

Happy Holidays!

Academic Assessment Newsletter



December 2015

General Education Assessment Feature

Professor: Rozalind Jester, Ph.D.

Class: OCB 1000C

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As a west coast native and a lifelong ocean lover, I followed my dream to pursue a career in ocean science. I have the privilege of teaching introductory-level marine science to primarily non-science majors. It is my mission to try to inspire my students to become ocean crusaders, and I am committed to providing them with memorable, hands-on experiences in the field and in the classroom.

Before I started teaching at FSW, I lived in Santa Cruz, CA, where I studied as a National Science Foundation Fellow at the University of California, Santa Cruz (UCSC). While I was there, I completed research on the food-web ecology of toxin producing algae (more commonly known as "red tide"), specifically those organisms responsible for human seafood poisoning events along the west coast of North America. After six years of graduate school, I finally earned my doctorate in Ocean Science. Though I loved doing research, I decided that I wanted to pursue a career teaching at the introductory level. I was a community college student, and it changed the path of my life. I'd like to give that experience back, and I believe it is incredibly important that we all have a basic understanding of the marine environment.

Exploration Activity 1 - How Can We Quantify Biodiversity?

When you finish this activity you should be able to:

Explain the meanings of the terms "population density," "species richness," "species evenness" and "biodiversity."

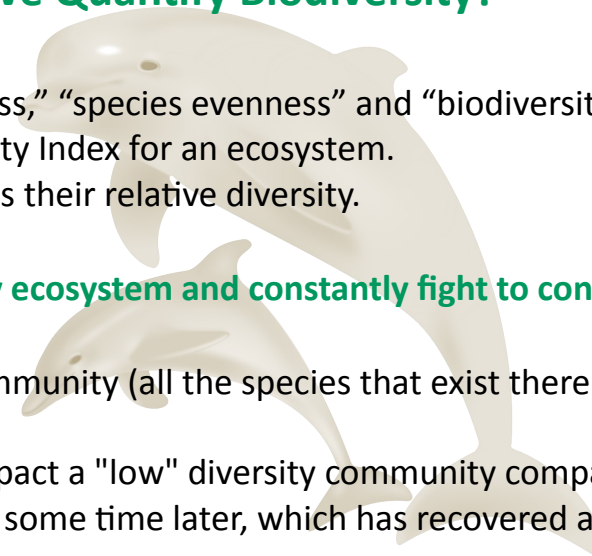
Calculate population density, species richness and the Simpson's Diversity Index for an ecosystem.

Apply the Simpson's Diversity Index to two or more ecosystems to assess their relative diversity.

Question 1. Biologists see high biodiversity as an indicator of a healthy ecosystem and constantly fight to conserve the species in these areas!

What types of "adverse" conditions might affect an entire biological community (all the species that exist there)? - Name at least one natural and one human induced.

Choose one of the scenarios you listed and describe how that would impact a "low" diversity community compared to a similar ecosystem with "high" biodiversity. Imagine revisiting these ecosystems some time later, which has recovered and why?



General Education Feature Continued

Question 2. What ecosystem were you assigned? Please include this on your Word document.

Your next task is to begin assessing your ecosystem. Follow my steps below to work your way through the calculations:

Question 3. Is your first impression of your "community" that it has a high or low biodiversity? Why?

Step 1. Determine what species are present in your "community" to the best of your ability. Identify them by common name and record them in your homework document. Below is a table that you may want to copy or recreate in your Word document.

Step 2. Count the total number of individuals for each species and record them in your table. Do this to the best of your ability -- for those species that there are a LOT of, just do your best to count them, so you have a close estimate.

Step 3. Once you have all the populations counted and recorded, the next step is to determine your species richness and your Simpson's Diversity Index. The table I have set up is intended to help walk you through the steps and make the math much easier! If you would like to use Excel please feel free. However, the document you submit to me should have all the data completed in a table as formatted below.

Question 4. Calculate the Simpson's Diversity Index for your community (show your work by completing the table) and record your value for "D."

Question 5. What is your species richness?

Once you have submitted your data, completed your answers to questions 1 - 5 above and prepared them in a Word document (organized & easily readable please), upload them to this assignment and submit them.

The last part of this assignment is to reflect on the data that you all have accumulated. In your discussion post:

State which community was the most diverse based on the data. How did you come to this conclusion? Consider both species richness and the Simpson's Diversity Index.

How did your calculations compare to others in class that evaluated the same ecosystem you did? Were your values similar? Were you close to the average? If not, why?

