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See <u>http:</u>	://www.uaf.edu/uafgov/faculty-senate/curri	culum/course-degree-procedu	<u>res-/</u> for a complete description of the	
	ruies governing	curriculum & course changes.	•	
	TRIAL COURSE O	R NEW COURSE PROPOS	AL	
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SUBMITTED	O BY:			
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Departme	ent Institute of Marine Science	College/School	School of Fisheries and	
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10. COMPLETE CATALOG DESCRIPTION including dept., number, title, credits, credit distribution, cross-listings and/or stacking (50 words or less if possible): Example of a complete description: FISH F487 W, O Fisheries Management 3 Credits Offered Spring Therew and practice of fisheries management with an emphasis on etwateries williand for the management of ENGL F213X; ENGL F414; FISH F425; or permission of instructor. Cross-listed with NRM F487. (3+0)

This course takes an interdisciplinary look at the interactions between physical, chemical and biological processes in the ocean. A wide range of spatial scales will be considered, ranging from the large ocean gyres down to the physiochemical scales on which individual bacteria, phytoplankton and zooplankton function. The course covers case studies that provide examples of the processes, connections, and feedbacks that control the biological, chemical, and physical variability

MSL 694 Physical, Chemical, and Biological Interactions in the Oceans

3 Credits Offered Fall 2013

	15. SPECIAL RESTRICTIONS, CONDITIONS none
	16. PROPOSED COURSE FEES \$0
	Has a memo been submitted through your dean to the Provost for fee approval?
	Yes/No
	17. PREVIOUS HISTORY
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	18. ESTIMATED IMPACT
	WHAT IMPACT, IF ANY, WILL THIS HAVE ON BUDGET, FACILITIES/SPACE, FACULTY, ETC.
	Cannas will receive receive receive alegares and a mark of the received the chiral months of the

	JUSTIFICATION FOR ACTION REQUESTED
	The purpose of the department and campus-wide curriculum committees is to scrutinize course change and new course anning to make sure that the qualitie of LIAE education is not lowered as a result of the proposed.
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	change. Please address this in your response. This section needs to be self-explanatory. Use as much space as
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	the items listed below are included. If items are missing or unclease the assessed as
	the items listed below are included. If items are missing or unclear, the proposed course (or changes to it) may be <u>denied</u> .
	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 corrector, this decumpative is the following information (according to the first to the following information).

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Physical, Chemical, and Biological Interactions in the Oceans MSL 694

Proposed Fall 2013 Syllabus

Instructor:

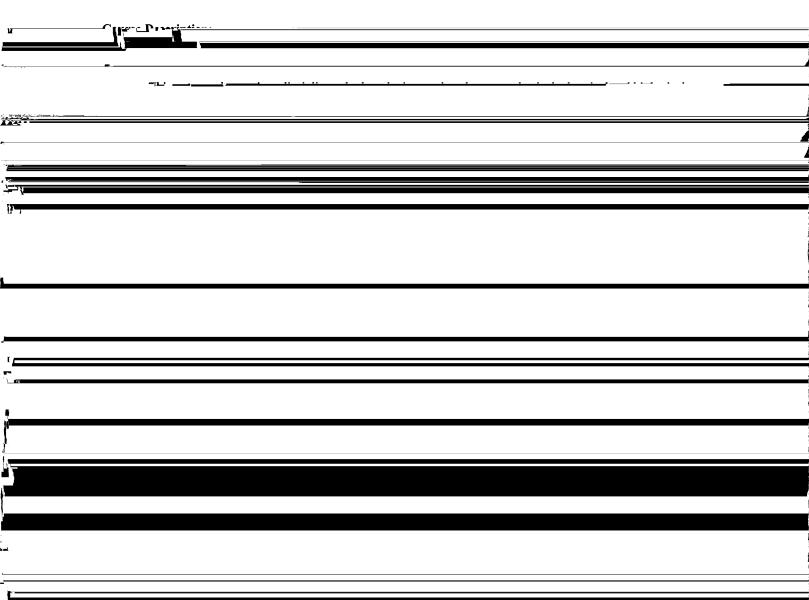
Dr. Andrew McDonnell
Assistant Professor of Oceanography
School of Fisheries and Ocean Sciences
231 Irving II
907-474-7529
amcdonnell@alaska.edu
Office Hours: TBD

Class meeting times: TBD

Location: TBD

Prerequisites: Graduate standing and completion of at least one of the following core oceanography courses: MSL 620 - Physical Oceanography, MSL 650 - Biological Oceanography, or MSL 660 - Chemical Oceanography; or permission of instructor.

