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**PROGRAM/DEGREE REQUIREMENT CHANGE (MAJOR/MINOR)**

**SUBMITTED BY:**

Department	<b>Fish Division</b>	College/School	<b>SFOS</b>
Prepared by	<b>Trent Sutton</b>	Phone	<b>907-474-7285</b>
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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	<b>B.S. in Fisheries Science</b>
Degree Level: (i.e., Certificate, A.A., A.A.S., B.A., B.S., M.A., M.S., Ph.D.)	<b>B.S.</b>

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

We are adding two new courses (FISH F102 [1 credit] and FISH F103 [2 credits]) and an existing course (FISH F261; 3 credits) to the B.S. in Fisheries Science degree program which will reduce the science elective component from 15 to 9 credits. The rationale for these additions and changes is to improve student retention in the degree program (see Justification for detail). In addition to these changes, FISH F301 (4 credits) is not taught and we would like to remove this from the B.S. in Fisheries Science degree requirements.

**B. CURRENT REQUIREMENTS AS IT APPEARS IN THE CATALOG:**

- Major — BS Degree
1. Complete the general university requirements. (See page 166. As part of the core curriculum requirements, complete MATH F200X or F272X.) To graduate, all students must complete 39 upper-division credits.
  2. Complete the BS degree requirements. (See page 166. As part of the BS degree requirements, complete STAT F401 or STAT F402.)
  3. Complete the following:\*
    - BIOL F115X—Fundamentals of Biology I\*\* .....4
    - BIOL F116X—Fundamentals of Biology II\*\*.....4
    - BIOL F260—Principles of Genetics.....4
    - BIOL F310—Animal Physiology (4)
      - or BIOL F213X—Human Anatomy and Physiology I (4)
      - and BIOL F214X—Human Anatomy and Physiology II (4).... 4 – 8
    - BIOL F371—Principles of Ecology.....4
    - CHEM F105X—General Chemistry I\*\* .....4
    - CHEM F106X—General Chemistry II\*\*.....4
    - ECON F235—Introduction to Natural Resource Economics (3)
      - or ECON F201—Principles of Economics I: Microeconomics (3).....3
    - ENGL F414W—Research Writing.....3
    - FISH F101—Introduction to Fisheries.....3
    - FISH F288—Fish and Fisheries of Alaska.....3
    - FISH F301—Biology of Fishes (4)
      - or BIOL F305—Invertebrate Zoology (4)
      - or FISH F427—Ichthyology (4).....4
    - FISH F315—Freshwater Fisheries Techniques (3)
      - or FISH F414—Field Methods in Marine Ecology and Fisheries (3) .....3
    - FISH F411—Human Dimensions of Environmental Systems (3)
      - or GEOG F312—People, Places, and Environment: Principles of Geography (3)
      - or SOC F440—Environmental Sociology (3).....3
    - FISH F425—Fish Ecology (3)
      - or FISH F426—Behavioral Ecology of Fishes (3)
      - or FISH F428—Physiological Ecology of Fishes (3).....3
    - FISH F487W,O—Fisheries Management.....3



FISH F490—Experiential Learning Internship.....	1
PHYS F103X—College Physics** (4)	
or PHYS F115X—Physical Science I** (4)	
or PHYS F211X—General Physics** (4).....	4
STAT F200X—Elementary Probability and Statistics.....	3
STAT F401—Regression and Analysis of Variance*** (4)	
or STAT F402—Scientific Sampling*** (3).....	3 – 4
4. Complete 15 credits of electives* from Fisheries, Biology, Marine Science and Limnology or Natural Resource Management (of which at least 5 credits must be upper-division).	
5. Complete 4 credits of electives* from Chemistry, Geology or Physics.	
6. Additional electives* to complete minimum credits required.	
7. Minimum credits required .....	120

\* Students must earn a C- grade or better in each course.  
 \*\* Courses completed in the fisheries core may be used to meet the core natural sciences or BS degree natural science requirements but not both.  
 \*\*\* STAT F401 or STAT F402 may be used to meet the BS degree mathematics requirements.

Note: Fisheries majors are encouraged to reinforce their fisheries qualifications by earning a minor in a program related to fisheries. Some examples are biology, business management, chemistry, economics, mathematics, natural resources management (animal science), northern studies, statistics or wildlife.

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 )

Major — BS Degree

1. Complete the general university requirements. (See page 166. As part of the core curriculum requirements, complete MATH F200X or F272X.) To graduate, all students must complete 39 upper-division credits.
2. Complete the BS degree requirements. (See page 166. As part of the BS degree requirements, complete STAT F401 or STAT F402.)
3. Complete the following:\*
 

