and outdoor living skills
- * First-aid skills

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MASTER'S DEGREE

Individuals with master's degrees frequently apply for entry-level positions and tend to be more competitive than those with bachelor's degrees. University graduate programs in fisheries do not typically require undergraduate degrees in fisheries. Students with science-based undergraduate degrees may pursue a fisheries career by obtaining a master's degree in fisheries. A master's degree program should provide greater depth of understanding of the items listed for the bachelor's degree, as well as the following:

- * Experience in the design, implementation, and evaluation of fishery management and research programs
- * Knowledge of the design and implementation of fish population and community surveys
- * Ability to write technical and scientific reports and publications

SPECIALIZATION

Many fisheries professionals choose to specialize in certain areas related to fisheries. Two areas in which bachelor's degree graduates may find entry-level positions are water quality and aquaculture (fish culture/hatchery management).

Water Quality

If you want to specialize in water quality, make sure the university program can offer you education in the following topics in addition to many of those above:

- * Environmental toxicology
- * Environmental assessment principles and procedures
- * Environmental laws and regulations
- * Pollution abatement methods
- * Analytical chemistry principles and procedures
- * Watershed management
- * Basic hydrology and hydraulic engineering

Fish Culture

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If you wish to specialize in fish culture, make sure the university program can provide you with classroom or laboratory training in:

- * Principles and operation of aquaculture systems including water-quality management
- * Reproduction, selective breeding, genetic principles, and artificial spawning techniques
- * Common fish diseases and treatment techniques
- * Fish behavioral responses in aquaculture systems
- * Basic nutrition
- * Harvest techniques
- * Microeconomics and marketing
- * Laws and regulations pertaining to aquaculture
- * Hatchery and business management techniques

Examples of other fisheries specializations include fish health, genetics, and physiology, as well as fisheries statistics, bioengineering, and socioeconomics. These specializations are typically achieved by obtaining an advanced degree after acquiring the basic fisheries background. In some cases, individuals who have obtained their primary education in the specialization apply that expertise to fisheries problems.

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QUESTIONS YOU SHOULD ASK

There are a number of questions that students should ask to determine whether a university program is likely to provide them with the required knowledge and abilities for the general or specialized fisheries positions.

- * Does the university teach the courses required for professional certification?
- * Does the content of the fisheries/aquatics courses cover the topics needed to qualify for entry-level positions?
 - * Are intern programs, field courses, and relationships with natural resource management agencies sufficient for students to gain practical experiences?
 - * Are the fisheries faculty active in research, and do they provide students with opportunities for research experience and interaction with graduate students?
 - * Do the faculty publish research articles and maintain membership in the American Fisheries Society and other aquatics-oriented professional societies so that they are up-to-date on advances in the profession?
 - * Is there a fisheries student organization to provide opportunities outside of the classroom for interaction among students with common interests?
 - * Are there several fisheries scientists on the faculty to provide students with a broad spectrum of views?
 - * Are class sizes small, and are there good opportunities to interact with faculty on a formal and informal basis?
 - * What is the program's record in placing students in fisheries/aquatics jobs?

Availability of these opportunities in a university program does not ensure a high-quality education, but their absence is likely to result in a less-than-satisfactory education

NORTH AMERICAN UNIVERSITY FISHERIES PROGRAMS - 2008

FISHERIES-RELATED PROGRAMS AT NORTH AMERICAN COLLEGES AND UNIVERSITIES

Schools are listed alphabetically, by state and then by institution. Departments offering named degree(s) in fisheries are indicated by * preceding the institution name, while + indicates the presence of a Cooperative Fishery Research Unit at that institution. Many other institutions offer program options in fisheries under another named degree (e.g., biology, wildlife, marine affairs, forestry, or natural resources). The number of faculty listed includes only faculty in the named department with fisheries-related teaching/research interests. Prospective students should contact departments directly to ascertain present program structure and emphasis. Website addresses are included where available.

ALABAMA

* *+Auburn University, Department of Fisheries & Allied Aquaculture, Auburn, AL 36830. BS, MS, PhD; 30 Faculty. Email: icaae@acesag.auburn.edu; Web: <http://www.ag.auburn.edu/dept/faa/>

* University of Alabama, Biology Department, University, AL 35486. BS, MS, PhD; 3 Faculty. Web: <http://www.as.ua.edu/biology/>

* University of South Alabama, Department of Biological Sciences, Life Sciences Building, Room 124 Mobile, AL 36688-0002. BS, MS; 4 Faculty. Web: <http://www.southalabama.edu/biology/>

ALASKA

* *Sheldon Jackson College, Division of Science & Mathematics, Sitka, AK 99835. BS; 10 Faculty. Contact: Mel Seifert; Phone: (907) 747-5253 Fax: (907) 747-5254; e-mail: ms@sj-alaska.edu; Web: <http://sj-alaska.edu/index.htm>, <http://www.sheldonjackson.edu/>

* *+University of Alaska, School of Fisheries & Ocean Sciences, Fairbanks, AK 99775. BS, MS, PhD; 25 Faculty. Email: fysfos@uaf.edu Web: <http://www.sfos.uaf.edu/fishdiv/{mospagebreak}>

ARIZONA

* Arizona State University, Department of Biology, Tempe, AZ 85287-1501. BS, MNS, MS, PhD; 6 Faculty. Contact: Paul C. Marsh; Phone: (602) 965-2977; Fax: (602) 965-2519; e-mail: fish.dr@asu.edu; Web: <http://lsvl.la.asu.edu/biology/>

* *+University of Arizona, School of Renewable Natural Resources, Tucson, AZ 85721. BS, MS, PhD; 3 Faculty. Web: <http://www.srn.arizona.edu/>

ARKANSAS

* *Arkansas Tech University, Fisheries & Wildlife Biology Program, Russellville, AR 72801. BS; 3 Faculty. Contact: Dr. Charles Gagen; Phone: (501) 964-0814; Fax: (501) 964-0814; e-mail: charlie.gagen@mail.atu.edu; Web: <http://pls.atu.edu/biosci/fw/index.htm>

* University of Arkansas, Department of Environmental Health Science, Little Rock, AR 72204. BS; 2 Faculty. Web: <http://www.ualr.edu/~ehsp/>

