

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

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:¹ 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 Abbreviation and Number	Course Title	SCH
BIO 311C	Introductory Biology I # # credit or registration in CH 301 or 301H	3
BIO 311D	Introductory Biology II # # BIO 311C	3
BIO 315H	Advanced Introduction to Genetics: Honors # # score of 5 on the College Board Advanced Placement Examination in Biology and credit or registration for CH 301 or 301H	3
CH 301	Principles of Chemistry I # # 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	3
CH 301H	Principles of Chemistry I: Honors #	3

	## 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 examination; and consent of the departmental honors adviser	
CH 302	Principles of Chemistry II # # 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	3
CH 302H	Principles of Chemistry II: Honors # # 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	3
MNS 310	Fundamentals of Marine Science # # BIO 311D; CH 302 or 302H	3
MNS 320	Marine Ecology # BIO 311D and CH 302/H	3
MNS 120L	Marine Ecology Laboratory # # Credit or registration in MNS 320	1
MNS 440	Limnology and Oceanography # # BIO 325 or 325H; CH 302 or 302H	4
MNS 152L	Topics in Marine Science Laboratory # # 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) # # UD standing; consent of instructor; BIO 325; CH 302 or 302H	3
MNS 352	Principles of Marine Science	3
MNS 352C	Estuarine Ecology # # UD standing; 6 hours in BIO, CH, GEO, or PHY	3
MNS 352D	Marine Botany # # UD standing; 3 hours of BIO; and 1 course from following: BIO 322, 324, 325 or 325H, 328, MNS 320, 352C	3
MNS 352E	Marine Conservation Biology # # BIO 311D; CH 302 or 302H	3
MNS 353	Topics in Marine Science # # UD standing; consent of instructor	3
MNS 354	Marine Invertebrates # # UD standing; 6 hours of BIO	3
MNS 354C	Biology of Fishes # # UD standing; 6 hours in BIO or consent of instructor	3
MNS 354E	Aquatic Microbiology # # BIO 311D; CH 302 or 302H; consent of instructor	3
MNS 354J	Marine Chemistry # # UD standing; CH 301 and 302; or consent of instructor	3
MNS 354Q	Marine Environmental Science # # UD standing; BIO 311D; CH 302 or 302H	3
MNS 354T	Biological Oceanography # # UD standing; BIO 311D	3
MNS 354U	Biology of Sharks, Skates, and Rays # # UD standing; BIO 354L, 361T, or MNS 354C; 3 UD hours of BIO or MNS or consent of instructor	3
MNS 355C	Physiology of Fishes # # UD standing; BIO 311D; CH 302 or 302H; or consent of instructor	3

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

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

- l. 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 Science 367K, 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.