

Submit originals (including syllabus) and one copy and electronic copy to the **Faculty Senate Office**  
See <http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures/> for a complete description of the rules governing curriculum & course changes.

**CHANGE COURSE (MAJOR) and DROP COURSE PROPOSAL**  
Attach a syllabus, except if dropping a course.

**SUBMITTED BY:**

Department	Fisheries Division	College/School	SFOS
Prepared by	Trent Sutton	Phone	474-7285
Email Contact	tmsutton@alaska.edu	Faculty Contact	Trent Sutton

**1. COURSE IDENTIFICATION: As the course now exists.**

Dept **FISH** Course # **650** No. of Credits **3**

COURSE TITLE **Fish Ecology**

**2. ACTION DESIRED: Changes to be made to the existing course.**

Change Course ☒ If Change, indicate below what change. Drop Course ☐

NUMBER		TITLE		DESCRIPTION	<input checked="" type="checkbox"/>
PREREQUISITES				FREQUENCY OF OFFERING	<input checked="" type="checkbox"/>
CREDITS (including credit distribution)				COURSE CLASSIFICATION	<input checked="" type="checkbox"/>
CROSS-LISTED		Dept.		(Requires approval of both departments and deans involved. Add lines at end of form for such signatures.)	
STACKED (400/600)		Dept.		Course #	
OTHER (please specify)					

**3. COURSE FORMAT**

NOTE: Course hours may not be compressed into fewer than three days per credit. Any course compressed into fewer than six weeks must be approved by the college or school's curriculum council and the appropriate Faculty Senate curriculum committee. Furthermore, any core course compressed to less than six weeks must be approved by the core review committee.

COURSE FORMAT: (check all that apply) ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☒ 6 weeks to full semester

OTHER FORMAT (specify all that apply)

Mode of delivery (specify lecture, field trips, labs, etc)

**4. COURSE CLASSIFICATIONS: (undergraduate courses only. Use approved criteria found on Page 10 & 17 of the manual. If justification is needed, attach on separate sheet.)**

H = Humanities ☐ S = Social Sciences ☐

Will this course be used to fulfill a requirement for the baccalaureate core?

YES	<input type="checkbox"/>	NO	<input checked="" type="checkbox"/>
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IF YES, check which core requirements it could be used to fulfill:

O = Oral Intensive, ☐ W = Writing Intensive, ☐ Natural Science, ☐  
Format 6 also submitted ☐ Format 7 submitted ☐ Format 8 submitted ☐

5. **COURSE REPEATABILITY:**

Is this course repeatable for credit?

YES

NO

X

Justification: Indicate why the course can be repeated (for example, the course follows a different theme each time).

How many times may the course be repeated for credit?

TIMES

If the course can be repeated with variable credit, what is the maximum number of credit hours that may be earned for this course?

CREDITS

6. **CURRENT CATALOG DESCRIPTION AS IT APPEARS IN THE CATALOG: including dept., number, title and credits**

FISH F650 Fish Ecology

3 Credits

Offered As Demand Warrants

The ecology of fish is examined from the community aspect. Current literature on inter- and intraspecific relationships, influence of the environment on community structure, behavior and production. Prerequisites: Permission of instructor. Cross-listed with BIOL F650. (2+3)

7. **COMPLETE CATALOG DESCRIPTION AS IT WILL APPEAR WITH THESE CHANGES: (Underline new wording strike through old wording and use complete catalog format including dept., number, title, credits and cross-listed and stacked.) PLEASE SUBMIT NEW COURSE SYLLABUS. For stacked courses the syllabus must clearly indicate differences in required work and evaluation for students at different levels.**

FISH F650 Fish Ecology

3 Credits

Offered As Demand Warrants

Offered Spring Odd-numbered Years

The ecology of fish is examined from the community aspect. Current literature on inter- and intraspecific relationships, influence of the environment on community structure, behavior and production. This course will examine the relationship of fishes to the physical, chemical, and biological features of their environment in both perturbed and unperturbed aquatic ecosystems. An emphasis will be placed on fish diversity in terms of morphology, behavior, feeding, and reproductive strategies as they relate to individual and population adaptation, and community structure in both freshwater and marine environments. Prerequisites: Permission of instructor. Cross-listed with BIOL F650. (2+3)-(3+0)

8. **IS THIS COURSE CURRENTLY CROSS-LISTED?**

YES/NO

X

If Yes, DEPT

BIOL

NUMBER

650

(Requires written notification of each department and dean involved. Attach a copy of written notification.)

9. **GRADING SYSTEM: Specify only one**

LETTER:

X

PASS/FAIL:

10. **ESTIMATED IMPACT**

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

There will be no impact on budget, facilities/space, faculty, etc. This course is covered by the instructor (Trent Sutton) as part of his negotiated workload. SFOS currently has the space and facilities to allow for the delivery of this course.

