

Submit original with signatures + 1 copy + electronic copy to UAF Governance.
 See <http://www.uaf.edu/uafgov/faculty/cd> for a complete description of the rules governing curriculum & course changes.

TRIAL COURSE OR NEW COURSE PROPOSAL

SUBMITTED BY:

Department	SFOS	College/School	SFOS
Prepared by	Sarah Hardy	Phone	474-7616
Email Contact	smhardy@alaska.edu ; clneumann@alaska.edu	Faculty Contact	Sarah Hardy

1. ACTION DESIRED (CHECK ONE):

Trial Course	<input type="checkbox"/>	New Course	<input checked="" type="checkbox"/>
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2. COURSE IDENTIFICATION:

Dept	MSL	Course #	212	No. of Credits	3
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Justify upper/lower division status & number of credits:	This is an introductory course designed for minors in marine science (n.b. paperwork for creation of a new minor in marine science has been submitted concurrently), or majors/minors in related fields (e.g., fisheries, biology, environmental science, natural resource management). Minimal science background is required for this course, which is aimed at incoming freshmen and sophomores. The course provides a basic foundation for more specialized courses offered in marine science and fisheries
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3. PROPOSED COURSE TITLE: **Introduction to Marine Science II**

4. CROSS LISTED? YES/NO **no** If yes, Dept: Course #

(Requires approval of both departments and deans involved. Add lines at end of form for such signatures.)

5. STACKED? YES/NO **no** If yes, Dept: Course #

6. FREQUENCY OF OFFERING: **Every spring**

(Every or Alternate) Fall, Spring, Summer - or As Demand Warrants

7. SEMESTER & YEAR OF FIRST OFFERING (if approved) **Spring 2012** Per Registrar: Fall 2012.

8. 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. Furthermore, any core course compressed to less than six weeks must be approved by the core review committee.

COURSE FORMAT: (check one)

<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input checked="" type="checkbox"/> 6 weeks to full semester
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OTHER FORMAT (specify)

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

9. CONTACT HOURS PER WEEK:

3.0 LECTURE hours/weeks	<input type="checkbox"/> LAB hours /week	<input type="checkbox"/> PRACTICUM hours /week
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Note: # of credits are based on contact hours. 800 minutes of lecture=1 credit. 2400 minutes of lab in a science course=1 credit. 1600 minutes in non-science lab=1 credit. 2400-4800 minutes of practicum=1 credit. 2400-8000 minutes of internship=1 credit. This must match with the syllabus. See <http://www.uaf.edu/uafgov/faculty/cd/credits.html> for more information on number of credits.

OTHER HOURS (specify type)

to GOV COON 12/16/10

10. COMPLETE CATALOG DESCRIPTION including dept., number, title and credits (50 words or less, if possible):

MSL 212: Introduction to Marine Science II (3.0 credits)

This course explores the diversity of marine life, from microbes to mammals, and the interactions of marine organisms with each other and with their environment. Topics include primary productivity, marine food webs, physiological adaptations, and ecology of marine habitats from coastal to deep-sea systems. Students will also be introduced to current topics in marine and fisheries research.

Prerequisites: MSL 211 (3+0)

11. 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 N = Natural Science S = Social Sciences

Will this course be used to fulfill a requirement for the baccalaureate core? YES NO

IF YES, check which core requirements it could be used to fulfill:

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

12. COURSE REPEATABILITY:

Is this course repeatable for credit? YES NO

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

13. GRADING SYSTEM:

LETTER: PASS/FAIL:

RESTRICTIONS ON ENROLLMENT (if any)

14. PREREQUISITES

These will be required before the student is allowed to enroll in the course.

RECOMMENDED

Classes, etc. that student is strongly encouraged to complete prior to this course.

