DOCUMENTS OF THE GENERAL FACULTY

PROPOSAL TO CREATE THE MARINE SCIENCE CERTIFICATE IN THE COLLEGE OF NATURAL SCIENCES CHAPTER IN THE UNDERGRADUATE CATALOG, 2016-2018

Dean Linda Hicke, in the College of Natural Sciences has filed with the secretary of the Faculty Council the following proposal to create a Marine Science Certificate in the *Undergraduate Catalog*, 2016-2018. On September 23, 2015, the college faculty approved the proposal. On September 28, 2015, Associate Dean David Vanden Bout approved it on behalf of the college and the dean. The secretary has classified this proposal as legislation of *general* interest to more than one college or school.

The Committee on Undergraduate Degree Program Review recommended approval of the certificate on November 18, 2015, and forwarded them to the Office of the General Faculty. The Faculty Council has the authority to approve this legislation on behalf of the General Faculty. The authority to grant final approval on this legislation resides with UT System with formal notification to the Texas Higher Education Coordinating Board.

If no objection is filed with the Office of the General Faculty by the date specified below, the legislation will be held to have been approved by the Faculty Council. If an objection is filed within the prescribed period, the legislation will be presented to the Faculty Council at its next meeting. The objection, with reasons, must be signed by a member of the Faculty Council.

To be counted, a protest must be received in the Office of the General Faculty by December 11, 2015.

Hillary Hart, Secretary

General Faculty and Faculty Council

PROPOSAL TO CREATE THE MARINE SCIENCE CERTIFICATE IN THE COLLEGE OF NATURAL SCIENCES CHAPTER IN THE UNDERGRADUATE CATALOG, 2016-2018

1.	Type of Proposal					
	Proposed classification ☐ Exclusive ☐ General ☐ Major					
2.	2. THIS PROPOSAL INVOLVES (Please check all that apply) Courses in other colleges Courses in proposer's college that are frequently taken by students in other colleges Course in the core curriculum Change in admission requirements (external or internal) Requirements not explicit in the catalog language (e.g., lists of acceptable courses maintained by department office) Flags Flags Courses that have to be added to the inventory Change in admission catalog language (e.g., lists of acceptable courses maintained by department office)					
3.	a. Does this proposal impact other colleges/schools? If yes, then how? Undergraduates in all colleges will be able to earn this certificate. The number of students pursuing this certificate who are not in natural sciences is anticipated to be very small. b. Do you anticipate a net change in the number of students in your college? Yes No If yes, how many more (or fewer) students do you expect? c. Do you anticipate a net increase (or decrease) in the number of students from outside of your college taking classes in your college? If yes, please indicate the number of students and/or class seats involved. Undergraduates in all colleges will be able to earn this certificate. The number of students pursing this certificate who are not in natural sciences is anticipated to be very small. d. Do you anticipate a net increase (or decrease) in the number of students from your college taking courses in other colleges? If 3 a, b, c, or d was answered with yes, please answer the following questions. If the proposal has potential budgetary impacts for another college/school, such as requiring new sections or a nonnegligible increase in the number of seats offered, at least one contact must be at the college-level. How many students do you expect to be impacted: Impacted schools must be contacted and their response(s) included: Date of communication: Response:					
4.	Official Certificate Name: Marine Science Certificate					
5.	Proposed Implementation Date: Fall 2016					
6.	CIP Code (administrative unit awarding the certificate): Department of Marine Science; CIP code 30.3201					
7.	Statement of Objective: The objective is to enable students to pursue a targeted exploration of the field of marine science. The proposed certificate provides a foundation of basic competency in the fundamentals of marine science, along with specialized upper division coursework in aquatic science. The certificate targets students who					

have an interest in marine science but do not want to specialize at the undergraduate stage. Exposure to marine science is important for students who think they may be interested in this field, because it is does

not receive enough attention in introductory science courses for students to make informed decisions about whether they would like to pursue the subject. The certificate will provide students knowledge of aquatic science that will help inform their decision about pursuing employment or graduate school in aquatic science, and make them competitive for jobs or graduate study. The proposed certificate comes at little or no cost to the University, as there is existing capacity in current marine science courses to accommodate the expected demand, without the need for additional course sections.

- **8.** Number of Students Expected to Receive the Certificate Each Semester: Our target enrollment is twenty students, with five to eight graduates each academic year.
- 9. Number of Hours Required for Completion: Nineteen hours.

