

Engaging Undergraduates in Fisheries Population and Ecosystem Dynamics

Dr. John Wiedenmann
Principal Investigator
Department of Ecology, Evolution,
and Natural Resources
Rutgers, the State University of New
Jersey
john.wiedenmann@rutgers.edu

Dr. Olaf P. Jensen
Co-Investigator
Department and Marine and Coastal
Resources
Rutgers, the State University of New
Jersey
ojensen@marine.rutgers.edu

Dr. Doug Zemeckis
Co-Investigator
Department of Agriculture
and Natural Resources
Rutgers, the State University
of New Jersey

Stock and ecosystem assessments are essential tools for sustainable fisheries management, and fisheries scientists must have a diverse set of quantitative and critical thinking skills to confront a wide range of challenges in this field. Recent changes in fisheries legislation mandating catch limits for all federally managed stocks has led to an increased workload for assessment scientists who have been asked to develop new assessments for previously unassessed stocks or to update existing assessments more frequently. This project supports a two-week course on fisheries for undergraduate students from across the U.S. to attract them to the field and teach them about a wide range of challenges and the quantitative tools necessary to address them.

The objectives are to cultivate a passion amongst the students for quantitative fisheries science while fostering an interest to pursue careers in the field, provide a foundation of knowledge of the approaches used in quantitative fisheries science that students can build upon throughout their careers, cultivate the critical thinking skills needed to understand and interpret results in population and ecosystem dynamics research, highlight the key challenges currently faced in fisheries and ecosystem assessment and

Table 1. Timeline of proposed activities for course development and implementation.

Task	2019					2020										
	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Course scheduling																
Attendance at OSU workshop																
Discussions with OSU*																
Student recruitment																
Evaluation of applicants																
Course preparation (lectures / activities)																
Course held (window of possible time)																
Completion of initial course evaluation																
Prepare and submit manuscript																

* discussions will focus on all aspects of the course, from recruiting, to course material, to logistics to determine what worked well, and what could be improved

fisheries management, emphasize the importance of collaboration in fisheries science, and provide students with key knowledge of the necessary next steps in their career path. The team's diverse expertise and available facilities at Rutgers University make this an ideal location to host the proposed course during Summer 2020. The group project will culminate in a scientific manuscript to be written shortly after completion of the course and submitted to a journal by the end of the year.