11. **LIBRARY COLLECTIONS**

Have you contacted the library collection development officer (kljensen@alaska.edu, 474-6695) with regard to the adequacy of library/media collections, equipment, and services available for the proposed course? If so, give date of contact and resolution. If not, explain why not.

No

Yes

X

Ann Christie was contacted during fall 2010 (this course was last taught during the spring 2011 semester) to ensure that the library had the necessary books and periodicals required to support this course.

**12. 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)

There are no anticipated impacts of the proposed changes for this course.

**13. POSITIVE AND NEGATIVE IMPACTS**

Please specify **positive** and **negative** impacts on other courses, programs and departments resulting from the proposed action.

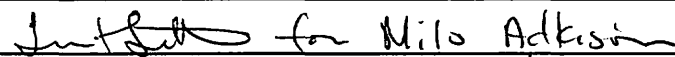
The proposed changes more accurately reflect the content and delivery of this course. Further, it will be offered on a more regular basis than previously. As a result, these changes could lead to increased enrollment for this course in Fisheries and Biology.


**JUSTIFICATION FOR ACTION REQUESTED**

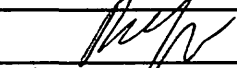
The purpose of the department and campus-wide curriculum committees is to scrutinize course change and new course applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be self-explanatory. If you ask for a change in # of credits, explain why; are you increasing the amount of material covered in the class? If you drop a prerequisite, is it because the material is covered elsewhere? If course is changing to stacked (400/600), explain higher level of effort and performance required on part of students earning graduate credit. 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 course is not compromised as a result.



The current instructor (Trent Sutton) inherited this course from two previous UAF Fisheries instructors (Nicholas Hughes and Nicola Hillgruber). The proposed changes include: (1) an update to the course description to provide a more in-depth overview of the course content (relative to the previous course description); (2) a change in course format from 2 hours of lecture and a 3-hour lab each week to 3 hours of lecture each week without a lab; and (3) a consistent offering of the course during the spring semester of odd-numbered years (rather than offering the course as demand warrants). The change in course description does not change the material covered in the course; rather, it only provides a more detailed overview of the material covered in the course. Teaching the course as a lecture-only course, and thereby dropping the lab (but retaining the same number of course credits – 3), reflects that SFOS does not have the laboratory facilities to teach laboratory exercises related to fish ecology (it is not clear how that expectation was ever met in the prior offering of this course by Drs. Hughes and Hillgruber). The course will be offered every other year (odd springs) because it is now fulfills the ecology requirement in the Master of Science in Fisheries degree program requirement.

**APPROVALS:** (Additional signature blocks may be added as necessary.)



 Date 8/9/12  
Signature, Chair,  
Program/Department of: Fisheries Division

 Date 8/9/12  
Signature, Chair, College/School Curriculum  
Council for: SFOS

 Date 8/9/12  
Signature, Dean, College/School  
of: SFOS

 Date   
Signature of Provost (if applicable)  
Offerings above the level of approved programs must be approved in advance by the Provost.

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

 Date   
Signature, Chair, UAF Faculty Senate Curriculum  
Review Committee

*Biology sigs to be added.*

**ADDITIONAL SIGNATURES: (As needed for cross-listing and/or stacking)**

		Date	
Signature, Chair, Program/Department of:			

		Date	
Signature, Chair, College/School Curriculum Council for:			

		Date	
Signature, Dean, College/School of:			

Note: The guidelines are online:

<http://www.uaf.edu/uafgov/faculty-senate/curriculum/course-degree-procedures-/uaf-syllabus-requirements/>

The Faculty Senate curriculum committees will review the syllabus to ensure that each of the items listed below are included. If items are missing or unclear, the proposed course (or changes to it) may be denied.

#### **SYLLABUS CHECKLIST FOR ALL UAF COURSES**

During the first week of class, instructors will distribute a course syllabus. Although modifications may be made throughout the semester, this document will contain the following information (as applicable to the discipline):

**1. Course information:**

☐ Title, ☐ number, ☐ credits, ☐ prerequisites, ☐ location, ☐ meeting time (make sure that contact hours are in line with credits).

**2. Instructor (and if applicable, Teaching Assistant) information:**

☐ Name, ☐ office location, ☐ office hours, ☐ telephone, ☐ email address.

**3. Course readings/materials:**

☐ Course textbook title, ☐ author, ☐ edition/publisher.  
☐ Supplementary readings (indicate whether ☐ required or ☐ recommended) and  
☐ any supplies required.

**4. Course description:**

☐ Content of the course and how it fits into the broader curriculum;  
☐ Expected proficiencies required to undertake the course, if applicable.  
☐ Inclusion of catalog description is *strongly* recommended, and  
☐ Description in syllabus must be consistent with catalog course description.