10. List Faculty on the Certificate Program Faculty Committee.

Name of Faculty Member	College/Department	Title at UT Austin	Highest Degree and Awarding Institution
Robert Dickey Chair	CNS/Marine Science	Professor Director, Marine Science Institute Chair, Dept. of Marine Science	Ph.D. Southern Illinois University, Carbondale
Bryan Black	CNS/Marine Science	Associate Professor	Ph.D. Pennsylvania State University
Kenneth Dunton	CNS/Marine Science	Professor	Ph.D. University of Maine
Deana Erdner	CNS/Marine Science	Associate Professor	Ph.D. Massachusetts Institute of Technology/Woods Hole Oceanographic Institution
Andrew Esbaugh	CNS/Marine Science	Assistant Professor	Ph.D. Queen's University
Amber Hardison	CNS/Marine Science	Assistant Professor	Ph.D. Virginia Institute of Marine Science, College of William and Mary

11. Academic Course Requirements:

Course	Course Title	SCH
Abbreviation		
and Number		
BIO 311C	Introductory Biology I #	3
	# credit or registration in CH 301 or 301H	
BIO 311D	Introductory Biology II #	3
	# BIO 311C	
BIO 315H	Advanced Introduction to Genetics: Honors #	3
	# score of 5 on the College Board Advanced Placement	
	Examination in Biology and credit or registration for CH 301 or	
	301H	
CH 301	Principles of Chemistry I #	3
	# credit or registration for 1 of the following: M 305G, 408C,	
	408D, 408K, 408L, 408M, 408N, 408R, 408S, SDS 302; and an	
	appropriate score on the Department of Chemistry placement	
	examination	
CH 301H	Principles of Chemistry I: Honors #	3

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	## credit or registration for 1 of the following: M 305G, 408C,		
	408D, 408K, 408L, 408M, 408N, 408R, 408S, SDS 302; an		
	appropriate score on the Department of Chemistry placement		
CIT 202	examination; and consent of the departmental honors adviser		
CH 302	Principles of Chemistry II #	3	
	# CH 301 or 301H; credit in M 305G or SDS 302; credit or		
	registration for 1 of the following: 408C, 408D, 408K, 408L,		
GIV 202V	408M, 408N, 408R, 408S		
CH 302H	Principles of Chemistry II: Honors #	3	
	# CH 301 or 301H; credit in M 305G or SDS 302; credit or		
	registration for 1 of the following: 408C, 408D, 408K, 408L,		
	408M, 408N, 408R, 408S; and consent of the departmental honors adviser		
MNS 310	Fundamentals of Marine Science #	3	
IVINS 310		3	
MNIC 220	# BIO 311D; CH 302 or 302H	2	
MNS 320	Marine Ecology # BIO 311D and CH 302/H	3	
MAIC 1201		1	
MNS 120L	Marine Ecology Laboratory #	1	
MONIC 440	# Credit or registration in MNS 320	4	
MNS 440	Limnology and Oceanography #	4	
MOIG 1501	# BIO 325 or 325H; CH 302 or 302H	1	
MNS 152L	Topics in Marine Science Laboratory #	1	
MNIG 152G	# Credit or registration in MNS 352	1	
MNS 152S	Seminar in Marine Science	1	
MNS 152T	Principles of Marine Science: Special Topics	1	
MNS 348:1	Topic 1: Training Cruise(s) #	3	
NO.1C 2.72	# UD standing; consent of instructor; BIO 325; CH 302 or 302H	2	
MNS 352	Principles of Marine Science	3	
MNS 352C	Estuarine Ecology #	3	
MNIC 252D	# UD standing; 6 hours in BIO, CH, GEO, or PHY	3	
MNS 352D	Marine Botany #	3	
	# UD standing; 3 hours of BIO; and 1 course from following:		
MNS 352E	BIO 322, 324, 325 or 325H, 328, MNS 320, 352C Marine Conservation Biology #	3	
MINS 332E		3	
MNS 353	# BIO 311D; CH 302 or 302H Topics in Marine Science #	3	
WINS 333	# UD standing; consent of instructor	3	
MNS 354	Marine Invertebrates #	3	
WINS 554	# UD standing; 6 hours of BIO	3	
MNS 354C	Biology of Fishes #	3	
WINS 334C	# UD standing; 6 hours in BIO or consent of instructor	3	
MNS 354E	Aquatic Microbiology #	3	
WINS 334E	# BIO 311D; CH 302 or 302H; consent of instructor	3	
MNS 354J	Marine Chemistry #	3	
WINS 5545	# UD standing; CH 301 and 302; or consent of instructor	3	
MNS 354Q	Marine Environmental Science #	3	
WIND 334Q	# UD standing; BIO 311D; CH 302 or 302H	3	
MNS 354T	Biological Oceanography #	3	
141140 2241	# UD standing; BIO 311D	3	
MNS 354U	Biology of Sharks, Skates, and Rays #	3	
141140 3340	# UD standing; BIO 354L, 361T, or MNS 354C; 3 UD hours of	3	
	BIO or MNS or consent of instructor		
MNS 355C	Physiology of Fishes #	3	
111110 2220	# UD standing; BIO 311D; CH 302 or 302H; or consent of	3	
	instructor		
	**************************************	1	

