GENERAL EDUCATION COMMITTEE RECOMMENDATION FORM

REQUEST FOR "AREA B1-3: SCIENTIFIC INQUIRY" DESIGNATION

**TO:** **Amy Parsons, Chair, Curriculum Committee**

**FROM:** **Tom Oppenheim, Chair, General Education Committee**

**DATE:** **February 16, 2021**

**SUBJECT: Curriculum Change Request: ___OCN 105_____**

Proposed Course Subject: OCN
Proposed Course Title: Introductory Oceanography
Submitted by: Jennifer Murphy
Date Submitted: February 2, 2021

## GE COMMITTEE SUMMARY

*In the space provided, please include the following information: when the committee met, who was in attendance, who was absent (and for what reason), a record of the vote/ decision, and a brief summary of the committee discussion (including justifications for decisions and dissenting opinions):*

GE Committee Meeting
2/2/2, 11:00 am

Attendees: Alex Parker, Elizabeth McNie, Tom Oppenheim, Jenny Murphy
Michael Strange, Colin Dewey, Julie Odom, Joshua Shackman, Margot Hanson, Kate Randolph, Aparna Sinha, Alejandro Cifuentes-Lorenzon, Julie Simons, Cynthia Trevisan
Absent: Ryan Dudley, Joshua Barlas, Graham Benton

Vote: 9 in favor, 0 opposed, 0 abstentions.

Cal Maritime has historically done oceanography differently than other campuses. Oceanography was broken into two semesters, other campuses do one. Designed to go deeper into topics for minor in Marine Science and not thought of as a GE course. Other CSU offers oceanography courses as B1 (one semester). Transferability issues. Now that we have OCN students, re-doing intro sequence for the major and it's not working for a diverse audience. Goal is to offer a B1 OCN course for GE, not for OCN students. This is similar to a course taught at Diablo Valley College and UC Berkeley, both fulfill physical science req. (and life science at UC Berkeley). Designed to give an overview, surface level concepts. Scientific method discussed, while applying. Geological oceanography, then chemical oceanography (carbon, nitrogen cycles, etc.), then physical oceanography (waves, physical properties of sea water). Weave in human interactions (fisheries, pollution, mining.)

General consensus that this course clearly meets B1 outcomes.

When reviewing courses, the GE Committee considers how well a course accords with the description of the subject area in EO1100, and whether or not the course will require that students satisfy the Cal Maritime General Education Learning Outcomes:

| EO1100 Description of Area B 1-3: Physical Science (B1), Life Science (B2), Laboratory Activity (B3) | GE Committee Discussion Notes |
|---|---|
| In Subareas B1-B3, students develop knowledge of scientific theories, concepts, and data about both living and non-living systems. Students will achieve an understanding and appreciation of scientific principles and the scientific method, as well as the potential limits of scientific endeavors and the value systems and ethics associated with human inquiry. The nature and extent of laboratory experience is to be determined by each campus through its established curricular procedures. | **B1 is obviously met.** |

| Cal Maritime GE Learning Outcomes: Area B1-B3 Scientific Reasoning | GE Committee Discussion Notes |
|---|---|
| GELO 4: Apply scientific principles and the scientific method to data about both living and non-living systems. | **Clearly does, scientific method will be covered.** |

When reviewing courses, the GE Committee also considers the "IGETC Standards, Policies & Procedures for Intersegmental General Education Transfer Curriculum, Version 2.0" (updated May 2019) and the "Guiding Notes for General Education Course Reviewers" (updated October 2019) which were "developed based on recommendations from the faculty and staff who review course outlines proposed for lower division general education credit in the University of California (UC) and the California State University (CSU)."

| IGETC Standard for Area B Courses | GE Committee Discussion Notes |
|---|---|
| 10.5 Physical and Biological Sciences Requirement: "Courses must emphasize experimental methodology, the testing of hypotheses, and the power of systematic questioning, rather than only the recall of facts. Courses that emphasize the interdependency of the sciences are especially appropriate for non-science majors." / "Students must develop a comprehension of the basic concepts of physical and biological sciences, and a sophisticated understanding of science as a human endeavor, including the limitations as well as the power of scientific inquiry."<br><br>10.5.1 Courses that Do Not Fulfill the Requirement: Acceptable courses *must* focus on teaching the basic concepts of biological sciences. Human Nutrition, Horticulture, Forestry, Health, and Human Environment courses were determined to have a narrow or applied focus and therefore unacceptable for this area. Courses which emphasize the major concepts of the discipline, including biochemical and physiological principles, will be considered. Courses which do not focus on the core concepts of a physical science discipline, such as Energy and the Way We Live, are not acceptable. Courses which survey both the physical and biological sciences but are not comparable in depth and scope to a traditional science course or focus on a particular subject will not satisfy [the requirement].<br><br>10.5.2 Laboratory Science Requirement: "The intent of the IGETC laboratory science requirement is that students take at least one physical or biological science course incorporating a laboratory component. Since the experimental methodology and hypothesis testing taught in a lab builds on the principles presented in the lecture portion of the course, the two must be related. Therefore, the laboratory must correspond to one of the lecture courses taken to fulfill this IGETC requirement. A student cannot use lecture courses in two subjects and a laboratory in a third subject. It is expected that the lecture course is a prerequisite or co-requisite of the laboratory course. Lecture and lab courses may have separate course numbers. Lab science courses must include a clearly identified lab manual in the course outline. | |