* University of Arkansas, Forest Resources Department, Monticello, AR 71655. BS; 1 Faculty. Web: <http://www.afrc.uamont.edu/sfr/index.htm>

NORTH AMERICAN UNIVERSITY FISHERIES PROGRAMS - 2008

* *University of Arkansas at Pine Bluff, Aquaculture/Fisheries Center, Mail Stop 4912, Pine Bluff, AR 71601 BS, MS 15 Faculty. Web: <http://www.uaex.edu/aqfi/>; Email: fisheries@uaex.edu

* +University of Arkansas, Department of Biological Sciences, Fayetteville, AR 72701. BS, MS, PhD; 4 Faculty. Web: <http://biology.uark.edu/bisc.html>

CALIFORNIA

* *California Poly State University, Natural Resources Management Department, San Luis Obispo, CA 93407. BS, MS; 6 Faculty. Web: <http://urbanfor.cagr.calpoly.edu/nrm/>

* California State University-Sacramento, RLS Department, 6000 J Street, Sacramento, CA 95819. BS, BA, MS, MA; 7 Faculty. Contact: Cary Goulard; Phone: (916) 278-6880; Fax: (916) 278-5053; e-mail: goulardc@csus.edu; Web: <http://www.hhs.csus.edu/RLS/>

* *+Humboldt State University, Department of Fisheries, Arcata, CA 95521. BS, MS; 8 Faculty. Contact: David Hankin; Phone: (707) 826-3683; Fax: (707) 826-3682; e-mail: dhg1@axe.humboldt.edu; Web: www.humboldt.edu/~fish

* San Diego State University, Department of Biology, San Diego, CA 92182 BS, BA, MS, MA, PhD; 1 Faculty. Web: <http://www.bio.sdsu.edu/>

* San Francisco State University, Department of Biological Science, San Francisco, CA 94132. BS, BA, MA; 1 Faculty. Web: <http://www.sfsu.edu/~biology/>

* San Jose State University, Department of Biological Sciences, 1 Washington Square, San Jose, CA 95192. BA, BS, MA, MS; 1 Faculty. Contact: Jerry J. Smith; Phone: (408) 924-4855; Fax: (408) 924-4840; e-mail: Jsmith@Biomail.sjsu.edu; Web: <http://www.sjsu.edu/depts/Biology/>

* *University of California, Department of Wildlife & Fisheries Biology, Davis, CA 95616. BS, MS, PhD; 4 Faculty. Web: <http://wfc.ucdavis.edu/>

* University of California, Department of Biology, Los Angeles, CA 90024-1606. 2 Faculty. Web: <http://www.obee.ucla.edu>

COLORADO

* *+Colorado State University, Department of Fish & Wildlife Biology, Fort Collins, CO 80523-1474. BS, MS, PhD; 6 Faculty. Web: <http://www.cnr.colostate.edu/FWB/>

CONNECTICUT

* *University of Connecticut, Natural Resources Department, Storrs, CT 06268. BS, MS, PhD; 1 Faculty. Web: <http://www.canr.uconn.edu/hmre/index.html>. College of Agriculture and Natural Resources: <http://www.canr.uconn.edu>
{mospagebreak}

DELAWARE

* Delaware State College, Department of Agriculture & Natural Resources, Dover, DE 19901. BS; 1 Faculty. Web: <http://www.dsc.edu/schools/Agriculture/deptofagri.html>

FLORIDA

NORTH AMERICAN UNIVERSITY FISHERIES PROGRAMS - 2008

* Florida Atlantic University, Department of Biological Science, Boca Raton, FL 33431. MS; 1 Faculty. Web: <http://www.fau.edu/divdept/biology/>

* Florida Institute of Technology, Department of Biological Sciences, 150 W University Boulevard, Melbourne, FL 32901. MS, PhD; 20 Faculty. Contact: Dr. Jon Shenker; Phone: (407) 674-8145; e-mail: shenker@fit.edu; Web: <http://www.bio.fit.edu/>

* *+University of Florida, School of Forest Resources & Conservation, Gainesville, FL 32611. MS, MFRC, PhD; 10 Faculty. Web: <http://www.sfrc.ufl.edu/>

* The University of Florida, Department of Fisheries and Aquatic Sciences, <http://fishweb.ifas.ufl.edu/>

* +University of Miami, Rosentiel School of Marine & Atmospheric Studies, 4600 Rickenbacker Causeway, Miami, FL 33149. BS, BA, MS, MA, PhD; 20 Faculty. Contact: Susan MacMahon, Director of Graduate Studies; Phone: (305) 361-4155; Fax: (305) 361-4771; e-mail: gso@rsmas.miami.edu; Web: <http://www.rsmas.miami.edu>

* University of South Florida, Biology Department, 4202 E Fowler Avenue, Tampa, FL 33620-5150. BS, MS, PhD; 35 Faculty. Contact: Dr. Philip Motta; Phone: (813) 974-2878; Fax: (813) 974-3263; Web: <http://www.cas.usf.edu/biology/index.html>

* University of West Florida, Biology Department, Pensacola, FL 32504. BS, MS; 8 Faculty. Web: <http://uwf.edu/biology/>

GEORGIA

* *+University of Georgia, School of Forest Resources, Athens, GA 30602. MS, PhD; 6 Faculty. Web: <http://www.uga.edu/wsfr/>

HAWAII

* +University of Hawaii, Department of Zoology, Honolulu, HI 96822. MS, PhD; 3 Faculty. Web: <http://www2.hawaii.edu/natsci/#Departments>

IDAHO

* Idaho State University, Department of Biological Sciences, Pocatello, ID 83209. BS; 2 Faculty. Web: <http://www.isu.edu/departments/bios/>

* *+University of Idaho, Department of Fish and Wildlife Resources, Moscow, ID 83843. BS, MS, PhD; 8 Faculty. Web: <http://www.its.uidaho.edu/fishwild/>

ILLINOIS

* Eastern Illinois University, Department of Biological Sciences, Charleston, IL 61920. BS; 3 Faculty. Contact: Dr. Robert Fischer; Phone: (217) 581-2817; Fax: (217) 581-7141; e-mail: cfruf@eiu.edu; Web: <http://www.eiu.edu/~biology/>