MNS 356	Ecosystem Oceanography #	3
	# UD standing; BIO 311D; CH 302 or 302H	
MNS 357	Marine Phytoplankton Diversity #	3
	# UD standing; BIO 311D; CH 302 or 302H	
MNS 367K	Human Exploration and Exploitation of the Sea #	3
	# UD standing; MNS 307	
MNS 170,	Special Studies in Marine Science #	1-3
270, 370	# 6 UD hours in science; grade point average of at least 3.0;	
	written consent of instructor	

12. Other Certificate Requirements: N/A

13. Give a Detailed Rationale for Change(s):

14. College/School Approval Process:

Departmental approval: April 6, 2015; September 21, 2015

College approval: September 23, 2015 Dean's approver: David Vanden Bout

Title: Associate Dean for Undergraduate Education

Date: September 28, 2015

PROPOSED NEW CATALOG TEXT:

Marine Science

The Marine Science transcript-recognized certificate enables students to explore of the field of marine science. The minor provides a foundation of basic competency in the fundamentals of marine science, along with specialized upper-division coursework in aquatic science. The knowledge of aquatic science that students gain through the certificate will help them to be competitive for employment or graduate study in this field.

The certificate consists of a minimum of nineteen hours with grades of at least *C*-. Most of the courses in the certificate contain prerequisites of one year of general biology and one year of general chemistry.

Marine and Freshwater Biology and Marine and Freshwater Science majors are not eligible to earn the certificate. Environmental Science majors may count no more than nine hours of degree requirements toward the Marine Science certificate.

- 1. Three hours chosen from: Biology 311C, 311D, 315H, Chemistry 301, 301H, 302, 302H.
- 2. Marine Science 310, Fundamentals of Marine Science.
- 3. Marine Science 320, Marine Ecology
- 4. Marine Science 120L, Marine Ecology Laboratory
- 5. Choose nine hours from the following list, including at least six hours at the Marine Science Institute in Port Aransas, Texas:
 - a. Marine Science 440, Limnology and Oceanography
 - b. Marine Science 152L, Topics in Marine Science Laboratory
 - c. Marine Science 152S, Seminar in Marine Science
 - d. Marine Science 152T, Principles of Marine Science: Special Topics
 - e. Marine Science 348:1, Research Training Cruise
 - f. Marine Science 352, Principles of Marine Science
 - g. Marine Science 352C, Estuarine Ecology
 - h. Marine Science 352D, Marine Botany
 - i. Marine Science 352E, Marine Conservation Biology
 - j. Marine Science 353, Topics in Marine Science
 - k. Marine Science 354, Marine Invertebrates

- 1. Marine Science 354C, Biology of Fishes
- m. Marine Science 354E, Aquatic Microbiology
- n. Marine Science 354J, Marine Chemistry
- o. Marine Science 354Q, Marine Environmental Science
- p. Marine Science 354T, Biological Oceanography
- q. Marine Science 354U, Biology of Sharks, Skates, and Rays
- r. Marine Science 355C, Physiology of Fishes
- s. Marine Science 356, Ecosystem Oceanography
- t. Marine Science 357, Diversity of Marine Phytoplankton
- u. Marine Science367K, Human Exploration and Exploitation of the Sea
- v. Marine Science 170, 270, 370, Special Studies in Marine Science

¹ See footnote 1b above: 18-24 hours are required.