15. SPECIAL RESTRICTIONS, CONDITIONS

16. PROPOSED COURSE FEES

Has a memo been submitted through your dean to the Provost & VCAS for fee approval? Yes/No

17. PREVIOUS HISTORY

Has the course been offered as special topics or trial course previously? Yes/No

If yes, give semester, year, course #, etc.:

18. **ESTIMATED IMPACT**

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

This course is not expected to have significant impact on budget and faculty. It will be taught by Sarah Hardy, who is a new faculty member in the School of Fisheries and Ocean Sciences, as part of her regular teaching workload. Impacts on space are limited to the need for a standard lecture room; smart classroom capability is not necessarily required.

19. **LIBRARY COLLECTIONS**

Have you contacted the library collection development officer (ffklj@uaf.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	<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/>
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BioSciences librarian Anne Christie was contacted on 17 November 2010; Library collections were determined to be suitable for the needs of this course.

20. **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)

Other programs are unlikely to be significantly impacted, other than through the broadening of course offerings made available to undergraduate students.

21. **POSITIVE AND NEGATIVE IMPACTS**

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

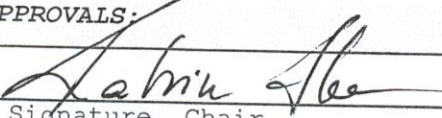
This course (and its companion courses, MSL 211 and 213) should greatly benefit students in the natural or social sciences who are interested in applying their degrees in a marine-related field (e.g., resource management, fisheries, etc.). No negative impacts are expected.

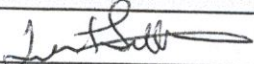
JUSTIFICATION FOR ACTION REQUESTED

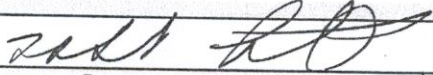
The purpose of the department and campus-wide curriculum committees is to scrutinize course change and new course applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be self-explanatory. Use as much space as needed to fully justify the proposed course.

This course is designed for lower-division undergraduate students in the natural or social sciences interested in gaining a broad introduction to the field of marine biology and ecology. It is intended to be taken in series with MSL 211 (Introduction to Marine Science I), and with the MSL 213 laboratory component. This 200-level series provides an alternative to MSL 111X, which is part of the core curriculum and therefore aimed mainly at non-science majors. The new 200-level series, including the course proposed here, will offer science majors and/or minors (or students with a stronger interest in the field) a more in-depth exploration of the fields of marine biology and ecology. However, the course is also likely to be of interest to students in other disciplines that may deal with marine-related topics, including political science, natural resource management, biology and wildlife, and other natural sciences. Other science disciplines currently offer multiple options for introductory courses to address the needs of both majors and non-majors in the fields (e.g., BIOL 100X or 103X vs. 115/116 series), yet marine science currently has no such alternative to MSL 111. This new 200-level series is intended to fill that need. This series would also serve as the "core" foundation for the Minor in Marine Science (paperwork submitted concurrently), and as such, would prepare MSL minors for additional 300- and 400-level coursework.

APPROVALS:

	Date	10/13/10
Signature, Chair, Program/Department of:	GPDSL	

	Date	10/14/10
Signature, Chair, College/School Curriculum Council for:	SFOS	

	Date	12/15/10
Signature, Dean, College/School of:	JFDS	

 	Date	
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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		

ADDITIONAL SIGNATURES: (If required)

 	Date	
Signature, Chair, Program/Department of:	 	

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

 	Date	
Signature, Dean, College/School of:	 	

ATTACH COMPLETE SYLLABUS (as part of this application).

Note: syllabus must follow the guidelines discussed in the Faculty Senate Guide

<http://www.uaf.edu/uafgov/faculty/cd/syllabus.html>.

The department and campus wide 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 change will 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 Student Learning Outcomes (more specific)

6. 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.).

7. 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.

8. Course policies:

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

9. 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.)

10. Support Services:

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

11. 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 (203 WHIT, 474-7043) to provide reasonable accommodation to students with disabilities."