3 credits

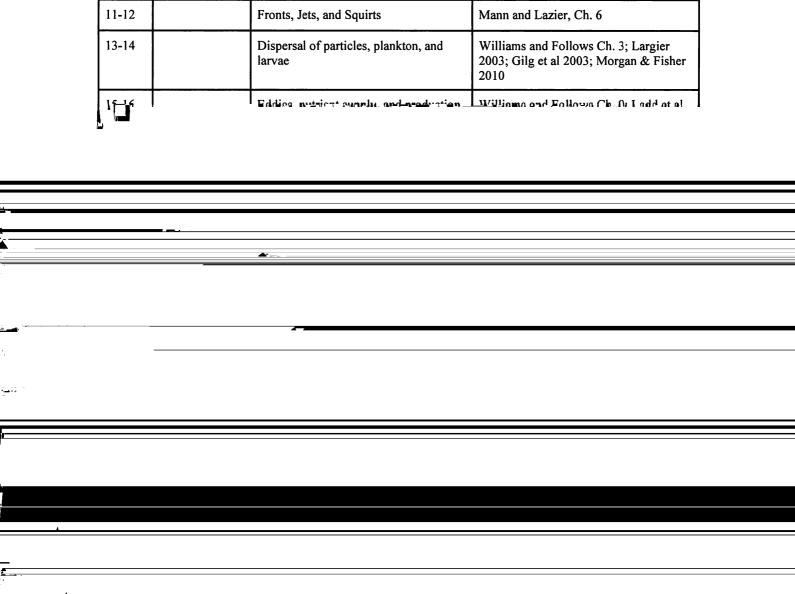


	Class Participation:	
<u></u>	Attendance, participation in class sessions, discussions, and presentations is required and factors into the	
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	Course Readings/Homework: The assigned course readings are all required and essential to meeting the course learning chicatings.	
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	percentages will be rounded to the nearest whole percentage point and letter grades will be assigned according to the following scale (no plus or minus grading): A: >90% B: 80-89% C: 70-79% D: 60-69% F: <59%
	Course Policies
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Course Schedule

Class Session	Date	Торіс	Reading
1		Course Introduction and Concept Mapping	Syllabus
2		Boundary Layers and phytoplankton	Mann and Lazier, Ch. 2
3		Zooplankton in a viscous environment	Mann and Lazier, Ch. 2
4-5		Ecosystem Engineers: Biology Shaping the Physical/Chemical Environment	Brietburg et al, 2010
6		Plankton Patchiness	Martin 2003
7-8		Vertical Structure of the open ocean: mixed layer dynamics	Mann and Lazier, Chpt. 3; Dewar et al 2006
9-10		Coastal Upwelling	Mann and Lazier, Ch. 5;
11-12		Fronts, Jets, and Squirts	Mann and Lazier, Ch. 6
13-14		Dispersal of particles, plankton, and larvae	Williams and Follows Ch. 3; Largier 2003; Gilg et al 2003; Morgan & Fisher 2010
15-6		Eddica sufficie panella, and made often	Williams and Fallows Ch. At I add at al.



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Dynamics of Marine Ecosystems: Biological-Physical Interactions in the Oceans - 3rd Edition (2006), by K. Mann
and J. Lazier. Blackwell Publishing.
Ocean dynamics and the carbon cycle: principles and mechanisms, (2011) Williams, R. G., & Follows, M. J.
Cambridge University Press.
Journal Articles (To be distributed in class or on Blackboard one week prior to assignment due date)
Breitburg, D. L., Crump, B. C., Dabiri, J. O., & Gallegos, C. L. (2010). Ecosystem engineers in the pelagic realm:
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