



OFFICE OF THE PRESIDENT

June 3, 2010

Interim Dean Dennis Hartmann  
College of the Environment  
Box 355679

Dear Dennis:

Based on the recommendation of its Subcommittee on Admissions and Programs, the Faculty Council on Academic Standards has recommended approval of the revised program requirements for the minor and Bachelor of Science degree in Aquatic and Fishery Sciences. A copy of the changes is attached.

I am writing to inform you that the School of Aquatic and Fishery Sciences is authorized to specify these requirements beginning autumn quarter 2010.

The new requirements should be incorporated in printed statements and in individual department websites as soon as possible. The *General Catalog* website will be updated accordingly by the Registrar's Office.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Mark A. Emmert".

Mark A. Emmert  
President

Enclosure

cc: Ms. Lin Murdock (with enclosure)  
Mr. Robert Corbett (with enclosure)  
Dr. Deborah H. Wiegand (with enclosure)  
Mr. Todd Mildon, J.D. (with enclosure FISH-20100428)

CREATING AND CHANGING UNDERGRADUATE  
ACADEMIC PROGRAMS

MAY 18 2010

OFFICE USE ONLY

Control #

Fish-20100420

After college/school/campus review, send a signed original and 8 copies to the Curriculum Office/FCAS, Box 355850.

For information about when and how to use this form: <http://depts.washington.edu/uwcr/1503instructions.pdf>College/Campus College of the  
Environment/SeattleDepartment/Unit School of Aquatic and  
Fishery Sciences

Date 4/28/2010

## New Programs

- ☐ Leading to a Bachelor of \_\_\_\_ in \_\_\_\_ degree.
- ☐ Leading to a Bachelor of \_\_\_\_ degree with a major in \_\_\_\_.
- ☐ Leading to a \_\_\_\_ Option within the existing major in \_\_\_\_.
- ☐ Leading to a minor in \_\_\_\_.

## Changes to Existing Programs

- ☐ New Admission Requirements for the Major in \_\_\_\_ within the Bachelor of \_\_\_\_.
- ☐ Revised Admission Requirements for the Major in \_\_\_\_ within the Bachelor of \_\_\_\_.
- ☒ Revised Program Requirements for the Major in Aquatic and Fishery Sciences within the Bachelor of Science.
- ☐ Revised Requirements for the Option in \_\_\_\_ within the major in \_\_\_\_.
- ☒ Revised Requirements for the Minor in Aquatic and Fishery Sciences.

## Other Changes

- ☐ Change name of program from \_\_\_\_ to \_\_\_\_.
- ☐ New or Revised Continuation Policy for \_\_\_\_.
- ☐ Eliminate program in \_\_\_\_.

Proposed Effective Date: Quarter: ☒ Autumn ☐ Winter ☐ Spring ☐ Summer Year: 20 10

Contact Person: Lin Murdock

Phone: 3-7457

Email: linm@uw.edu

Box: 355020

## EXPLANATION OF AND RATIONALE FOR PROPOSED CHANGE

For new program, please include any relevant supporting documentation such as student learning outcomes, projected enrollments, letters of support and departmental handouts. (Use additional pages if necessary).

See attached.

## OTHER DEPARTMENTS AFFECTED

List all departments/units/ or co-accredited programs affected by your new program or changes to your existing program and acquire the signature of the chair/director of each department/unit listed. Attach additional page(s) if necessary. \*See online instructions.

Department/Unit:

Chair/Program Director:

Date:

Department/Unit:

Chair/Program Director:

Date:

**CATALOG COPY**

Catalog Copy as currently written. Include only sections/paragraphs that would be changed if your request is approved. Please cross out or otherwise highlight any deletions.

See attached.

**PROPOSED CATALOG COPY**


Reflecting requested changes (Include exact wording as you wish it to be shown in the printed catalog. Please underline or otherwise highlight any additions. If needed, attach a separate, expanded version of the changes that might appear in department publications).  
**Please note:** all copy will be edited to reflect uniform style in the General Catalog.

