MARINE SCIENCE

School of Fisheries and Ocean Sciences 907-474-7824 www.sfos.uaf.edu/academics/

Minor only

Though the marine science minor is available to students in all degree programs, fisheries students will particularly benefit from the breadth this minor offers. The program will also appeal to students from other disciplines (e.g., political science, earth sciences, biology and wild-life, environmental science, resource management, and education) in which possible career paths may require and/or benefit from training in marine science (policy-making, resource management, education, the seafood industry, etc.).

Students who complete 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. The education and training will be applicable to jobs within government management agencies such as the Alaska Department of Fish and Game and the U.S. Fish and Wildlife Service, as well as Alaska Native organizations, non-profit conservation organizations, the seafood industry, or in other policy development, fisheries, education, or outreach capacities.

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1.	Complete the following:	
	MSL F211—Introduction to Marine Science I	3
	MSL F212—Introduction to Marine Science II	3
	MSL F213L—Marine Science Laboratory	
2.	Complete 6 credits from the following:	
	MSL F317—Introduction to Marine Mammal Biology	3
	MSL F330—The Dynamic Alaskan Coastline	
	MSL F403—Estuaries Oceanography	
	MSL F412—Early Life Histories of Marine Invertebrates	
	MSL F431—Polar Marine Science	
	MSL F449 – Biological Oceanography	
	MSI F463—Chemical Coastal Processes	

3. Complete 2 additional credits from the following:

Marine Science and Limnology	
MSL F220—Scientific Diving	2
MSL F317—Introduction to Marine Mammal Biology	
MSL F330—The Dynamic Alaskan Coastline	
MSL F403—Estuaries Oceanography	
MSL F412—Early Life Histories of Marine Invertebrates	
MSL F421—Field Course in Subtidal Studies	
MSL F431—Polar Marine Science	
MSL F449—Biological Oceanography	
MSL F450—Marine Biology and Ecology Field Course	4
MSL F456—Kelp Forest Ecology	
MSL F463—Chemical Coastal Processes	3
MSL F497—Marine Field Experience (Independent Study)	
Fisheries	
FISH F288/BIOL F288—Fish and Fisheries of Alaska	3
FISH F301—Biology of Fishes	
FISH F425—Fish Ecology	
FISH F440—Oceanography for Fisheries	
Biology and Wildlife	ر
BIOL F305—Invertebrate Zoology	5
BIOL F473—Limnology	ر
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Economics	
ECON F235—Introduction to Natural Resource Economics	3
Minimum credits required	15
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Baccalaureate Core Requirements	NATURAL SCIENCES (8)
(Note: all courses for Core must be at C- or higher.)	Complete any two (4-credit) courses:
	ATM F101X(4)
COMMUNICATION (9)	BIOL F100X(4)
Complete the following:	BIOL F103X(4)
ENGL F111X(3)	BIOL F104X(4)
ENGL F190H may be substituted.	BIOL F111X(4)
•	BIOL F112X(4)
Complete one of the following:	BIOL F115X(4)
ENGL F211X OR ENGL F213X(3)	BIOL F116X(4)
Complete one of the following:	CHEM F100X(4)
COMM F131X OR COMM F141X(3)	CHEM F103X(4)
	CHEM F104X(4)
DEDCDECTIVES ON THE HUMAN CONDITION (10)	CHEM F105X(4)
PERSPECTIVES ON THE HUMAN CONDITION (18)	CHEM F106X(4)
Complete all of the following four courses:	
ANTH F100X/SOC F100X(3)	GEOS F100X(4) GEOS F101X(4)
ECON F100X OR PS F100X(3)	GEOS F101X (4) GEOS F112X(4)
HIST F100X(3)	GEOS F112X (4)
ENGL/FL F200X(3)	GEOS F125X
Complete one of the following three courses:	MSL F111X(4)
ART/MUS/THR F200X, HUM F201X OR ANS F202X (3)	PHYS F102X(4)
,	PHYS F103X(4)
Complete one of the following six courses: BA F323X, COMM F300X, JUST F300X, NRM F303X,	PHYS F104X(4)
PS F300X OR PHIL F322X(3)	PHYS F115X(4)
	PHYS F116X(4)
OR complete 12 credits from the above courses PLUS	PHYS F175X(4)
• two semester-length courses in a single Alaska Native language or	PHYS F211X(4)
other non-English language OR	PHYS F212X(4)
• three semester-length courses (9 credits) in American Sign	PHYS F213X(4)
Language taken at the university level.	
	LIBRARY AND INFORMATION RESEARCH (0 – 1)
MATHEMATICS (3)	Successful completion of library skills competency test OR
Complete one of the following:	LS F100X or F101X prior to junior standing $(0-1)$
MATH F103X, MATH F107X, MATH F161X OR	
STAT F200X(3 – 4)	LIBBER DIVICIONI WIRITING AND ORAL COMMUNICATIO
* No credit may be earned for more than one of MATH F107X or	UPPER-DIVISION WRITING AND ORAL COMMUNICATIO
F161X.	Complete the following:
OR complete one of the following:*	Two writing intensive courses designated (W)(0)
MATH F200X, MATH F201X, MATH F202X,	and one oral communication intensive course
MATH F262X OR MATH F272X(4)	designated (O)(0)
*Or any math course having one of these as a prerequisite.	OR two oral communication intensive courses designated (O/2), at the upper-division level (see degree and/or major
	requirements)(0)
	CORE CREDITS REQUIRED38 -
	Minimum credits required for degree





