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PROGRAM/DEGREE REQUIREMENT CHANGE (MAJOR/MINOR)

SUBMITTED BY:

Department	Fisheries	College/School	SFOS
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See <http://www.uaf.edu/uafgov/faculty/cd> for a complete description of the rules governing curriculum & course changes.

PROGRAM IDENTIFICATION:

DEGREE PROGRAM	Fisheries
Degree Level: (i.e., Certificate, A.A., A.A.S., B.A., B.S., M.A., M.S., Ph.D.)	MS

A. CHANGE IN DEGREE REQUIREMENTS: (Brief statement of program/degree changes and objectives)

This modification adds a Seafood Science emphasis to the Fisheries MS, while characterizing the existing MS requirements as the Fisheries emphasis. The intent is to accommodate MS students studying Seafood Science, who with rare exceptions will no longer be permitted to enroll as Independent Study (INDS) students. Students electing the Seafood Science emphasis will be required to take two core Seafood Science courses and courses from two of the three core areas of the existing Fisheries emphasis.

In addition, there are minor housekeeping changes. Two courses have been added to the list of courses in the Management and Human Dimensions core area (in the previous version, these courses had not yet received final approval). Also, the program prerequisite of ichthyology or invertebrate zoology has been modified to include biology of fishes as an alternative. Finally, there are changes in the preamble recognizing the incorporation of much of the former Fisheries Industrial Technology Center (now the Kodiak Seafood and Marine Science Center) into the Fisheries program.

B. CURRENT REQUIREMENTS AS IT APPEARS IN THE CATALOG:

FISHERIES

School of Fisheries and Ocean Sciences
 907-474-7289
www.sfos.uaf.edu/academics/

M.S., Ph.D. Degrees
 Minimum Requirements for Degrees: M.S.: 30 credits; Ph.D.: 18 thesis credits

Graduate degree program students attend classes and work with faculty in Juneau and/or Fairbanks. Academic programs can be developed

in one of the following subject areas: fisheries management (Juneau and Fairbanks), fish/invertebrate biology (Juneau and Fairbanks) and aquaculture (Juneau). Research assistantships are available. Applicants should contact the fisheries program for further information and application forms.

Fairbanks' geographic location is advantageous for the study of interior Alaska aquatic habitats. A number of subarctic streams and lakes are within easy reach. Main access to the marine environment from the Fairbanks campus is in Prince William Sound and Cook Inlet.

The Juneau Center, School of Fisheries and Ocean Sciences, houses the UAF fisheries science program in southeast Alaska. The Juneau Center has well-equipped labs, including freshwater and seawater wet labs and computer labs. There is ready access to both marine and freshwater habitats. The Juneau Center is located near the Auke Bay National Marine Fisheries Service Laboratory north of Juneau. The Fishery Industrial Technology Center is located in Kodiak. It has new facilities for work in harvest technology, seafood technology, seafood biochemistry and microbiology.

Fisheries students in Fairbanks and Juneau have an opportunity to associate with personnel of federal and state conservation agencies. These agencies often hire students for summer field work.

Graduate Program — M.S. Degree

1. Complete the following admission requirements:
 - a. Prerequisites: calculus, elementary statistics, ichthyology or invertebrate zoology and computer competency.
 - b. Submit GRE scores.
2. Complete the general university requirements (page 198).
3. Complete the master's degree requirements (page 202).
4. Complete the following:

FISH F699—Thesis.....	6 – 12
STAT F401—Regression and Analysis of Variance.....	4

Students must complete one of the following courses under each area:

Biology and ecology of fish and shellfish

BIOL F415/MSL F615—Physiology of Marine Organisms.....	3
FISH F425—Fish Ecology.....	3
FISH F426/FISH F626—Behavioral Ecology of Fishes.....	3
FISH F428/FISH F628—Physiological Ecology of Fishes.....	3
FISH F633—Pacific Salmon Life Histories.....	3
FISH F650—Fish Ecology.....	3
FISH F651—Fishery Genetics.....	4
MSL F640—Fisheries Oceanography.....	4
MSL F652—Marine Ecosystems.....	3

Quantitative population dynamics of fish and shellfish

FISH F421—Fisheries Population Dynamics.....	4
FISH F601—Quantitative Fisheries Science.....	3
FISH F621—Estimation of Fish Abundance.....	3
FISH F622—Quantitative Fish Population Dynamics II.....	3

Management and human dimensions of fisheries

FISH F411—Human Dimensions of Environmental Systems.....	3
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FISH F487—Fisheries Management.....	3
FISH F640—Management of Renewable Resources.....	3
FISH F675—Political Ecology of the Oceans.....	3
Graduate seminars.....	2
5. Minimum credits required.....	30

Note: Students working in subject areas involving significant non-English literature may be expected to read the appropriate foreign language.

