

FORMAT 1

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	Harper Simmons	Phone	474-4697
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Email Contact	hlsimmons@alaska.edu, cineumann@alaska.edu	Faculty Contact	Harper Simmons
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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 #	211	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, or majors/minors in related fields (e.g., fisheries, biology, environmental science, natural resource management). The course provides a basic foundation for more specialized courses offered in marine science and fisheries. The proposed Marine Science minor paperwork is being submitted concurrently.
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3. PROPOSED COURSE TITLE:	Introduction to Marine Science I
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4. CROSS LISTED? YES/NO	no	If yes, Dept:		Course #	
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(Requires approval of both departments and deans involved. Add lines at end of form for such signatures.)

5. STACKED? NO	YES/	no	If yes, Dept.		Course #	
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to Gov. COUNCIL 12/16/10

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6. FREQUENCY OF OFFERING:	Every fall
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(Every or Alternate) Fall, Spring, Summer — or As Demand Warrants

7. SEMESTER & YEAR OF FIRST OFFERING (if approved)	Fall 2011 Per Registrar: 2012.
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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"/>	X	6 weeks to full semester

OTHER FORMAT (specify)	
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Mode of delivery (specify lecture, field trips, labs, etc)	Lecture
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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)	
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10. COMPLETE CATALOG DESCRIPTION including dept., number, title and credits (50 words or less, if possible):

MSL 211: Introduction to Marine Science I (3.0+0 credits)

This is the first part of a two semester sequence in Marine Science: MSL211, 212, 213 (Lab). This course introduces students to the geology, chemistry and physics of the ocean as well as related topics in the cryosphere and climate. Students will gain a basic understanding of the interconnections between the ocean and atmosphere, and the oceans and the solid earth (the continents and sea floor). Prerequisites: MATH107

and one of the following: CHEM F105X, BIOL F115X, PHYS F103X, GEOS F101X.

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

MATH107 or equivalent or concurrent enrollment.

and one of the following: CHEM F105X, BIOL F115X, PHYS F103X, GEOS F101X.

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

NONE

16. PROPOSED COURSE FEES

\$0

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**

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 existing faculty in the School of Fisheries and Ocean Sciences as part of their regular 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

Yes

Contacted Anne Christie, BIOSCIENCES library (Nov. 29 2010). There is a copy of the text at the Library. In consultation with Anne, supplementary reading will be made available for students via E-reserves.

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.

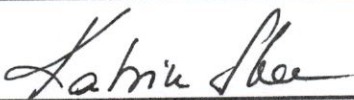
This course (and its companion courses, MSL 211 and 212) should greatly benefit students in the natural or social sciences who are interested in applying their degrees in a marine-related field (e.g., resource management, fisheries, etc.). No negative impacts are expected.

JUSTIFICATION FOR ACTION REQUESTED

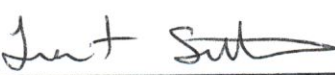
The purpose of the department and campus-wide curriculum committees is to scrutinize course change and new course applications to make sure that the quality of UAF education is not lowered as a result of the proposed change. Please address this in your response. This section needs to be self-explanatory. 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 the physical marine sciences (geology, chemistry, physics). It is intended to be taken prior to MSL 212 (Introduction to Marine Science II), and 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 science. 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, the physical sciences (geology, chemistry, physics) 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.

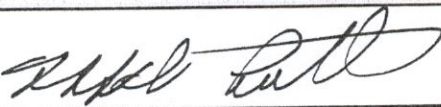
APPROVALS:

	Date	14/12/10
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Signature, Chair, Program/Department of:	GPSL
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	Date	12/14/10
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Signature, Chair, College/School Curriculum Council for:	SFOS
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	Date	10/15/10
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Signature, Dean, College/School of: S1505

Date

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:

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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."

Instructor:

Dr. Harper Simmons
Rm. 127 O'Neill building
Phone: 474-5729
Email: hlsimmons@alaska.edu

Class meeting times: TBA
Location: TBA
Office Hours: MWF 11-noon

Prerequisites: MATH107 or concurrent enrollment.