**5. ☐ Course Goals (general), and (see #6)**

**6. ☐ Student Learning Outcomes (more specific)**

**7. Instructional methods:**

☐ Describe the teaching techniques (eg: lecture, case study, small group discussion, private instruction, studio instruction, values clarification, games, journal writing, use of Blackboard, audio/video conferencing, etc.).

**8. Course calendar:**

☐ A schedule of class topics and assignments must be included. Be specific so that it is clear that the instructor has thought this through and will not be making it up on the fly (e.g. it is not adequate to say "lab". Instead, give each lab a title that describes its content). You may call the outline Tentative or Work in Progress to allow for modifications during the semester.

**9. Course policies:**

☐ Specify course rules, including your policies on attendance, tardiness, class participation, make-up exams, and plagiarism/academic integrity.

**10. Evaluation:**

☐ Specify how students will be evaluated, ☐ what factors will be included, ☐ their relative value, and ☐ how they will be tabulated into grades (on a curve, absolute scores, etc.) ☐ Publicize UAF regulations with regard to the grades of "C" and below as applicable to this course. (This is not required in the syllabus, but it's a convenient way to publicize this if applicable.) Faculty Senate Meeting #171:

<http://www.uaf.edu/uafgov/faculty-senate/meetings/2010-2011-meetings/#171>

**11. Support Services:**

☐ Describe the student support services such as tutoring (local and/or regional) appropriate for the course.

**12. Disabilities Services:**

The Office of Disability Services implements the Americans with Disabilities Act (ADA), and insures that UAF students have equal access to the campus and course materials. ☐ State that you will work with the Office of Disabilities Services (208 WHITAKER BLDG, 474-5655) to provide reasonable accommodation to students with disabilities.

6/30/2011

**FISH 650/BIOL 650 FISH ECOLOGY  
SPRING 2011**

Instructor

Dr. Trent M. Sutton, Associate Professor  
1W02 AHRB; Phone: 474-7285  
E-mail: tmsutton@alaska.edu

Office Hours

Tu, Th: 9:30 – 10:30 a.m., 1:00 – 2:00 p.m.  
W: 11:00 a.m. – 1:00 p.m.; or by appt

Meeting Times

11:30 a.m. – 1:00 p.m., Tuesday & Thursday, 201 ONL

Course Description

The relationship of fishes to the physical, chemical, and biological features of their environment in both perturbed and unperturbed aquatic ecosystems. An emphasis will be placed on fish diversity in terms of morphology, behavior, feeding, and reproductive strategies as they relate to individual and population adaptation, and community structure in both freshwater and marine environments. Prerequisites: Permission of instructor.

Course Objectives

1. To develop an appreciation for the diversity of responses by individual fish to environmental variability and the consequences of individual adaptation for population and community persistence.
2. To provide a basic understanding of the elementary principles of fish population dynamics and response strategies to biotic and abiotic features of the environment.
3. To promote consideration of the limits of ecological adaptation in the development of alternative fisheries management strategies.
4. To hone critical thinking, written and oral communication, and professional skills as they relate to ecological theory within the context of fisheries biology and management.

Special Needs

If you need course adaptations or accommodations because of a disability, please contact me as soon as possible in order to make the necessary arrangements.

Reading Assignments

Because of the diverse nature of topics that will be covered in this course, lecture material will be drawn from many different sources. Readings from Ecology of Teleost Fishes, Second Edition by Wootton will serve as the required course text. Journal reprints and lecture outlines, available on Blackboard or as handouts, will also be required for this course and will provide the required readings for all lecture topics and class discussions. All readings are listed on the lecture outline.

Scientific Writing Style

The research proposal must follow the *Guide for Authors* requirements as outlined in American Fisheries Society journals. Information obtained from the Internet is not considered to be a valid source of scientific information and will not be accepted for your report.

Research Proposal

One assignment that you will complete this semester is a written research proposal on a topic area of fish ecology. Topic areas must be chosen by each individual (or pair of individuals) no later than February 03. Prior to the final proposal deadline, you will be required to complete a literature search of peer-reviewed periodicals and turn in an annotated reference section for your project (50 points; due on February 15). The final written proposal, which is due April 28, will include the following sections: title page, table of contents, project summary, project description, anticipated contribution, schedule, personnel and facilities, budget, and literature cited (150 points; see handout for specific details). The total assignment value is 200 points.

### Exams

Two in-class lecture exams (100 points each) and the final exam (150 points) will be administered during the semester. Lecture exams are tentatively scheduled for March 01 and April 05. The final exam will be given during the time period designated by the university. In all cases, students will not be allowed to retain copies of the exams.