Note: Only 9 credits of the required 30 M.S. degree credits can be at the 400-level.

C. PROPOSED REQUIREMENTS AS IT WILL APPEAR IN THE CATALOG WITH THESE CHANGES:
 (Underline new wording strike through old wording and use complete catalog format)

FISHERIES

School of Fisheries and Ocean Sciences
 907-474-7289
 www.sfos.uaf.edu/academics/

M.S., Ph.D. Degrees
 Minimum Requirements for Degrees: M.S.: 30 credits; Ph.D.: 18 thesis credits

~~Graduate degree program students attend classes and work with faculty in Juneau and/or Fairbanks. Academic programs can be developed in one of the following subject areas: fisheries management (Juneau and Fairbanks), fish/invertebrate biology (Juneau and Fairbanks) and aquaculture (Juneau). Research assistantships are available. Applicants should contact the fisheries program for further information and application forms.~~

- ~~–Fairbanks’ geographic location is advantageous for the study of interior Alaska aquatic habitats. A number of subarctic streams and lakes are within easy reach. Main access to the marine environment from the Fairbanks campus is in Prince William Sound and Cook Inlet.~~
- ~~–The Juneau Center, School of Fisheries and Ocean Sciences, houses the UAF fisheries science program in southeast Alaska. The Juneau Center has well-equipped labs, including freshwater and seawater wet labs and computer labs. There is ready access to both marine and freshwater habitats. The Juneau Center is located near the Auke Bay National Marine Fisheries Service Laboratory north of Juneau. The Fishery Industrial Technology Center is located in Kodiak. It has new facilities for work in harvest technology, seafood technology, seafood biochemistry and microbiology.~~
- ~~–Fisheries students in Fairbanks and Juneau have an opportunity to associate with personnel of federal and state conservation agencies. These agencies often hire students for summer field work.~~

Fisheries graduate degree program students take classes and undertake research on a diverse set of fisheries-related topics; program strengths include quantitative science, fisheries management and human dimensions, biology and ecology, and seafood technology. Students

are typically based in Juneau, Fairbanks, or Kodiak, but most courses are video-delivered to locations throughout Alaska.

Traditionally, the Juneau location emphasizes the marine environment, Fairbanks, the freshwater, and Kodiak, seafood science; however, students at each location are engaged in a wide variety of research topics. All locations have excellent laboratory facilities, access to pristine environments and healthy fisheries, and strong connections to state and federal agency scientists and managers as well as to participants in commercial, sport, and subsistence fisheries.

Most students are supported as research assistants for some or all of their tenure. Agencies such as the National Atmospheric and Oceanic Administration, the U.S. Fish and Wildlife Service, and the Alaska Department of Fish and Game are collaborators on research projects and employ many of our graduates.

Graduate Program — M.S. Degree

1. Complete the following admission requirements:
 - a. Prerequisites: calculus; elementary statistics; ichthyology, biology of fish, or invertebrate zoology; and computer competency.
 - b. Submit GRE scores.