* Loyola University of Chicago, Department of Biology, Chicago, IL 60626. BS, MS, PhD; 2 Faculty. Web: <http://www.luc.edu/depts/biology/>

* *Southern Illinois University, Department of Zoology, Carbondale, IL 62901. MS, PhD; 8 Faculty. Web: <http://www.science.siu.edu/zoology/index.html>

* Western Illinois University, Department of Biological Sciences, Macomb, IL 61455. 2 Faculty. Web: <http://www.wiu.edu/users/mibiol/>

NORTH AMERICAN UNIVERSITY FISHERIES PROGRAMS - 2008

* University of Illinois, Department of Ecology, Ethology, & Evolution, Urbana, IL 61801. BS, MS, PhD; 3 Faculty. Web: <http://www.life.uiuc.edu/eee/>

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INDIANA

* *Ball State University, Aquatic Biology and Fisheries, Department of Biology, Muncie, IN 47306. BS, BA, MS, MA; 5 Faculty. Contact: Thomas S. McComish; Phone: (765) 285-8845; Fax: (765) 285-8804; e-mail: tmccomis@bsu.edu; Web: <http://www.bsu.edu/UP/cover.html>

* Depauw University, Biological Sciences, Greencastle, IN 46135. BS; 1 Faculty. Contact: James Gammon; Phone: (765) 658-4780; e-mail: jrgammon@depauw.edu; Web: <http://www.depauw.edu>

* *Purdue University, Department of Forestry & Natural Resources, West Lafayette, IN 47907. BS, MS, PhD; 2 Faculty. Web: <http://www.fnr.purdue.edu>

IOWA

* *+Iowa State University, Department of Animal Ecology, Ames, IA 50011. BS, MS, PhD; 7 Faculty. Web: <http://www.ag.iastate.edu/departments/aecl/>

KANSAS

* Emporia State University, Division of Biological Sciences, 1200 Commercial, Emporia, KS 66801. BA, BS, MS; 2 Faculty. Contact: David Edds; Phone: (316) 341-5622; Fax: (316) 341-6055; E-mail: eddsdavid@esumail.emporia.edu; Web: <http://www.emporia.edu/biosci/biology.htm>

* Fort Hays State University, Department of Biological Science, Hayes, KS 67601. BS, MS; 1 Faculty. Fax: (785) 628-4153; Web: <http://www.fhsu.edu/biology/index.html>

* *+Kansas State University, Division of Biology, Manhattan, KS 66506. BS, BA, MS, PhD; 2 Faculty. Web: <http://www.ksu.edu/biology>

* Pittsburgh State University, Department of Biology, Pittsburgh, KS 66762. BA, BS, MS; 2 Faculty. Web: <http://www.pittstate.edu/biol/>

* University of Kansas, Division of Biological Sciences, Lawrence, KS 66045-2106. MA, PhD; 3 Faculty. Contact: Ms. Berry Clemens; Phone: (785) 864-5887; Fax: (785) 864-5321; E-mail: bclemens@falcon.cc.ukans.edu; Web: <http://kuhttp.cc.ukans.edu/cwis/units/biol/biol.html>

KENTUCKY

* *Eastern Kentucky University, Department of Biological Science, Richmond, KY 40475-0950. BS, MS; 6 Faculty. Contact: Dr. Patrick Ceas; Phone: (606) 622-1537; Fax: (606) 622-1020; E-mail: bioceas@acs.eku.edu; Web: <http://www.biology.eku.edu/>

* Morehead State University, Department of Biological & Environmental Sciences, Morehead, KY 40351. BS, MS; 3 Faculty. Web: <http://www.morehead-st.edu/colleges/science/biology/>

* *Murray State University, Department of Biological Sciences, Murray, KY 42071. BS, MS; 4 Faculty. Web: http://www.mursuky.edu/qacd/cos/bio/bio_inf.htm

* University of Louisville, Department of Biology, Louisville, KY 40292. BS, MS, PhD; 6 Faculty. Web: <http://www.louisville.edu/a-s/biology/>

LOUISIANA

NORTH AMERICAN UNIVERSITY FISHERIES PROGRAMS - 2008

* *+Louisiana State University, Department of Biological Sciences, Baton Rouge, LA 70803. BS, MS, PhD; 10 Faculty. Web: <http://www.biology.lsu.edu/>

* Louisiana Technological University, College of Applied and Natural Sciences, PO Box 10138, Ruston, LA 71270. BS, MS; 11 Faculty. Contact: Dr. James Dyer; Phone: (318) 257-4457; Fax: (318) 257-5061; E-mail: jdyer@latech.edu; Web: <http://www.ans.latech.edu/forestry-faculty.html>

* Nicholls State University, Department of Biological Sciences, Thibodaux, LA 70301. BS; Faculty. Web: <http://www.nich.edu/biol/>

* Northeast Louisiana University, Department of Biology, Monroe, LA 71209. BS, MS; 3 Faculty. Web: <http://www.ulm.edu/biology/biology.html>

* Northwestern State University, Wildlife Management Program, Natchitoches, LA 71497. BS, MS; 5 Faculty.

* Southeastern Louisiana University, Department of Biological Sciences, Hammond, LA 70402. BS, MS; 6 Faculty. Web: <http://www.selu.edu/Academics/Depts/Biology/>
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MAINE

* University of Maine, Department of Zoology, Orono, ME 04469. BS, MS, PhD; 4 Faculty. Web: <http://www.umesci.maine.edu/biology/>

NOTE: U. of Maine has a new marine-type school, so above should be completely different.

* University of Southern Maine, Department of Biological Science, Portland, ME 04103. 1 Faculty.

* Unity College, Division of Environmental Programs, Quaker Hill Road, Unity, ME 04988. BS; 2 Faculty. Contact: David S. Potter; Phone: (207) 948-3131

MARYLAND

* *Frostburg State University, Biology Department, Frostburg, MD 21532.

* BS, MS; 3 Faculty.