See attached.

**APPROVALS**

Chair/Program Director:

Date:

 FOR DAVID ARMSTRONG

5/4/10

College/School/Campus Curriculum Committee:

Date:

 Stephen D. West

7 May 2010

Dean/Vice Chancellor:

Date:

 Dennis R. Hunt

5/14/10

Faculty Council on Academic Standards/ General Faculty Organization/Faculty Assembly Chair:

Date:

 John Schaafberg

5/28/2010

**POST TRI-CAMPUS APPROVAL (when needed)**

Faculty Council on Academic Standards/ General Faculty Organization/Faculty Assembly Chair:

Date:

### **Summary of Changes and Rationale for the AFS major:**

The School of Aquatic and Fishery Sciences needs to change some of our departmental requirements following our move into the College of the Environment. Specifically, we need to accommodate the new CoEnv General Education requirements without creating an unreasonable burden on our current and incoming students. These changes are relatively minor.

Here is a summary of the actual changes that we are requesting:

- Students will no longer be required to take I&S courses specifically aimed at meeting the “Law, Policy or Ethics” and “Economics” areas. This change compensates for the increase in I&S credits that our students will take as a result of entering the College of the Environment. We will continue to encourage our students to take specific courses in this area, but will no longer require these classes.
- The catalogue text is being rewritten in its entirety; all changes reflect changes in the College General Education requirements, approved and effective Spring Quarter 2010.
- We will require Fish 493: Capstone Preparation (1 cr., C/NC) of all of our students. We have offered this course for the last two years and almost all of our students take the class (even though they know it’s not required), because they see the value in having a structured “design phase” as part of their capstone project. Requiring this course will ensure that all of our students have the needed support as they embark on this task. In DARS, Fish 493 should be excluded from the Upper Division FISH electives in each of the 3 focus areas.
- We have decided that Fish 210: Research Methods does not sufficiently serve our students in its current form, because most students are not entering the class when they need the content and the material is duplicated in other classes. We have discussed and redesigned this class several times over the last five years. The course will not be required this next year; we will develop a higher level equivalent over the 2010-11 academic year, as part of a greater effort to revise our curriculum. In the meantime, we are requiring the students take those 5 credits from our 300- and 400-level course listings. The full faculty discussion likely won’t be complete until December 2010. A revised curriculum should have an effective date of Autumn 2011.

### **Summary of Changes and Rationale for the AFS minor:**

We currently require FISH 210 plus two courses (Fish 310, 311, 312, 323 and 324). We will discontinue FISH 210 in the next academic year, and instead require that students take three courses from a slightly longer list (Fish 101, 250, 310, 311, 312, 323 and 324). Two of those three classes must be at least at the 300 level. The rest of the minor would stay the same.

Current UW Catalog Copy for B.S. Requirements in the School of Aquatic and Fishery Sciences:

## **Bachelor of Science**

~~*Suggested First and Second Year College Courses:* Calculus and either the chemistry or biology series the first year, followed by the other series immediately following. English composition, public speaking or other Visual, Literary & Performing Arts (VLPA) courses, and FISH 250.~~

## **Department Admission Requirements**

Students in good academic standing may declare this major at any time, including on their application for admission to the UW. After notification of admission and before registration, new students should visit or email the Student Services Office for help in planning their programs.

## **Graduation Requirements**

~~180 credits, to include 44 credits in FISH prefix courses; 44 credits of Natural World (NW); 15 credits of mathematics; 10 credits each of Individuals & Societies (I&S) and Visual, Literary, & Performing Arts (VLPA); 12 credits of writing; and 45 credits of free electives.~~

## **The Natural World**

~~Minimum of 44 credits, to include:~~

~~*Biological Sciences:* BIOL 180, BIOL 200, BIOL 220 (5, 5, 5); or BIOL 201, BIOL 202, BIOL 203 (5, 5, 5); or BIOL 101 BIOL 102 or BIOL 161 BIOL 162 and GENOME 371 or FISH 340/BIOL 340 (5, 5, 5). One of BIOL 356 (3), FISH 447 (3), or BIOL 473 and BIOL 474 (3, 2).~~

