

CETACEAN BEHAVIOR
COA 444
Gulf Coast Research Laboratory
Ocean Springs, Mississippi

Instructor:

Jeffrey W. Siegel, B.S., M.S.

E-mail: jeff.siegel@mgccc.edu

Mississippi Gulf Coast Community College, Harrison County campus
2226 Switzer Road, Gulfport, MS 39507 U.S.A.

General Information

Students will learn tools and techniques used in the systematic observation and documentation of *cetacean* behavior, focusing on *delphinids*, both in the wild and controlled habitat. Course includes both classroom lecture and field studies focused primarily on dolphins of the Mississippi Sound.

Textbooks

Cetacean Societies, Field Studies of Dolphins and Whales

Edited by Janet Mann, Richard C. Connor, Peter L. Tyack, and Hal Whitehead.
University of Chicago Press, 2000, ISBN: 0-226-50340-2

Good-natured Statistics

Ann Weaver, Bookman Publishing & Marketing, 2005, ISBN: 1-59453-639-2

Curriculum Topics

- Lecture topics: students will learn and discuss the scientific method, measurement and sampling techniques, experimental designs, operational definitions for variables, and statistical methods for data collection and analysis.
- Lecture topics: instructor will demonstrate the development of ethograms, assessing inter-rater reliability, and collating data obtained from ethograms.
- Field studies: instructor will teach rationale of transect randomization, species identification, gender identification, and photo-identification techniques.
- Field studies: students will learn navigation and boating techniques used near marine mammals. Students will learn about Marine Mammal Protection Act (MMPA) considerations for appropriate field observer techniques including how to avoid harassment of marine mammals as defined by MMPA.
- Field studies: students may conduct environmental and acoustic measurements, and observe perception systems of *delphinids*.
- Field studies: students will observe and document behavior of *delphinids*.
- Students will learn various computer statistical analysis techniques.
- Students will participate in analysis of ethograms created from behavioral observations, and practice report writing skills using proper style.

ADA Syllabus Statement: If a student has a disability that qualifies under the Americans with Disabilities Act (ADA) and requires accommodations, he/she should contact the

Office for Disability Accommodations (ODA) for information on appropriate policies and procedures. Disabilities covered by ADA may include learning, psychiatric, physical disabilities, or chronic health disorders. Students can contact ODA if they are not certain whether a medical condition/disability qualifies.

Address:

The University of Southern Mississippi
Office for Disability Accommodations
118 College Drive # 8586
Hattiesburg, MS 39406-0001

Voice Telephone: 601.266.5024 or 228.214.3232 Fax: 601.266.6035

Individuals with hearing impairments can contact ODA using the *Mississippi Relay Service* at 1.800.582.2233 (TTY) or email ODA at oda@usm.edu.

Class Schedule and Reading Assignments

COA 444 is a two-week class consisting of reading assignments, lectures, and fieldwork (lab). Fieldwork labs scheduled on research vessels are subject to boat availability. Lectures occur on days the class is not scheduled for fieldwork (exact scheduling of all activities subject to change due to boat availability and weather conditions).

Reading assignments from Cetacean Societies:

1. Pages 49-64, & 9-22 Day 1
2. Pages 22-49 Day 2
3. Pages 65-87 Day 2
4. Pages 91-126 Day 3
5. Pages 199-223 Day 4
6. Pages 224-246 Day 6
7. Pages 247-269 Day 7

Reading assignments from Good-natured Statistics:

1. Pages 1-18 Day 1
2. Pages 18-30 Day 2
3. Pages 31-48 Day 3
4. Pages 48-61 Day 4
5. Pages 61-73 Day 6
6. Pages 73-87 Day 7
7. Pages 89-109 Day 8

Lecture Topics:

1. Science, variables, and research design
2. About whales and dolphins
3. Sampling methodology and ethograms
4. Behavioral states and events
5. Basic statistics
6. Whale and dolphin behavior and behavioral data collection techniques
7. IACUC, NEPA, and research permits

Assignments:

1. Quiz 1 (12 points)
2. Quiz 2 (12 points)
3. Provide introductory paragraph with hypothesis for research manuscript (5 points)
4. Quiz 3 (11 points)
5. Create Ethogram (10 points)
6. Complete 3 Ethograms (10 points)
7. Manuscript introduction and methods (10 points)
8. Quiz 4 (15 points)
9. Data analysis (10 points)
10. Final Exam (25 points)
11. Manuscript (25 points)