### Class Participation

At least three class discussion periods, each covering material relevant to previous lecture topic areas, will be scheduled throughout the semester. Because class participation is critical for these activities, you will need to prepare yourself by completing any necessary readings and/or assignments before the scheduled periods. To provide additional incentive to sufficiently prepare for and participate in these exercises, each discussion is worth up to 35 points. If additional class discussion periods are added, then the point value per class discussion period will be adjusted accordingly. Points will be awarded based on degree of participation in each activity at the discretion of the instructor. An additional 45 points is also available for general class participation and attitude during the other class meeting periods.

### Grading

Grades will be based on a 90-80-70-60 scale. If the class average falls below 75%, this scale will be adjusted accordingly. All assignments are due at the beginning of the indicated class period. Late assignments will be docked 10% of the total exercise point value for each day late and missed exams or class discussion periods will be assigned a zero score. If you cannot take an exam, turn in an assignment, or attend a class discussion period for a legitimate reason, it is your responsibility to contact me prior to the date in question in order not to receive a penalty. With the exception of emergencies, exam make-up or late assignment requests will only be honored if a legitimate reason is provided to me in writing at least one week prior to that date. Point and percentage values for each evaluation component are as follows:

Component	Points Available	Percentage of Total
Class Discussions	150	20%
Proposal Project	200	40%
Exams	350	40%
<b>TOTAL</b>	<b>700</b>	<b>100%</b>

## LECTURE OUTLINE

<u>Topic</u>	<u>Date</u>	<u>Readings</u>
<b>INTRODUCTION</b>		
Course Description; Fish Ecology Perspective	Jan 20	ETF (Ch. 1)
Ecological Adaptation	Jan 25	ETF (Ch. 1)
Fish Evolution and Distribution	Jan 27	
<b>MORPHOLOGICAL ADAPTATIONS</b>		
Body Form and Locomotion	Feb 01	ETF (Ch. 2)
External and Internal Morphology;	Feb 03	ETF (Ch. 2)
<b>Proposal Topic Selection</b>		
Sensory Modalities		
Chemoreception and Mechanoreception	Feb 08	ETF (Ch. 2)
Electroreception, Photoreception, and	Feb 10	ETF (Ch. 2)
Visual Signals		
<b>BEHAVIORAL ADAPTATIONS</b>		
Adaptive Behavior and Learning;	Feb 15	ETF (Ch. 5)
<b>Proposal Annotated Literature Cited</b>		
Schooling and Territoriality	Feb 17	ETF (Ch. 5)
Migration and Homing	Feb 22	ETF (Ch. 5)
<b>Class Discussion I</b>	Feb 24	TBD
<b>LECTURE EXAM I</b>		
	<b>Mar 01</b>	
<b>TROPHIC ECOLOGY AND ENERGETICS</b>		
Ethomorphic Diversity	Mar 03	ETF (Ch. 3)
Adaptability and Optimality in Feeding	Mar 08	ETF (Ch. 3)
<b>ECOLOGICAL ASPECTS OF REPRODUCTION</b>		
Modes of Reproduction	Mar 10	ETF (Ch. 7)
<b>SPRING BREAK</b>		
	Mar 15	
<b>SPRING BREAK</b>		
	Mar 17	
Alternative Modes of Reproduction	Mar 22	ETF (Ch. 7)
Reproductive Strategies	Mar 24	ETF (Ch. 7);
<b>Class Discussion II</b>	Mar 29	TBD
Energetics and Synchrony of Reproduction	Mar 31	ETF (Ch. 7)
<b>LECTURE EXAM II</b>		
	<b>Apr 05</b>	
<b>POPULATION ECOLOGY</b>		
Early Life History of Fishes	Apr 07	ETF (Ch. 10)
Year-Class Strength	Apr 12	ETF (Ch. 10 and 11)
Population Regulation	Apr 14	ETF (Ch. 10)
<b>Class Discussion III</b>	Apr 19	TBD

## BIOTIC INTERACTIONS

### Predation

Components of Predation

Apr 21

ETF (Ch. 8)

Predator-Prey Interactions

Apr 26

ETF (Ch. 8)

### Competition

Competition and Niche Overlap;

Apr 28

ETF (Ch. 9)

#### **Written Proposal**

Resource Partitioning

May 03

ETF (Ch. 9)

Community Energy Dynamics

May 05

BEF (Ch. 12)

### **Final Exam**

May 11 (5:45-7:45 p.m.)

### Honor System

All assignments submitted are to be entirely your own work, unless you receive specific instructions to the contrary. All aspects of your course work are covered by the Honor system. Any suspected violations (e.g. cheating, plagiarism) will be promptly reported and appropriate action(s) will be taken. Additionally, you will receive a zero for that assignment or exam; two such violations and you will automatically fail this course. Honesty in your academic work will develop into professional integrity. The faculty and students of Purdue University will not tolerate any form of academic dishonesty.