* *University of Maryland, Appalachian Laboratory, Gunter Hall, Frostburg, MD 21532. PhD; 11 Faculty. Contact: Raymond P. Morgan II or Kenneth R. McKaye; Phone: (301) 689-3115; Fax: (301) 689-8518; Web: <http://www.umces.edu>

MASSACHUSETTS

* Southeastern Massachusetts University, Biology Department, North Dartmouth, MA 02747. BS, MS; 5 Faculty.

* Northeastern University, Marine Science Center, Nahant, MA 01908. BS, MS, PhD; 5 Faculty. Contact: Sal Genovese; Phone: (781) 595-5597; Fax: (781) 581-6076; Email: eastwest@lynx.neu.edu; Web: <http://www.atsweb.neu.edu/msc/mschomepage.html>

* Westfield State College, Department of Biology, Westfield, MA 01085. BS; 2 Faculty.

* *+University of Massachusetts, Department of Forestry & Wildlife Management, Amherst, MA 01003. BS, MS, PhD; 5 Faculty.

MICHIGAN

NORTH AMERICAN UNIVERSITY FISHERIES PROGRAMS - 2008

* Adrian College, Department of Biology, Adrian, MI 49221. 1 Faculty.

* Central Michigan University, Biology Department, Mt. Pleasant, MI 48859. BS, MS; 4 Faculty.

* *Lake Superior State University, School of Natural and Health Sciences, Sault Ste. Marie, MI 49783. BS; 3 Faculty. E-mail: dmyton@gw.lssu.edu Web: <http://www.lssu.edu/academics/science/schools/natural-sciences/default.html>

* *Michigan State University, Department of Fisheries & Wildlife, 13 Natural Resources Building, East Lansing, MI 48824. BS, MS, PhD; 28 Faculty. Contact: William W. Taylor; Phone: (517) 353-0647; Fax: (517) 432-1699; E-mail: taylorw@pilot.msu.edu; Web: <http://www.fw.msu.edu>

* Michigan Technological University, Department of Biological Science, Houghton, MI 49855. 3 Faculty.

* Northern Michigan University, Biology Department, Marquette, MI 49855. BS, MS; 1 Faculty. Contact: Philip A. Doepke; Phone: (906) 227-2812; Fax: (906) 227-1063

* University of Michigan, School of Natural Resources and Environment, Ann Arbor, MI 48109-1115. BS, MS, PhD; 5 Faculty. Contact: James Diana; Phone: (313) 763-5834; Fax: (313) 936-2195; E-mail: jimd@umich.edu; Web: <http://www.snre.umich.edu>

MINNESOTA

* Bemidji State University, Department of Biology, Bemidji, MN 56601. BS; 2 Faculty.

* St. Cloud State University, Math-Science Building, 720 4th Avenue South, St. Cloud, MN 56301-4498. BS; 3 Faculty. Contact: Steve Miller; Phone: (320) 255-2039; Fax: (320) 255-4166; Email: stevev@statecloudstate.edu

* Saint Mary's College, Biology Department, Winona, MN 55987. BA, MS; 3 Faculty.

* University of Minnesota-Duluth, Department of Biology, 10 University Drive, Duluth, MN 55812. BS, MS; 1 Faculty. Contact: Lyle Shannon; Phone: (218) 726-7276; Email: lshannon@d.umn.edu

* *+University of Minnesota, Department of Fisheries & Wildlife, St. Paul, MN 55108. BS, MS, PhD; 9 Faculty.

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MISSISSIPPI

* *+Mississippi State University, Department of Wildlife & Fisheries, Mississippi State, MS 39762. BS, MS, PhD; 7 Faculty.

* University of Southern Mississippi, Department of Biological Science, Hattiesburg, MS 39406-5018. BS, MS, PhD; 18 Faculty.

* University of Mississippi, Biology Department, University, MS 38677. MS, PhD; 5 Faculty.

MISSOURI

* Southwest Missouri State University, Department of Biology, Springfield, MO 65802. BS, BA, MS; 3 Faculty. Contact: Daniel W. Beckman; Phone: (417) 836-5980; E-mail: dw8760f@wpfate.smsu.edu; Web: <http://biology.smsu.edu/>

* *+University of Missouri, School of Forestry, Fisheries & Wildlife, Columbia, MO 65211. BS, MS, PhD; 5 Faculty.

MONTANA

NORTH AMERICAN UNIVERSITY FISHERIES PROGRAMS - 2008

* *+Montana State University, Biology Department, Bozeman, MT 59717.

* BS, MS, PhD; 5 Faculty.

NEBRASKA

* *University of Nebraska, School of Natural Resource Science, 101 Plant Industrial Building, Lincoln, NE 68583-0814. BS, MS, 3 Faculty. Contact: Edward J. Peters; Phone: (402) 472-6824; Fax: (402) 472-2964; E-mail: epeters@unlinfo.unl.edu

NEVADA

* University of Nevada, Department of Biological Science, Las Vegas, NV 89154. BS, MS, PhD; 5 Faculty.

NEW JERSEY

* Rutgers University, Department of Biological Science, P.O. Box 1059, Piscataway, NJ 08854. BA, MS, PhD; 2 Faculty.

NEW MEXICO

* Eastern New Mexico University, Department of Life Science, Portales, NM 88130. BA, BS, MA, MS; 1 Faculty.

* *+New Mexico State University, Department of Fishery & Wildlife Science, Las Cruces, NM 88003-0003. BS, MS; 4 Faculty.

NEW YORK

* City University of New York, Department of Biology, New York, NY 10031. MS, PhD; 4 Faculty.

* +Cornell University, Department of Natural Resources, Fernow Hall, Ithaca, NY 14853. BS, MS, PhD; 7 Faculty. Contact: Charles C. Krueger; Phone: (607) 255-2838; Fax: (607) 255-8837; E-mail: cck4@cornell.edu

* Southampton College, Biology Department, Southampton, NY 11968. BS, BA; 5 Faculty.

* State University College, Biology Department, Oneota, NY 13820. BS, BA, MA; 3 Faculty.

* State University of New York - Brockport, Department of Biological Sciences, Brockport, NY 14420-2973. BS, MS; 2 Faculty. Contact: James M. Haynes; (Phone: (716) 395-5783; Fax: (716) 395-2741; E-mail: jhaynes@acspr1.acs.brockport.edu; Web: <http://www.brockport.edu/biology>

* State University of New York, Biology Department, Fredonia, NY 14063. BS, MS; 2 Faculty.