Course Description

This is the first part of a two semester sequence in Marine Science: MSL211, 212, 213 (Lab). This course introduces students to the geology, chemistry and physics of the ocean as well as related topics in the cryosphere and climate. Students will gain a basic understanding of the interconnections between the ocean and atmosphere, and the oceans and the solid earth (the continents and sea floor). Prerequisites: MATH107

Course Objectives: The course is intended for freshman or sophomore students with a science background. Students who complete the course will gain a basic understanding of the geology, physics, and chemistry of the oceans and its role of the in climate. Specifically they will understand:

- 1) The geological history of the earth's ocean basins, including basic tectonic theory.
- 2) The role that ocean chemistry and circulation plays in the storage of greenhouse gases and other materials relevant to the earth's climate.
- 3) The role of the cryosphere in the ocean circulation and the earth's radiation balance.
- 3) The circulation of the oceans and its role in the storage and transport of heat and freshwater.
- 4) The unique aspects of Alaskan and Polar marine science.

Office hours: See me at the end of class and we will either meet then, or set up an appointment to meet later. Generally, email is an excellent way to get in touch. You may also call or e-mail for an appointment. If you leave a voicemail, please include your e-mail address in your message. If you send email, please identify yourself and treat this as formal correspondence with correct spelling, no abbreviations et cetera.

Blackboard: Grades for labs and exams/quizzes will be posted on Blackboard. Students should contact instructors as soon as possible if an error is discovered and check frequently to make sure they have been credited with a correct grade for all work done. If you have any problems accessing Blackboard, call the IT help desk at 450-8300 to ensure that you have a valid email account and that you are using the correct login. Keep all graded and returned items until your final grade has been posted.

Text and Reading Assignments: The course textbook is *An Introduction to the World's Oceans*, 10th Edition, by Sverdrup and Armbrust, with supplementary material as warranted.

Note that the textbook provides many website addresses to supplement the basic material in the book. These are excellent resources if you would like more information about particular topics.

There is also a textbook website from the publisher (McGraw Hill) at <http://mhhe.com/sverdrup10e>.

- *Students are responsible for completing the reading assignments as indicated on the listing of lecture topics below.*

Course Requirements

1. Exams: There will be three mid-term examinations (one-hour) and one final examination (two-hour). The final exam will be comprehensive; that is, it will cover material presented during the entire semester. Each mid-term exam will be worth 100 points and the final will be worth 200 points. Under extreme circumstances, students may make up missed exams; however, it is the student's responsibility to arrange this with the instructor. Make up exams will be more difficult than the regular exams. Arrangements must be made ahead of time for a planned absence during an exam.

2. Quizzes: There will be four ten-minute quizzes given. Each quiz is worth 25 points. Quizzes cannot be made up under any circumstances unless prior arrangements are made.

3. Study Guide: A week before each exam, a Study Guide will be distributed or made available online. Some exam questions will be taken from the Study Guides. Therefore, answering Study Guide questions is excellent practice for the exams. Students have the option of turning in their answers to any two of the **essay** questions from the Study Guide. If these answers are turned in before the exam (see due date on the syllabus), the graded questions will be returned to you during the lecture before the exam. You will get up to 25 extra credit points if both of your answers are correct. I recommend that all students complete this extra credit opportunity because it will help reinforce the best way to answer exam questions for full credit.

4. Attendance: Students are expected to attend class. **I will present material during classes that will not be covered in the course textbook. These will also appear on exams and quizzes.**

5. Grading will be based on your point total for the semester, as follows:

Quizzes (4)	100 points
Hour exam #1	100 points
Hour exam #2	100 points
Hour exam #3	100 points
Study guide extra credit (3 opportunities)	75 points
Final Exam	200 points
Total	675 points

Grading 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%

Course Policies: Students should be familiar with the UAF Honor Code, which can be found in the course catalog. All written work, including projects, class questions, exams, and extra credit reviews, must be the work of the student submitting it and not copied from another source, such as another student (past or present).

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 an F.**

Disabilities Services: I will work with the student and with the Office of Disabilities Services to provide reasonable accommodation for students with disabilities.

Course Schedule and Lecture Topics (SUBJECT TO CHANGE)

