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	<b>SFOS</b>		<b>SFOS</b>
	<b>Sarah Hardy</b>		<b>x7616</b>
	<a href="mailto:smhardy@alaska.edu">smhardy@alaska.edu</a> ;		
	<a href="mailto:iken@ims.uaf.edu">iken@ims.uaf.edu</a> ;		
	<a href="mailto:clneumann@alaska.edu">clneumann@alaska.edu</a>		

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This program will provide students with a marine science knowledge base, skill set, and hands on experience, which will augment their educational experience at UAF. This minor will strengthen the abilities of UAF graduates to address essential issues in research, education, management, administration or industry related to Alaska's marine resources. To address these objectives, the program will include a required two semester core course with associated lab that will introduce students to the interdisciplinary field of marine science, including study of the unique physical, chemical and biological aspects of the marine environment, and the organisms that inhabit this environment. Building on this core foundation, students will be able to choose from a variety of more focused courses depending on their specific area of interest. The elective courses will provide more detailed study of marine biology and ecology, and the physics and chemistry of the oceans. Available electives will include field courses that will be taught at the UAF marine lab facility, the Kasitsna Bay Laboratory near Homer, AK, and will emphasize hands on learning and student centered research projects. Several elective options (e.g., Polar Marine Science, Dynamic Alaskan Coastline, Marine Biology and Ecology Field Course) will also emphasize polar regions, and Alaskan marine ecosystems in particular.

Undergraduates that have completed the minor in Marine Science will possess a knowledge base and skill set that will make them more competitive for a wide variety of agency and organization positions, particularly within the state of Alaska. Training provided here will be applicable in jobs with government management agencies (e.g., Alaska Department of Fish and Game, U.S. Fish and Wildlife Service), Alaska Native Organizations, non profit conservation organizations, seafood industry, or in other policy development, fisheries, education, or outreach capacities.

MSL 450 – Marine Biology and Ecology Field Course (4 credits)  
MSL 456 – Kelp Forest Ecology  
MSL 463 – Chemical Coastal Processes (3 credits)  
MSL 497 – Marine Field Experience (Independent Study) (1 2 credits)

***Fisheries***

FISH 288/BIOL 288 – Marine and Freshwater Fishes of Alaska (3 credits)  
FISH 301—Biology of Fishes (3 credits)  
FISH 425 – Fish Ecology (3 credits)  
FISH 440—Oceanography for Fisheries (3 credits)

***Biology and Wildlife***

BIOL 305 – Invertebrate Zoology (5 credits)  
BIOL 473 – Limnology (4 credits)

***Economics***

ECON 235 – Introduction to Natural Resource Economics (3 credits)

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

This new program offering should not impact



(MSL 450: Marine Biology and Ecology Field Course)

Biology of marine invertebrates and macroalgae, benthic ecology, polar marine ecology, chemical ecology

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*Amanda Rosenberger, Assistant Professor*

(MSL 425: Fish Ecology)

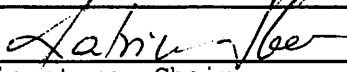
Fisheries

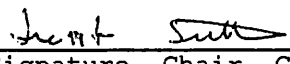
political science, as described in the sections above, and we intend to advertise the program to draw in students from these other fields.

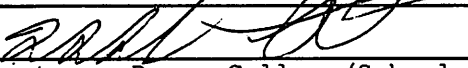
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**APPROVALS:**

	Date	17 Dec 10
Signature, Chair, Program/Department of:	GPMSI	

	Date	01/03/11
Signature, Chair, College/School Curriculum Council for:	SPOS	

	Date	1/18/11
Signature, Dean, College/School of:	SPOS	

<b>ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE</b>	
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**Curriculum Committee SFOS**

Members: Trent Sutton (Chair)  
Katrín Iken  
Jeremy Mathis  
Andre Lopez

08 December 2010

**New Minor**  
**Minor Title:** Marine Science

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**First Time of Offering:** Yes

**General Recommendations:**

General question – will courses be video conference to rural locations (e.g., Juneau, Anchorage, etc.) where there are UAF undergraduates?

**Faculty Senate Form:**

**Clarify and Address the following:**

- For MSL 412, please capitalize all words as for other courses? Also, list FISH