* State University of New York, College of Environmental Science & Forestry, Syracuse, NY 13210. BS, MS, PhD; 4 Faculty.

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NORTH CAROLINA

* *+North Carolina State University, Fisheries & Wildlife Science Program, Raleigh, NC 27695-7646. BS, MS, PhD; 15 Faculty. Contact: Richard L. Noble, Coordinator; Phone: (919) 515-7586; Fax: (919)

NORTH AMERICAN UNIVERSITY FISHERIES PROGRAMS - 2008

515-5110; Email: richard_noble@ncsu.edu; Web: <http://www.ncsu.edu/ncsu/cals/>

* University of North Carolina at Chapel Hill, Department of Marine Science, 12-7 Venable Hall, CB 3300, Chapel Hill, NC 28599-3300. MS, PhD; 10 Faculty. Contact: Francisco Werner; Phone: (919) 962-1252; Fax: (919) 962-1254; Email: cisco@marine.unc.edu

* Western Carolina University, Department of Biology, Cullowhee, NC 28723. BS, MS; 5 Faculty.

NORTH DAKOTA

* North Dakota State University, Department of Zoology, Fargo, ND 58105-5517. BS, BA, MS, PhD; 2 Faculty. Contact: Criag A. Stockwell; Phone: (701) 231-8449; Fax: (701) 231-7149; Web: <http://www.ndsu.nodak.edu/zoology/>

* *University of North Dakota, Department of Biology, Box 9019, Grand Forks, ND 58201. BS, MS, PhD; 17 Faculty. Contact: Steven W. Kelsch; Phone: (701) 777-4284; Fax: (701) 777-2623; E-mail: kelsch@plains.nodak.edu; Web: <http://www.und.nodak.edu/academics/departments/biology/dept.html>

OHIO

* John Carroll University, Department of Biology, University Heights, OH 44118. 1 Faculty.

* Miami University, Department of Zoology, Oxford, OH 45056. BA, BS, MS, PhD; 4 Faculty.

* *Ohio State University, School of Natural Resources, Columbus, OH 43210. BS, MS; 5 Faculty.

* +Ohio State University, Department of Evolution, Ecology and Organismal Biology, Columbus, OH 43210. BS, MS, PhD; 3 Faculty. Web: <http://www.biosci.ohio-state.edu/~eeob/index.html>

* Ohio State University, Zoology Department, Mansfield, OH 44906. 1 Faculty.

OKLAHOMA

* Northeastern State University, Department of Biological Science, Tahlequah, OK 74464. BS; 3 Faculty.

* *+Oklahoma State University, Zoology Department, Stillwater, OK 74078. BS, MS, PhD; 7 Faculty. Contact: William L. Fisher; Phone: (405) 744-6342; Fax: (405) 744-5006; Email: wfisher@okway.okstate.edu; Web: http://www.okstate.edu/artsci/zoo_home/

* University of Oklahoma, Department of Zoology, Norman, OK 73019. BS, MS, PhD; 8 Faculty.

OREGON

* +*Oregon State University, Nash 104, Fisheries & Wildlife, Corvallis, OR 97331-3803. BS, MS, PhD; 15 Faculty. Contact: Erik K. Fritzell; Phone: (541) 752-3350; Fax: (541) 737-3590; Email: erik.fritzell@orst.edu; Web: http://osu.orst.edu/dept/fish_wild

PENNSYLVANIA

* Allegheny College, Department of Biology and Environmental Science, Meadville, PA 16335. 3 Faculty.

*

California University of Pennsylvania, Department of Biological and Environmental Science, 250 University Avenue, California, PA 15419. BS, 2 Faculty. email argent@cup.edu or

NORTH AMERICAN UNIVERSITY FISHERIES PROGRAMS - 2008

<http://workforce.cup.edu/argent>

* Lehigh University, Biology Department, Bethlehem, PA 18015. BS, BA, MS, PhD; 2 Faculty.

* *Mansfield University, Fisheries Program, Mansfield, PA 16933. BS; 3 Faculty. Contact: Richard W. Soderberg; Phone: (717) 662-4539; E-mail: rsoderbe@mnsfld.edu; Web: <http://www.mnsfld.edu>

* Millersville State College, Biology Department, Millersville, PA 17551. 1 Faculty.

* *+Pennsylvania State University, School of Forest Resources, University Park, PA 16802. BS, MS, PhD; 5 Faculty. Contact: Paola Ferreri; Phone: (9814) 863-2095; Fax: (814) 865-3725; Email: cpf3@psu.edu

* Shippensburg University of Pennsylvania, Department of Biology, Shippensburg, PA 17257. BS, MS; 3 Faculty.

* York College, Department of Biology, York, PA 17405. 1 Faculty.

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RHODE ISLAND

* University of Rhode Island, Department of Fisheries, Animal, & Veterinary Science, Kingston, RI 02881. BS, MS, PhD; 7 Faculty.

SOUTH CAROLINA

* *Clemson University, Department of Entomology, Fisheries, & Wildlife, Clemson, SC 29631. BS, MS; 4 Faculty.

* University of South Carolina, Marine Science Program, Columbia, SC 29208. BS, MS, PhD; 20 Faculty. Contact: John Mark Dean, Phone (803) 777-0075; Fax (803) 777-3935; E-mail: jmdean@biol.sc.edu; Web: <http://marine-science.sc.edu/>

SOUTH DAKOTA

* *+South Dakota State University, Department of Wildlife & Fisheries Science, PO Box 2140B, Brookings, SD 57007. BS, MS, PhD; 5 Faculty. Contact: Dr. Charles G. Scalet; Phone: (605) 688-6121; Fax: (605) 688-4515; E-mail: longielj@mg.sdstate.edu; Web: <http://wfs.sdstate.edu/>

* University of South Dakota, Department of Biology, Vermillion, SD 57069. BS, BA, MA; 3 Faculty.

TENNESSEE

* +Tennessee Technological University, Department of Biology, Cookeville, TN 38505. BS, MS; 8 Faculty.

* *University of Tennessee, Department of Forestry, Wildlife & Fisheries, Knoxville, TN 37916. BS, MS; 2 Faculty.