~~*Physical Sciences:* PHYS 114, PHYS 115 (4, 4), OCEAN 210 (3). *Option A:* CHEM 142 (or CHEM 144), CHEM 152 (or CHEM 154), CHEM 162 (or CHEM 164) (5, 5, 6), and CHEM 220 (5) or CHEM 223 and CHEM 224 (4, 4); *Option B:* CHEM 120, CHEM 220, CHEM 221 (5, 5, 5).~~

## **Mathematics and Statistics**

~~Minimum of 15 credits beyond MATH 120, to include Q SCI 291, Q SCI 292 (5, 5) or MATH 124, MATH 125 (5, 5) or MATH 144, MATH 145 (5, 5). Q SCI 381 (5).~~

## **General Education**

~~*Individuals & Societies (I&S):* Minimum of 10 credits to include one course (3 credits minimum) in economics and one course (3 credits minimum) in law, policy, or ethics. See program Web site for list of acceptable courses.~~

~~*Visual, Literary, & Performing Arts (VLPA):* Minimum of 10 credits.~~

~~*Writing Proficiency:* Minimum of 12 credits, to include 5 credits of English composition drawn from the University list, and at least 7 additional credits of writing intensive (W) courses.~~

### **Major Requirements**

~~Minimum of 44 credits to include FISH 210, FISH 310, and FISH 311 (5, 5, 5); one from FISH 312 (5), FISH 323 (5), or FISH 324 (5); 18 additional credits of upper division FISH courses, including 12 credits in the student's chosen focus area; FISH 494 and FISH 495 (3-9, 3).~~

### **Minor**

#### **Aquatic and Fishery Sciences**

~~*Minor Requirements:* Minimum of 28 credits to include FISH 210 (5); two from FISH 310 (5), FISH 311 (5), FISH 312 (5), FISH 323 (5) and FISH 324 (5); Q SCI 381 (5) or Q SCI 482 (5); minimum of two upper-division FISH courses totaling at least 8 credits.~~

**Proposed UW Catalog Copy for B.S. Requirements in the School of Aquatic and Fishery Sciences:**

*(This is mostly re-written content, since the changes are significant enough that revising requirements above is more complicated than just starting over.)*

## **Bachelor of Science**

***Suggested First- and Second-Year College Courses:*** Calculus and a chemistry series the first year along with English composition and Fish 250 and/or Fish 101. The biology series, Q SCI 381 and Fish 310 and/or Fish 311 along with other courses to meet the college general education requirements during the second year. Students should start the FISH core courses as soon as the Biology series has been completed.

### **Department Admission Requirements (same)**

Students in good academic standing may declare this major at any time, including on their application for admission to the UW. After notification of admission and before registration, new students should visit or email the Student Services Office for help in planning their programs.

### **Graduation Requirements**

**180 credits.** Students must complete the College of the Environment General Education AND the Aquatic and Fishery Sciences Major requirements outlined below. Many courses may overlap in both categories unless otherwise noted. The balance of the 180 credits will be general electives.

- 1. General Education Requirements (85 credits)** These requirements may and do overlap with the major requirements unless noted otherwise:
  - a. Written Communication (15 credits):** 5 credits English composition (ENGL 131 preferred); and ten additional credits, which are often satisfied by departmental courses shown below.
  - b. Quantitative and Symbolic Reasoning (10 credits):** met by departmental requirements below.
  - c. Natural World (20 credits):** 10 of these credits must be taken “out-of-major,” which is defined as courses that neither count toward the major requirements below nor have the prefix of the department from which the student is earning their degree (this includes co-listed courses.)
  - d. Visual, Literary, & Performing Arts (VLPA) (10 credits):** may overlap with major requirements. No specific courses required.
  - e. Individuals & Societies (I&S) (20 credits):** 10 of these credits must be taken “out-of-major,” which is defined as courses that neither count toward the

major requirements below nor have the prefix of the department from which the student is earning their degree (this includes co-listed courses.)