MSL 212: Introduction to Marine Science II

Instructor: Dr. Sarah M. Hardy
School of Fisheries and Ocean Sciences
233 Irving II
907-474-7616
smhardy@alaska.edu

Class meeting times: MWF TBA
Location: TBA
Office hours: TBA

Prerequisites: MSL 211

Course Description

This course explores the diversity of marine life, from microbes to mammals, and the interactions of marine organisms with each other and with their environment. Topics include primary productivity, marine food webs, physiological adaptations, and ecology of marine habitats from coastal to deep-sea systems. Students will also be introduced to current topics in marine and fisheries research.

Goals and Learning Objectives

1. Learn various classification systems for marine organisms, and identify representative taxa from the major marine phyla.
2. Become familiar with the unique environmental conditions faced by marine organisms in a variety of different habitats, and the adaptations that have arisen to deal with these conditions.
3. Understand how energy flows through the marine food web, and how energy flow relates to production of marine fisheries resources.
4. Discuss current research topics in marine ecology, including climate change and human impacts.

Instructional Methods and Course Policies

This course will consist of three 1-hour lectures per week. The instructor will provide copies of slides and/or key figures discussed in lectures. These files will be made available in digital format via Blackboard. Paper copies will not be provided; students will be responsible for making their own copies if they wish to take notes on the slides during class. Supplementary reading materials may also be assigned periodically, and these readings will also be provided via Blackboard.

Please provide a **current email address** and check it regularly. Urgent updates to course policies, assignments, scheduling issues, etc. may be distributed via email. Also, make sure you have a current **Blackboard account** login. Course materials such as copies of power point presentations will be made available via Blackboard. You may also receive up-to-date information regarding your grade in this manner.

Text and Reading Assignments: The required text for this course is *Marine Biology, 8th Edition, by Castro & Huber*. A copy will be placed on physical reserves in the BioScience Library

in AHRB. Reading assignments are noted on the lecture schedule below. *Please note that all students are responsible for completing the reading assignments as indicated on the lecture outline. Reading assignments will not be announced in lecture.* Students are expected to be familiar with all material in the assigned readings unless otherwise noted.

Exams: Three **midterms** (one hour) and one **final exam** (comprehensive; two hours) will be given during the course. Each mid-term exam will be worth 75 points and the final will be worth 125 points. Exams will consist of multiple choice and short essay questions. Students may make up missed exams in the event of a justifiable absence; however, it is the student's responsibility to arrange make-up exams with the instructor. Arrangements must be made ahead of time for a planned absence during an exam.

Attendance: Students are expected to attend class. Lectures will frequently include material that is covered in much less detail—or not at all—in the text. Thus, you are unlikely to be successful in this course if you do not attend lectures. Attendance will not be taken during each class period—it is your responsibility to make arrangements to get the notes or other material missed during an absence. In the event of a *planned* absence, the instructor may provide notes or handouts from missed classes upon request.

Plagiarism and academic integrity: Plagiarism will not be tolerated in any way during this course. All assignments are expected to consist of students' original ideas and/or information from *properly cited* published sources. Students may seek assistance with proper referencing of scientific literature from the instructor as needed. Students are expected to conduct themselves according to the UAF Student Code of Conduct, which can be found in the course catalog. Failure to comply with these guidelines will result in a failing grade, and the student may face consequences at the university level, depending on the severity of the offense.

Grading

Keep all graded and returned exams and other assignments until after you have received your final grade for the class. If there is an error in the recording of grades, you will be asked to produce these assignments for verification. Your class record will be posted on Blackboard, and you should check your grades carefully and periodically. Grades will be determined based on the absolute points awarded for the following requirements:

Midterm1	75
Midterm 2	75
Midterm 3	75
Final exam	125
Total	350 pts.