2. Complete the general university requirements (page 198).

3. Complete the master's degree requirements (page 202).

4. Complete the following:

FISH F699—Thesis	6 – 12
STAT F401—Regression and Analysis of Variance	4
<u>Graduate seminars</u>	<u>2</u>

and emphasis requirements:

4a. Fisheries Emphasis: Students must complete one of the following courses under each area:

Biology and ecology of fish and shellfish

BIOL F415 /MSL F615—Physiology of Marine Organisms ..	3
FISH F425 Fish F650—Fish Ecology ..	3
FISH F426 /FISH F626—Behavioral Ecology of Fishes	3
FISH F428 /FISH F628—Physiological Ecology of Fishes ..	3
FISH F633—Pacific Salmon Life Histories ..	3
FISH F650—Fish Ecology	3
FISH F651—Fishery Genetics	4
MSL F640—Fisheries Oceanography	4
MSL F652—Marine Ecosystems	3

Quantitative population dynamics of fish and shellfish

FISH F421—Fisheries Population Dynamics	4
FISH F601—Quantitative Fisheries Science ..	3
FISH F621—Estimation of Fish Abundance ..	3
FISH F622—Quantitative Fish Population Dynamics II	3

Management and human dimensions of fisheries

FISH F411—Human Dimensions of Environmental Systems	3
FISH F487—Fisheries Management ..	3
FISH F640—Management of Renewable Marine Resources	3
<u>FISH F645—Bioeconomic Modeling and Fisheries Management ..</u>	<u>3</u>
<u>FISH F670—Quantitative Analysis for Marine Policy Decisions ..</u>	<u>3</u>
FISH F675—Political Ecology of the Oceans	3

4b. Seafood Science Emphasis: Students must complete the following two courses and

one course from two of the three core areas in the Fisheries emphasis above:

FISH F661—Seafood Processing and Preservation 3

FISH F662—Seafood Composition and Analysis 3

Graduate seminars.....2

5. Minimum credits required.....30

Note: Students working in subject areas involving significant non-English literature may be expected to read the appropriate foreign language.

Note: Only 9 credits of the required 30 M.S. degree credits can be at the 400-level.

D. ESTIMATED IMPACT

WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.

This change will have little budgetary, space, or faculty implications. Prior to the reassignment of Kodiak Center faculty to Fisheries, there was substantial academic interaction between the Fisheries program and Kodiak Center faculty and students. Most Kodiak Center faculty taught courses with Fisheries designations and Kodiak Center students routinely took video-delivered Fisheries courses. This proposal will result in the formal regularization of these practices.

E. IMPACTS ON PROGRAMS/DEPTS:

*What programs/departments will be affected by this proposed action?
Include information on the Programs/Departments contacted (e.g., email, memo)*

This change affects only Fisheries and the faculty currently part of the Kodiak Center who've been reassigned wholly or in part to Fisheries. All current Fisheries and Kodiak Center faculty have been extensively involved in developing this revision to the Fisheries MS, and the revision was approved without opposition at the January meeting of the Fisheries faculty.

F. IF MAJOR CHANGE - ASSESSMENT OF THE PROGRAM:

Description of the student learning outcomes assessment process.)

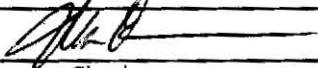
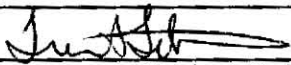
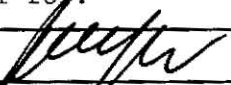
By formally offering students interested in Seafood Science a M.S. degree in Fisheries, the proposed changes facilitate the outcome assessment process.

JUSTIFICATION FOR ACTION REQUESTED



The purpose of the department and campus-wide curriculum committees is to scrutinize program/degree change applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be self-explanatory. If you drop a course, is it because the material is covered elsewhere? Use as much space as needed to fully justify the proposed change and explain what has been done to ensure that the quality of the program is not compromised as a result.

This proposal allows students interested in seafood science to obtain an MS degree in Fisheries, as the Provost has indicated that routine assignment of such students into an INDS designation will no longer be permitted. While a separate MS program in Seafood Science might be desirable, the current number of seafood-focused students is insufficient to support such a program at this time. The proposed Seafood Emphasis within the Fisheries MS balances the need for such students to obtain a solid core in seafood science, while obtaining the breadth of exposure to other areas of fisheries expected of students with a Fisheries MS.

APPROVALS:

	Date	4/2/2012
Signature, Chair, Program/Department of:	Fisheries	
	Date	4/3/2012
Signature, Chair, College/School Curriculum Council for:	SFOS Curricular Committee	
	Date	April 3, 2012
Signature, Dean, College/School of: Assoc.	FOI	

ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE

	Date	
Signature, Chair, UAF Faculty Senate Curriculum Review Committee		