BIOL F115X—Fundamentals of Biology I** .....	4
BIOL F116X—Fundamentals of Biology II**.....	4
BIOL F260—Principles of Genetics.....	4
BIOL F310—Animal Physiology (4)	
or BIOL F213X—Human Anatomy and Physiology I (4)	
and BIOL F214X—Human Anatomy and Physiology II (4)....	4 – 8
BIOL F371—Principles of Ecology.....	4
CHEM F105X—General Chemistry I** .....	4
CHEM F106X—General Chemistry II**.....	4
ECON F235—Introduction to Natural Resource Economics (3)	
or ECON F201—Principles of Economics I: Microeconomics (3).....	3
ENGL F414W—Research Writing.....	3
FISH F101—Introduction to Fisheries.....	3
<u>FISH F102---Fact or Fishin: Case Studies in Fisheries.....</u>	<u>1</u>
<u>FISH F103---The Harvest of the Sea.....</u>	<u>2</u>
<u>FISH F261---Introduction to Fisheries Utilization.....</u>	<u>3</u>
FISH F288—Fish and Fisheries of Alaska.....	3
FISH F301—Biology of Fishes (4)	
<u>FISH F427—Ichthyology (4)</u>	
or BIOL F305—Invertebrate Zoology (4).....	4
or <del>FISH F427—Ichthyology (4).....</del>	<del>4</del>
FISH F315—Freshwater Fisheries Techniques (3)	
or FISH F414—Field Methods in Marine Ecology and Fisheries (3).....	3
FISH F411—Human Dimensions of Environmental Systems (3)	
or GEOG F312—People, Places, and Environment: Principles of Geography (3)	
or SOC F440—Environmental Sociology (3).....	3
FISH F425—Fish Ecology (3)	
or FISH F426—Behavioral Ecology of Fishes (3)	
or FISH F428—Physiological Ecology of Fishes (3).....	3
or FISH F433---Pacific Salmon Life Histories (3).....	3



FISH F487W,O—Fisheries Management.....	3
FISH F490—Experiential Learning Internship.....	1
PHYS F103X—College Physics** (4)	
or PHYS F115X—Physical Science I** (4)	
or PHYS F211X—General Physics** (4).....	4
STAT F200X—Elementary Probability and Statistics.....	3
STAT F401—Regression and Analysis of Variance*** (4)	
or STAT F402—Scientific Sampling*** (3).....	3 – 4
4. Complete <u>15-9</u> credits of electives* from Fisheries, Biology, Marine Science and Limnology or Natural Resource Management (of which at least 5 credits must be upper-division).	
5. Complete 4 credits of electives* from Chemistry, Geology or Physics.	
6. Additional electives* to complete minimum credits required.	
7. Minimum credits required .....	120

\* Students must earn a C- grade or better in each course.

\*\* Courses completed in the fisheries core may be used to meet the core natural sciences or BS degree natural science requirements but not both.

\*\*\* STAT F401 or STAT F402 may be used to meet the BS degree mathematics requirements.

Note: Fisheries majors are encouraged to reinforce their fisheries qualifications by earning a minor in a program related to fisheries. Some examples are biology, business management, chemistry, economics, mathematics, natural resources management (animal science), northern studies, statistics or wildlife.

**D. ESTIMATED IMPACT**

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

There is no anticipated impact of these changes on budgets, facilities, space, and faculty. FISH F102 Fact or Fishin: Case Studies in Fisheries (1 credit) is a course that is to be taught every fall semester by Fisheries faculty members Trent Sutton and Andy Seitz as part of their annual workload. In addition, FISH F103 The Harvest of the Sea (2 credits) will be taught by Fisheries faculty member Trent Sutton as part of his annual workload. FISH F261 Introduction to Fisheries Utilization is currently taught as part of the B.A. in Fisheries degree program by Fisheries faculty members Brian Himelbloom, Alex Oliviera, and Brennan Smith as part of their annual workload. Adding this course (FISH 261) to the B.S. in Fisheries Science degree program will increase student enrollment in this course, which is something welcomed by the instructors. These courses will require video conferencing, which is available in SFOS. There are no additional resources required for these courses. FISH F301 Biology of Fishes has never been taught, so removing it from the degree program will have no impact.

**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)*

The inclusion of these courses in the B.S. in Fisheries Science degree program will have no impact on any other programs at UAF.

**F. IF MAJOR CHANGE - ASSESSMENT OF THE PROGRAM:**

*Description of the student learning outcomes assessment process.)*

The motivation for adding FISH F102, F103, and F261 to the B.S. in Fisheries Science degree program is to improve student retention. There exists a metric in this degree program already to specifically assess the impacts of adding these classes:

Track retention rates and rate of graduation within 5 years as evidence of achievement. Eighty percent (80%) of undergraduates will be retained each year, and 50% of juniors will complete degrees in ≤3 years.




**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.

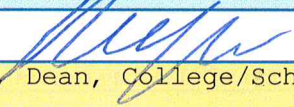
**FISH F102, F103, and F261 have been added to the B.S. in Fisheries Science degree program to improve student retention, specifically during the first two years. Current first-year retention rates for new freshman and transfer students combined in this degree program are 50%. We have identified that this is in part due to the lack of classes after the first fall semester that a student is enrolled in the degree program (FISH F101 Introduction to Fisheries) until spring semester of their sophomore year (FISH F288 Fish and Fisheries of Alaska). Based on the retention literature, having frequent contact between students and faculty during the first two years, especially the first year, is critical for creating a learning culture that improves student retention. By adding two 100-level courses during the first year (FISH F102 – Fall semester; FISH F103 – Spring semester) and FISH 261 to the Fall semester of their second year, students will come into more frequent contact with Fisheries Division faculty. Further, we anticipate that increasing the number of lower-level courses will help us to develop a learning community/culture for our students and serve as a recruitment tool for students into this degree program.**

**FISH F301 is being removed from the degree program because it has never been taught and it appears that there is no prospect that it will be taught in the future. Because students ask about this course frequently, we have decided to remove this course from our degree program to more accurately reflect the actual course offerings available to students.**

**APPROVALS:**

	Date	09/21/13
Signature, Chair, Program/Department of:	Fisheries Division	

	Date	09/21/13
Signature, Chair, College/School Curriculum Council for:	SFOS Council Committee	

	Date	Aug 21, 2013
Signature, Dean, College/School of:	SFOS	

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

	Date	
Signature, Chair, UAF Faculty Senate Curriculum Review Committee		