TEXAS

* University of North Texas, Department of Biological Sciences, Denton, TX 76203. BA, BS, MS, PhD; 4 Faculty.

* Pan American University, Department of Biology, Edinburg, TX 78539. BS, MS; 2 Faculty.

* Southwest Texas State University, Biology Department, San Marcos, TX 78666. BS, MS; 5 Faculty.

* *Texas A&M University, Department of Wildlife & Fisheries Science, 210 Nagle Hall, College

NORTH AMERICAN UNIVERSITY FISHERIES PROGRAMS - 2008

Station, TX 77845-2259. BS, MS, MA, PhD; 23 Faculty. Contact: Dr. Robert Brown; Phone: (409) 845-5777; Fax: (409) 845-3786; E-mail: rdbrown@tamu.edu; E-mail: <http://wfscnet.tamu.edu>

* Texas A&M University, Department of Marine Biology, Galveston, TX 77553. 4 Faculty.

* Texas A&M University, Distance Education Master's degree program. Texas A&M.

* Texas Christian University, Biology Department, Fort Worth, TX 76729. BS, BA, MS; 1 Faculty.

* *+Texas Tech University, Department of Range, Wildlife, and Fisheries Management, Box 42125, Lubbock, TX 79409-2125. BS, MS, PhD; 4 Faculty. Contact: Dr. Kevin L. Pope; Phone: (806) 742-2843; Fax: (806) 742-2280; Email: kevin.pope@ttu.edu; Web: <http://www.rw.ttu.edu/dept/default.htm>.

* University of Texas, Department of Biology, Arlington, TX 76019. BS, MS; 6 Faculty.

* University of Texas, Department of Zoology, Austin, TX 78712. BS, BA, MA, PhD; 6 Faculty.

UTAH

* Brigham Young University, Zoology Department, Provo, UT 84602. BS, MS; 4 Faculty.

* *+Utah State University, Department of Fisheries & Wildlife, Logan, UT 84321. BS, MS, PhD; 10 Faculty.

VERMONT

* *University of Vermont, Department of Wildlife & Fisheries Biology Program, Burlington, VT 05401. BS, MS; 6 Faculty.

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VIRGINIA

* College of William & Mary, School of Marine Science, Virginia Institute of Marine Science, Gloucester Point, VA 23062. MA, PhD; 12 Faculty.

* Old Dominion University, Department of Ocean, Earth, and Atmospheric Sciences, 4600 Elkhorn Avenue, Norfolk, VA 23529. MS, PhD; 18 Faculty. Contact: William Dunstan; Phone: (757) 683-4285; Fax: (757) 683-5303; Email: wdunstan@odu.edu; Web: <http://www.odu.edu/webroot/orgs/sci/colsciences.nsf/pages/ocen>

* University of Richmond, Biology Department, Richmond, VA 23173. BS, BA, MS, MA; 3 Faculty.

* University of Virginia, Environmental Science Program, Charlottesville, VA 22903. BA, MS, MA, PhD; 4 Faculty.

* +Virginia Polytechnical Institute & State University, Department of Fisheries & Wildlife Science, Blacksburg, VA 24061. 10 Faculty. Contact: Academic Programs Office; Phone: (540) 231-5482; Fax: (540) 231-7664; E-mail: kfabryck@vt.edu; Web: <http://www.fw.vt.edu/fisheries/>

WASHINGTON

* Grays Harbor College, Fish & Wildlife Management Program, Aberdeen, WA 98520. Associate's Degree (2-year); 2 Faculty.

* *Peninsula College, Fisheries Technology Program, Port Angeles, WA 98362. Associate's Degree (2-year); 2 Faculty.

* *+University of Washington, School of Fisheries, PO Box 357980, Seattle, WA 98195. BS, MS, PhD; 43 Faculty. Contact: Student Services Officer, Phone: (206) 543-7457, Fax: (206) 616-9785; E-mail: instruct@fish.washington.edu; Web: <http://www.fish.washington.edu/>

NORTH AMERICAN UNIVERSITY FISHERIES PROGRAMS - 2008

WEST VIRGINIA

* +West Virginia University, Division of Forestry, P.O. Box 6125, Morgantown, WV 26505. BS, MS, PhD; 5 Faculty.

WISCONSIN

* University of Wisconsin, Department of Biology/Microbiology, LaCrosse, WI 54601. BS, MS; 8 Faculty. Contact: Mark Sandheinrich; Phone: (608) 785-8261; Fax: (608) 785-6954; E-mail: sandhein@uwlax.edu

* University of Wisconsin-Madison, Center for Limnology, 680 N Park Madison, WI 53706. MS, PhD; 3 Faculty. Contact: Ann McLain; Phone: (608) 263-3264; Fax (608) 265-2340; E-mail: asmclain@facstaff.wisc.edu

* University of Wisconsin, Center for Great Lakes Studies, Milwaukee, WI 53204. BS, MS, PhD (various departments); 13 Faculty.

* *+University of Wisconsin, College of Natural Resources, Stevens Point, WI 54481. BS, MS; 5 Faculty.

WYOMING

* *+University of Wyoming, Department of Zoology & Physiology, Laramie, WY 82071. BS, MS, PhD; 5 Faculty.

PUERTO RICO

* University of Puerto Rico, Department of Natural Resources, Mayaguez, PR 00708. MS; 1 Faculty.

CANADA

* Acadia University, Biology Department, Wolfville, Nova Scotia B0P 1X0. BS, BA, MS, MA; 16 Faculty. Contact: Dr. Michael J. Dadswell; Phone: (902) 542-2201; Fax: (902) 585-1059; Email: mdadswel@acadia.ca

* +Dalhousie University, Biology Department, Halifax, Nova Scotia B3H 4J1. BS, MS, PhD; 30 Faculty. Contact: Dr. R. O'Dor; Phone: (902) 494-3514; fax: 9902) 494-3736; Email: biology@dal.ca; web: <http://www.dal.ca/~biology2/index.html>

* Lakehead University, Faculty of Forestry, 955 Oliver Road, Thunder Bay, Ontario P7B 5E1. BScF, BES, HBES, MScF, MF; 16 Faculty. Contact: Dr. David Euler; Phone: (807) 343-8623; Email: David.Euler@lakeheadu.ca

* McGill University, Department of Biology, Montreal, Quebec H3A 1B1. BS, MS, PhD; 8 Faculty. Contact: Anne Comeau; Phone: (514) 398-4109; Fax: (398) 5069; E-mail: anne@biol.lan.mcgill.ca

* Memorial University of Newfoundland, St. Jons, NF A1C 5S7. Phone: (709) 737-8000; Fax: (709) 737-4569

* Simon Fraser University, Institute for Aquaculture Research, Burnaby, British Columbia V5A 1S6. BS, MS, PhD; 8 Faculty.

