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

**SUBMITTED BY:**

Department	<b>MSL</b>	College/School	<b>SFOS</b>
Prepared by	<b>Ana M. Aguilar-Islas</b>	Phone	<b>907 474 1524</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:**

<b>DEGREE PROGRAM</b>	<b>Minor in Marine Science</b>
Degree Level: (i.e., Certificate, A.A., A.A.S., B.A., B.S., M.A., M.S., Ph.D.)	<b>B.A, B.S</b>

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

The minor in Marine Science is offered to undergraduate students in all degree programs, and the requested changes are intended to add flexibility to the elective portion of the program. Changes are NOT requested to the core of the minor. The following changes are requested:

- 1) Reallocation of elective credits from 6 (MSL only) and 2 (MSL and/or other departments) to 3 (MSL only) and 5 (MSL and/or other departments)
- 2) Removal of elective courses which are no longer available (i.e. FISH 301—Biology of Fishes (3 credits))
- 3) Inclusion of elective courses from other departments (i.e. CHEM 202, CHEM 212, GEOS/GEOG 222, FISH 427, and STAT 200X)
- 4) Inclusion of 2 additional MSL elective courses (i.e. MSL 420, MSL440 and MSL 461)

The paperwork for the above proposed MSL courses is included for approval.

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

1. Complete the following:	
MSL 211 – Introduction to Marine Science I .....	3
MSL 212 – Introduction to Marine Science II .....	3
MSL 213L—Marine Science Laboratory .....	1
2. Complete 6 credits from the following:	
MSL 317 – Introduction to Marine Mammal Biology .....	3
MSL 330 —The Dynamic Alaskan Coastline .....	3
MSL 403— Estuaries Oceanography .....	2
MSL 412 —Early Life Histories of Marine Invertebrates .....	3
MSL 431 – Polar Marine Science .....	3
MSL 449 – Biological Oceanography .....	3
MSL 463 – Chemical Coastal Processes .....	3
3. Complete 2 additional credits from the following:	
<b>Marine Science and Limnology</b>	
MSL 220 – Scientific Diving .....	2
MSL 317 – Introduction to Marine Mammal Biology .....	3
MSL 330 —The Dynamic Alaskan Coastline .....	3
MSL 403— Estuaries Oceanography .....	2
MSL 412 —Early Life Histories of Marine Invertebrates .....	3
MSL 421 – Field Course in Subtidal Studies .....	2
MSL 431 – Polar Marine Science .....	3
MSL 449 – Biological Oceanography .....	3
MSL 450 – Marine Biology and Ecology Field Course .....	4
MSL 456 – Kelp Forest Ecology .....	4
MSL 463 – Chemical Coastal Processes .....	3
MSL 497 – Marine Field Experience (Independent Study) .....	1–2
<b>Fisheries</b>	
FISH 288/BIOL 288 – Marine and Freshwater Fishes of Alaska .....	3
FISH 301—Biology of Fishes .....	3

FISH 425 – Fish Ecology	3
FISH 440—Oceanography for Fisheries	3
Biology and Wildlife	
BIOL 305 – Invertebrate Zoology	5
BIOL 473 – Limnology	4
<b>Economics</b>	
ECON 235 – Introduction to Natural Resource Economics	3
4. Minimum credits required	15

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 )