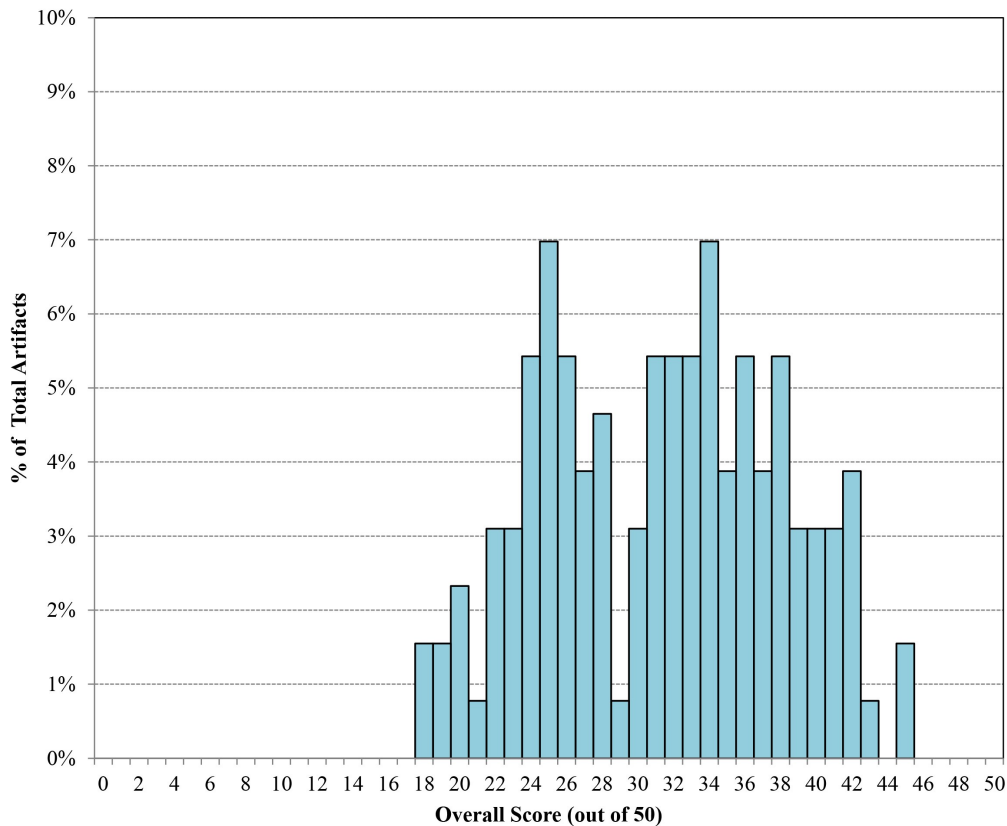
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Course-Level Assessment

Score Distribution (GEB 1011, Spring 2015)



GEB 1011 Study

The figure on the left illustrates the common course assessment used by GEB 1011, Introduction to Business. The graph depicts the distribution of scores across a 50-question assessment which ranged from the highest, 45/50, to the lowest, 18/50. These data exhibit a distinct bimodal score distribution (scores center two peaks at 25 and 34) as opposed to the more typical bell-shaped curve. On the surface, this characteristic might appear as though it may be caused by scores originating from students at different campuses or modalities (online vs. traditional). However, this pattern emerges in those subpopulations as well, meaning this distribution is at the student or assessment level.

A review of the results as depicted in this graph allow faculty to ask questions like “Does an understanding by the student at a certain level result in an additional set of questions likely to also be correct?”, or “Does that cut-off emerge from the material or assessment design?”. The Office of Academic Assessment can provide support for analyzing these data and conducting further studies as articulated by faculty.

LAC Member Profile



Dr. Kristi Moran
Mathematics Professor

Dr. Kristi Moran is the new Assessment Coordinator for the School of Pure and Applied Sciences - Department of Mathematics. Dr. Moran comes to FSW from Connecticut after having served as full-time mathematics faculty and Coordinator of Business Studies for seven years at University of Hartford and two years as a visiting professor at Central Connecticut State University. She has a BS and MS in mathematics, a MA in counseling, and an earned Doctorate in Educational Leadership with her published research focusing on the mathematical preparedness of high school students entering college. Dr. Moran’s research areas include retention, preparedness, and best practices utilizing technology. She brings more than 15 years of experience in public education as a classroom teacher, guidance counselor/director and assistant principal, as well as nine years as a mathematics professor at the college level.

A part-time resident of Gateway Greens in Ft. Myers since 2009, Dr. Moran, her husband George, an Education and Human Services Professor, and their two boys Dimitri (8) and Spiro (4), recently traded in their snow shovels and boots for sand chairs and beach umbrellas.