* University de Montreal, Department de Sciences Biologiques, Montreal, Quebec H3C 3J7. 1 Faculty.

NORTH AMERICAN UNIVERSITY FISHERIES PROGRAMS - 2008

* University of Alberta, Department of Biological Sciences, Edmonton, Alberta T6G 2E9. BS, MS, PhD; 5 Faculty. Contact: Chair, Department of Biological Sciences: Fax: 9403) 492-9234; Web: <http://www.biology.ualberta.ca>

* University of British Columbia, Department of Zoology, Vancouver, British Columbia V6T 1W5. 5 Faculty.

* University of Guelph, Department of Zoology, Guelph, Ontario N1G 2W1. MS, PhD; 25 Faculty.

* University of New Brunswick, Biology Department, Fredericton, New Brunswick E3B 5A3. BS, MS, MS, PhD; 8 Faculty.

* University of Prince Edward Island, Department of Biology, Charlottetown, Prince Edward Island C1A 4P3. 1 Faculty.

* University of Toronto, Zoology Department, Toronto, Ontario M5S 1A1. BS, MS, PhD; 6 Faculty.

* University of Waterloo, Biology Department, Waterloo, Ontario N2L 3G1. BS, MS, PhD; 9 Faculty. Contact: R. Scott McKinley; Phone: (519) 885-1211; Fax: (519) 746-4989; E-mail: smckinle@sciborg.uwaterloo.ca; Web: <http://www.science.uwaterloo.ca/biology/biology.html/>

* University of Windsor, Department of Biological Science, Windsor, Ontario N9B 3P4. BS, MS, PhD; 3 Faculty.

* Wilfred Laurier University, Department of Biology, Waterloo, Ontario N2L 3C5. BA, BSc; 2 Faculty.

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MEXICO

* University of Baja California, School of Marine Sciences, KM 103 Carretera Tijuana-Ensenada, Apartado Postal No 453, Ensenada, Baja California, Mexico. BS, MS, PhD; 60 Faculty. Contact: M.SC. Guillermo Torres Moye: Phone: (61) 74-45-70: Fax: (61) 74-41-03: Email: gtorres@bahia.ens.uabc.mx; Web: oceano@bahia.ens.uabc.mx

* Center of Higher Education and Scientific Research of Ensenada (CICESE), Apartado Postal No. 2732, Ensenada, Baja California, Mexico. Phone: (61) 74-44-00

Universities and Colleges Offering Curricula in Wildlife Conservation

This roster includes those North American campuses that have indicated they have special curricula related to the fields of wildlife conservation and management. The Wildlife Society believes strongly that graduates from wildlife curricula should meet certain minimum educational requirements. A recommended curriculum for a Bachelor's degree in wildlife was first adopted by the Society in 1965 and revised and strengthened in 1971 and 1977. The 1977 recommended minimum educational requirements subsequently became the initial minimum standard of education for The Wildlife Society's Certified Wildlife Biologist Program. These standards are revised periodically. The current educational requirements for certification are listed on the Certification page and prospective students in wildlife are encouraged to incorporate them into their higher education plans. Colleges and universities use a variety of approaches in educating students in wildlife conservation and management; some offer named degrees in wildlife, others have a wildlife major option, and still others have neither named degrees nor a major option in wildlife, but offer wildlife courses. To assist you in identifying campuses of potential interest, the list is organized by state and province and each entry is followed by a code to provide you with a general idea about the institution and its wildlife program. An interpretive "key" to the coding system is provide below. Additional information may be obtained by contacting the institution directly, or by browsing that institution's web site. Please note that each institution provided the information on its wildlife program. The Wildlife Society assumes no responsibility for the accuracy of the data. The list is assembled for public service purposes only. It may not be complete, and it is not to be interpreted as any type of accreditation by The Wildlife Society.

- B = Bachelor's Degree
- M = Master's Degree
- D = Doctorate
- WP = Wildlife Professor with non-wildlife department
- S = Student Chapter of The Wildlife Society at institution
- 1 = Institution grants a named degree in wildlife.
- 2 = Institution grants a wildlife major option with degree in:
 - a. Agriculture
 - b. Animal Science
 - c. Biology
 - d. Ecology
 - e. Education
 - f. Field Biology
 - g. Forestry
 - h. Parks
 - i. Range
 - j. Zoology
 - k. Natural Resources
- 3 = Institution grants no degree in wildlife, but has curriculum or courses in wildlife.
- 4 = Institution requires, as part of a wildlife degree or wildlife option, all courses necessary to meet the educational requirements for certification by The Wildlife Society.
- 5 = Institution offers, but does not require, all courses necessary to meet the educational requirements for certification by The Wildlife Society.
- Alabama
 - Alabama A & M University (WP 3,5)
 - Auburn University (B1, MD2j, 4)S
- Alaska
 - University of Alaska - Fairbanks (BMD1, 4)S
- Alberta
 - University of Alberta (BMD3cdfj, 5)
 - Lethbridge College (B1, 2hk)S
- Arizona
 - Arizona State University (B1, MD3j, 5)S
 - Northern Arizona University (B2c, MD2c, 5)S
 - University of Arizona (BMD1, 4)S
- Arkansas
 - Arkansas State University (B1, 4, D2c)
 - Arkansas Tech University (B1, 5)S
 - University of Arkansas-Monticello
- British Columbia
 - University of British Columbia (BMD3jk, 5)
- California
 - California Polytechnic State University (BM2cdfgjk, 5)
 - California State University (BM2c, 5)
 - Humboldt State University (B1, M2k, 5)S