<u>Week</u>	<u>Date</u>	<u>Topic</u>	<u>Text Chapter</u>
1	9/3	Introduction, Syllabus, Course Policies	
	9/5	Labor Day	
2	9/7	History of Oceanography	1
	9/9	History of Oceanography, Earth Origin	2
	9/11	Earth and Ocean Origin	2
3	9/14	Plate Tectonics	3
	9/16	Plate Tectonics	3
	9/19	Sea Floor	4
4	9/21	Sea Floor	4
	9/23	Coastal Erosion	Supplementary material
	9/26	Sea floor mapping	Supplementary material
5	9/28	Guest Lecture: Geological Oceanography of Alaskan Waters	
	9/30	Exam # 1	
	10/3	Physical Properties of Water	5
6	10/5	Physical Properties of Water	5
	10/7	Chemistry of Seawater	6
	10/10	Chemistry of Seawater	6
7	10/12	Chemistry of Seawater	6
	10/14	Ocean Structure	Supplementary material
	10/17	Guest Lecture: Chemical Oceanography of Alaskan Waters	
8	10/19	Exam # 2	
	10/21	Structure and Motion of the Atmosphere	7
	10/24	Structure and Motion of the Atmosphere	7
9	10/26	Structure and Motion of the Atmosphere	7
	10/28	Circulation and Ocean Structure	8
10	10/31	Circulation and Ocean Structure	8

	11/2	Circulation and Ocean Structure	8
	11/4	The Currents	9
	11/7	Waves	10
11	11/9	Tides	11
	11/11	Tides	11
	11/14	Sea Ice: Geology, Chemistry, Physics	Supplementary material
12	11/16	Sea Ice: Geology, Chemistry, Physics	Supplementary material
	11/18	Guest Lecture: Physical Oceanography of Alaskan Waters	
	11/21	Exam # 3	
13	11/23	Coastal Oceanography and Estuaries	12
	11/25	Thanksgiving Break	
	11/28	Coastal Oceanography and Estuaries	12
14	11/30	Physics of Climate: The Greenhouse Effect	Supplementary material
	12/2	Physics of Climate: Hydrologic Cycle, Cryosphere, Ocean and Atmospheric Circulation	Supplementary material
	12/5	Earth's Climate: Past Present and Future	Supplementary material
15	12/7	Climate change and the Ocean	Supplementary material
	12/9	Climate change and the Ocean	
16	12/12	Review for Final	
	12/14	Final Exam	

Curriculum Committee SFOS

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

08 December 2010

New Course

Course Number: MSL 211

Course Title: Introduction to Marine Science I

Instructor: Simmons

First Time of Offering: Yes

General Recommendations:

On the last page of the course proposal form is a checklist of components to be included in the syllabus. Be sure to go through this checklist to make sure all components are addressed. Failure to do so could result in the delay of getting this course proposal through the UAF Curriculum Review Committee. For future course proposals, please proof them prior to submission.

Faculty Senate Form:

Clarify and Address the following:

- Please add Christina Neumann's email address (cneumann@alaska.edu) to the email contact line in addition to your email address.
- Proposed course title: Just Introduction to Marine Science I. Eliminate the rest and make sure you do this for the section on the course description and the syllabus as you have three different titles.
- For course identification section, need to state that the proposed Marine Science minor has been submitted concurrently.
- The catalog description (section 10) must appear as it will in the actual catalog; you must include the prerequisites and course format (e.g., 3+0); you only had the title, credits, and course description. Also, the course is Introduction to Marine Science I, not II. Your course description must match the syllabus. Eliminate the line "This course will cover...". For the third sentence, remove "...who successfully complete the course.."
- Not a natural science course so do not check that box.
- Prerequisites – Just Math 107, nothing else.
- The UAF Curriculum Review Committee is recommending that recommended courses should not be listed.
- State "None" for special restrictions.
- Need to provide additional information for the estimated impact . Will this course be part of your regular workload for teaching?

- For the library collections category, you contacted the library so be sure to check the appropriate box. And you need the date you contacted the library.
- For section 21, it should state MSL 212 and 213, not 211 and 213. Looks like this was cut and pasted from something else.
- For the justification, second line, Introduction to marine Science II, not I.

Syllabus:

- Provide the correct title.
- Office hours have to be provided and posted, cannot be just by appointment.
- The course description on the syllabus must match the course description on the form (UAF requirement). Same for the prerequisites.
- Need student learning outcomes in bullet form. First line says for science majors. Actually, this course is not just for science majors, but for undergraduates with a science background.
- For the section on study guide, line 3, should be Study Guide not Student Guide. Like 6 should be I not We to start the sentence.
- For grading, you list 4 exams but there are only three in the schedule. How many are there? Please rectify.
- For the incomplete grade section. Last line, change to reflect that incompletes will be changed to an F grade (this is UAF policy).
- On your course outline, Thanksgiving is in November (not 12/8) and you need to change the one of the November dates to reflect the Thanksgiving break.
- Include a section on special accommodations/needs and disabilities services.