**f. *Additional Areas of Knowledge (10 credits.)***

**2. *Aquatic and Fishery Sciences Major Requirements:***

- a. *Foundational Courses (54+ credits):*** MATH 124 and 125 or Q SCI 291 and Q SCI 292; Q SCI 381; CHEM 120/220/221 or CHEM 142/152/162 and 220; BIOL 180/200/220; PHYS 114/115; a course counting for “3<sup>rd</sup> Physical World” and “Ecology” requirements. See adviser or website for acceptable courses in these categories.
- b. *Core Courses (10 credits):*** FISH 310 and FISH 311.
- c. *Flagship Course (5 credit min.):*** FISH 312 or FISH 323 or FISH 324.
- d. *Upper division FISH Electives (Minimum 23 credits) of 300- or 400-level courses from within the School of Aquatic and Fishery Sciences for the major; 12 such credits must count toward the focus area which the student is planning to complete. See departmental website for more description of the focus areas and which courses count in each.***
- e. *Capstone (7-13credits):*** FISH 493 and FISH 494 and FISH 495.

**3. *Free electives:*** As needed to bring minimum total to 180 credits.

**Minor**

**Aquatic and Fishery Sciences**

***Minor Requirements:*** Minimum of 28 credits to include: three courses (two of which must be at least at the 300 level) from FISH 101 (5), FISH 250 (5), FISH 310 (5), FISH 311 (5), FISH 312 (5), FISH 323 (5) and FISH 324 (5); Q SCI 381 (5) or Q SCI 482 (5); minimum of two upper-division FISH courses totaling at least 8 credits.



**Additional DARS programming changes requested:**

Since 2001, there have been a number of new courses which have come online. We'd like to add a few new courses to the list of options that DARS has programmed for our third physical world requirement, effective Autumn 2010. We have acquired signatures from the Chairs of the affected departments:

- 1) Fish/Envir 330: Climatic Effects on Marine Ecosystems

(FISH is the responsible department, so no additional signatures required.)

- 2) Ocean/ESS 230: Rivers and Beaches

R.W. [Signature]  
Chair, Earth and Space Sciences Dept or designee

3/6/10  
Date

- 3) Envir 313/ESS 315: Environmental Earth Science

R.W. [Signature]  
Chair, Earth and Space Sciences Dept or designee

3/6/10  
Date

And we'd like to add the following courses as options for our Ecology requirement:

- 1) Envir/SMA 433: Environmental Degradation in the Tropics (5)

See attached.  
Chair, School of Marine Affairs or designee

\_\_\_\_\_  
Date

- 2) Biol 480: Field Ecology (4) and

- 3) Biol 476: Conservation Biology (5)

See attached.  
Chair, Biology Dept or designee

\_\_\_\_\_  
Date

- 4) Ocean 310: The Puget Sound Nearshore: Processes and Problems (3)

Please disregard. Course being deleted.  
Chair, School of Oceanography or designee

\_\_\_\_\_  
Date

Exclusion of Fish/Biol/Ocean 479: In DARS we would like to also exclude Fish/Biol/Ocean 479 from all three focus areas in the Upper Division Electives sections. This course is the "Integrative Seminar" for the Marine Biology minor and, as such, may not be counted for that requirement and the student's major. This policy was reflected in the original discussions in the minor, but was inadvertently left out on the 1503 for the marine biology minor.

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Date

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 FOR RAM HVEY  
\_\_\_\_\_  
Chair, Biology Dept or designee

6 MAY 2010  
\_\_\_\_\_  
Date

- 4) Ocean 310: The Puget Sound Nearshore: Processes and Problems (3)

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Chair, School of Oceanography or designee

\_\_\_\_\_  
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