Semester grades will be assigned according to the following scale:

A+ 98-100%	A 93-97%	A- 90-92%
B+ 87-89%	B 83-86%	B- 80-82%

C+ 77-79% C 73-76% C- 70-72%
 D+ 67-69% D 63-66% D- 60-62% F <60%

Incompletes (I) will be given only to those students who have received permission to complete course work after the scheduled date of the final exam. Students who do not have permission to turn in their work late will be given a grade based on the number of points they have earned as of the semester's end. **If work is not completed within one year of the scheduled final exam, incompletes will be changed to a grade of F, per UAF policy.**

Support and Disability Services

The Office of Disability Services (203 WHIT; 474-5655; fydso@uaf.edu) implements the Americans with Disabilities Act and insures that UAF students have equal access to the campus and course materials. Students with physical or learning disabilities should contact this office, or the instructor, as soon as possible so that suitable arrangements can be made to accommodate specialized needs.

Lecture Schedule (Subject to change**):**

Week	Date	Lecture Topic	Readings
1	1/21	Introductions, Course overview and goals	
2	1/24	Scientific method; History of marine biology	Chapter 1
	1/26	Review: The ocean floor	Chapter 2
	1/28	Review: Chemistry and physics of the oceans	Chapter 3
3	1/31	Review: Fundamentals of biology, Photosynthesis	Ch. 4, pp. 64-70
	2/2	Challenges of life in the sea	Ch. 4, pp. 70-76
	2/4	Classification of living things	Ch. 4, pp. 79-83
4	2/7	Microbial life in the oceans	Ch. 5, pp. 85-92
	2/9	Marine plants: Single-celled algae	Ch. 5, pp. 93-100
	2/11	Marine plants: Macro-algae and flowering plants	Chapter 6
5	2/14	Midterm #1	
	2/16	Diversity of marine invertebrates	Chapter 7
	2/18	Marine invertebrates (cont.)	
6	2/21	Marine invertebrates (cont.)	
	2/23	Diversity and classification of marine fishes	Ch. 8, pp. 151-158
	2/25	Diversity and classification of marine reptiles, birds and mammals	Ch. 9, pp. 177-196

7	2/28	Biology and physiology of marine organisms	Ch. 8, pp. 158-175; Ch. 9, pp. 197-209
	3/2	Biology and physiology (cont.)	
	3/4	Reproduction and dispersal of marine organisms	Supplementary readings
8	3/7	Reproduction and dispersal (cont.)	
	3/9	Film: excerpts from The Blue Planet series	
	3/11	Midterm #2	
9	3/14	Spring Break	
	3/16		
	3/18		
10	3/21	Marine community ecology	Ch. 10, pp. 211-221
	3/23	Food webs and energy flow	Ch. 10, pp. 221-229
	3/25	Nutrient cycling and the microbial loop	Supplemental readings
11	3/28	Intertidal ecology	Chapter 11
	3/30	Intertidal ecology (cont)	
	4/1	Salt marshes, mangroves and estuaries	Chapter 12
12	4/4	Subtidal ecology: Soft-bottom habitats	Ch. 13, pp. 287-297
	4/6	Subtidal ecology: Hard-bottom habitats	Ch. 13, pp. 297-305
	4/8	Coral reefs	Chapter 14
13	4/11	Coral reefs (cont.)	
	4/13	Midterm #3	
	4/15	Pelagic ecosystems and food webs	Ch. 15, pp. 332-350
14	4/18	Patterns in ocean productivity	Ch. 15, pp. 350-359
	4/20	Deep-Sea organisms & adaptations	Chapter 16
	4/22	Hydrothermal vents and seeps	
15	4/25	Seamounts, Abyssal Plains	
	4/27	Pollution, habitat destruction, and ocean dead-zones	Chapter 18
	4/29	NO CLASS (Spring Fest)	
16	5/2	Climate change	pp. 231-242

	5/4	Ocean acidification	
	5/6	Wrap-up and Review for final exam	
17	TBA	Final Exam	