- San Diego State University (BM3cdfj, D3d)
- San Jose State University (B2j, M2c, 5)
- University of California - Berkeley (BMD2k, 5)
- University of California - Davis (B1, MD2d, 5)S
- Colorado
- Colorado State University (BMD, 5)S
- Connecticut
- University of Connecticut (B3, M2k, 5)S
- Yale University (MD2dgk)
- Delaware
- University of Delaware (B1, MD3, 5)
- Florida
- University of Florida (BMD1, 5)S
- Georgia
- University of Georgia (BMD1, 4)S

- Idaho
- Idaho State University (BMD2, 5)
- University of Idaho (BMD1, 5)S
- Illinois
- Southern Illinois University (BMD2j, 5)S
- University of Illinois - Champaign/Urbana (BMD3bcdg, 5)
- Western Illinois University (BM3c, 5)S

- Indiana
- Ball State University (BM2c, 5)S
- Purdue University (BMD1, 2g, 4)S

- Iowa
- Iowa State University (BMD1, 5)S

- Kansas
- Kansas State University (BMD2c, 5)S
- Fort Hays State University (B2c, M2c, 5)
- Emporia State University (BM3, 5)
- Kentucky
- Eastern Kentucky University (B1M, 5)S
- Murray State University (BM1, 4, 2c, 5)S
- University of Kentucky (B3, M2g, 5)S
- Louisiana
- Louisiana State University (B1, 4.MD1, 5)S
- Louisiana Tech (B2Mc, 5)S
- McNeese State University (B1)
- Northeast Louisiana University (B3, M2c, 5, WP)
- Northwestern State University (B2c, WP, 5)
- University of Southwestern Louisiana (B2f, M3,D3, 5)
- Maine
- University of Maine (B1, 4, MD1, 5)S
- Manitoba
- University of Manitoba (M3k, 5)
- Maryland
- Frostburg State University (B1, 4, M1, 5)S
- University of Maryland - College Park (B2k, 5)
- Massachusetts
- Framingham State College (B2c, 5)
- University of Massachusetts (BMD1, 5)S
- Michigan
- Central Michigan University (BM2cdfk, 5)
- Lake Superior State University (B1, 5)
- Michigan State University (BMD1, 5)S
- Michigan Tech University (BMD2g, 5)S

- Northern Michigan University (BM2c, 5)S
- University of Michigan (BMD1, 5)S

- Minnesota
- University of Minnesota (BMD1, 5)S
- University of Minnesota, Crookston (B2k, 4)S
- Mississippi
- Mississippi State University (BMD1, 5)S
- Delta State University (B2c,4)
- Missouri
- Missouri Western State University (B1, 5)S
- University of Missouri (BMD1, 5)S
- Montana
- Montana State University (B2c, M1, D2c, 5)
- University of Montana (BMD1, 5)S
- Nebraska
- University of Nebraska at Kearney (B2c, M2e, 4)S
- University of Nebraska at Lincoln (B2k, M1, D2g, 5)
- Nevada
- University of Nevada - Reno (BM2k, D2d, 5)
- New Brunswick
- University of New Brunswick (BM2g, 4, MD2c, 5)

- New Hampshire
- University of New Hampshire (B, M2k, D2k, 5)S

- New Jersey
- Rutgers University (B2k, MD2d, 5)S
- New Mexico
- Eastern New Mexico University (B1, 4, M2c, 5)
- New Mexico State University (B2a, M1, 5)S
- New York
- Cornell University (2k, 5)S
- SUNY-Cobleskill (B2b, 5)S
- SUNY-ESF (Syracuse) (BMD2f, 5)S
- Paul Smith's College (B1)

- North Carolina
- North Carolina State University (BM1, D2gj, 5)
- North Dakota
- North Dakota State University (BMD2j, 5)S
- University of North Dakota (B1, MD2c, 5)S
- Nova Scotia
- University of Acadia (BM3, 5)
- Ohio
- Ohio State University (B2k, MD2, d, e, g, k, 4)S
- Oklahoma
- Northeastern State University (B2c, 5)
- Oklahoma State University (BMD1, 5)S
- Southeastern Oklahoma State University (B1, 5)
- Ontario
- Lakehead University (B2g)
- University of Guelph (BMD1, 5)
- University of Western Ontario (BMD2dj, 5)
- Oregon
- Oregon State University (BMD1, 5)S

- Pennsylvania
- California University of Pennsylvania (B2c, M3c, 5)S
- Pennsylvania State University (BMD1, 4)S

- Quebec
- McGill University (MacDonald Campus) (BMD2a, 5)S

- Rhode Island
- University of Rhode Island (B2k, M2k, 4)S
- South Carolina
- Clemson University (B1, M1, D3j, 5)S
- South Dakota
- South Dakota State University (BMD1, 4)S
- Tennessee
- Lincoln Memorial University (B1, 5)S
- Tennessee Tech University (B1, M2c, 4)S
- University of Tennessee - Knoxville (B1, M1, &2d, D2d, 4)S
- University of Tennessee - Martin (B 2K 4)S
- University of Tennessee-Martin
- Texas
- Southwest Texas State University (BM2c, 5)S
- Stephen F. Austin State University (BM2cg, D2g, 5)S
- Sul Ross State University (B2ck, M1, 5)S
- Tarleton State University (B1, M3, 5)S
- Texas A&M University (BMD1, 4)S
- Texas A&M University-Commerce (B1, 4, M3) S
- Texas A&M University-Kingsville (BMD1, 4)S
- Texas Tech University (BMD, 4)S

- Utah
- Brigham Young University (B2ij, MD1, 4)S
- Utah State University (BMD1, 5)S
- Vermont
- University of Vermont (B1, M1, D2k, 5)S

- Virginia
- Ferrum College (B3, 5)
- Virginia Polytechnic Institute & State University (B2g, MD1, 4)S
- Washington
- University of Washington (BMD2g, 5)S
- Washington State University (BMD2k, 5)S
- West Virginia
- West Virginia University (BMD1, 4)S
- Wisconsin
- Northland College (B2k)
- University of Wisconsin Stevens Point (BM1, 4)S
- University of Wisconsin-Madison (BMD2k, 5)
- Wyoming
- University of Wyoming (B1, MD2j, 5)S