1. Complete the following:	
MSL 211 – Introduction to Marine Science I	3
MSL 212 – Introduction to Marine Science II	3
MSL 213L—Marine Science Laboratory	1
2. Complete <del>6</del> <u>3</u> credits from the following:	
MSL 317 – Introduction to Marine Mammal Biology	3
MSL 330 –The Dynamic Alaskan Coastline	3
MSL 403— Estuaries Oceanography	2
MSL 412 –Early Life Histories of Marine Invertebrates	3
MSL 431 – Polar Marine Science	3
MSL 449 – Biological Oceanography	3
MSL 463 – Chemical Coastal Processes	3
3. Complete <del>2</del> <u>5</u> additional credits from the following:	
<b>Marine Science and Limnology</b>	
MSL 220 – Scientific Diving	2
MSL 317 – Introduction to Marine Mammal Biology	3
MSL 330 –The Dynamic Alaskan Coastline	3
MSL 403— Estuaries Oceanography	2
MSL 412 –Early Life Histories of Marine Invertebrates	3
<del>MSL 420 – Introduction to Physical Oceanography</del>	<del>3</del>
MSL 421 – Field Course in Subtidal Studies	2
MSL 431 – Polar Marine Science	3
<del>MSL 440 – Oceanography for Fisheries</del>	<del>3*</del>
MSL 449 – Biological Oceanography	3
MSL 450 – Marine Biology and Ecology Field Course	4
MSL 456 – Kelp Forest Ecology	4
<del>MSL 461 – Chemical Oceanography</del>	<del>3*</del>
MSL 463 – Chemical Coastal Processes	3
MSL 492 – IMS Seminar	1
MSL 497 – Marine Field Experience (Independent Study)	1–2
<b>Fisheries</b>	
FISH 288/BIOL 288 – Marine and Freshwater Fishes of Alaska	3
<del>FISH 301 – Biology of Fishes</del>	<del>3</del>
FISH 425 – Fish Ecology	3
FISH 440—Oceanography for Fisheries	3
<del>FISH/BIOL 427 – Ichthyology</del>	<del>3</del>
<b>Biology and Wildlife</b>	
<b>Biology and Wildlife</b>	
BIOL 305 – Invertebrate Zoology	5
BIOL 473 – Limnology	4
<b>Chemistry</b>	
<del>CHEM 202 – Basic Inorganic Chemistry</del>	<del>3</del>
<del>CHEM 212 – Chemical Equilibrium and Analysis</del>	<del>4</del>
<b>Economics</b>	
ECON 235 – Introduction to Natural Resource Economics	3
<b>Geology and Geophysics</b>	
<del>GEOS/GEOG 222 – Fundamentals of Geospatial Sciences</del>	<del>3</del>
<b>Statistics</b>	
<del>STAT 200X – Elementary Probability and Statistics</del>	<del>3</del>
4. Minimum credits required	15

Should be:  
 MSL F419 - Concepts in  
 Physical Oceanography

\* Included in conjunction with this change>THIS NOTATION NOT FOR CATALOG

**D. ESTIMATED IMPACT**

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

The impact of the proposed action on UAF budget is expected to be positive, as the added flexibility is expected to increase the number of students enrolling in additional credits to complete this minor. Facilities/space and faculty are not expected to be negatively impacted by the requested change to add electives from other departments, because these courses are already being offered and the additional enrolment is unlikely to be taxing. The proposed MSL course additions are also not expected to negatively impact facilities/ space and faculty. For specific course impact see attached course paperwork.

**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 selection of course electives from other departments (CHEM, GEOS, FISH, STAT) was determined after email communication with the head of each department. Negative impacts were not identified for these departments. Potential increase in enrolment for these courses would be a positive impact of the proposed action.

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

*Description of the student learning outcomes 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.


The requested changes to increase the offered electives and redistribute course requirements are in response to feedback from students enrolled or interested in the minor. Several students have expressed concern about the little flexibility offered by the structure of the electives in the minor, and some students were ambivalent about signing up for the minor for fear they would be unlikely to complete the minor in time for their graduation.


Currently, the minor structure requires students to choose 6 of their 8 elective credits from MSL courses, and the remaining 2 credits from courses in MSL or other disciplines. The available MSL elective courses are mainly 400 level classes, many of which are offered on alternate years. Thus, any particular student has a limited pool of MSL electives to choose from on a given semester.

Redistributing elective requirements to 3 credits from MSL courses and 5 credits from courses in MSL or other disciplines allows students more flexibility in 3 of the 8 elective credits required. Added courses from other disciplines will increase the number of 200 and 300 level courses available as electives, thus contributing to the needed flexibility.

**APPROVALS:**

	Date	8/30/13
Signature, Chair, Program/Department of:	GPM SL	

	Date	9/9/2013
Signature, Chair, College/School Curriculum Council for:	SFOS Curriculum Committee	

	Date	8/4/2013
Signature, Dean, College/School of:		

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

	Date	
Signature, Chair, UAF Faculty Senate Curriculum Review Committee		