

BIOL 527, 527L, 492L
MW 1300-1700
BIOLOGY OF PELAGIC ORGANISMS

Spring 2008

Instructor: Dr. Michael Franklin, Sci 4112C, ext.7145, DrMFranklin@aol.com
G.A.: Brent Haggin, Sci 4112. x4037, bmh22765@csun.edu
Office Hours: MW 1100-1230 hrs , or by appointment

Text: Nybakken, James W. And M.D. Berness 2005. *Marine Biology: An Ecological Approach*. 6th Edition. Strunk, W. And E.B. White 2000. *The Elements of Style*, 4th Edition.

***Original papers from the primary scientific literature will also be assigned.

Grading:

Lecture -

1 Exam (100 pts)	100 pts
Cumulative Final (150 pts)	150 pts
GP oral reports	50 pts
Group Project Report	100 pts
Participation/Attendance.....	50 pts
Annotated Bibliography.....	50 pts

TOTAL: **500 pts**

Laboratory -

Midterm Practicum (and mini prac)	75 pts
Final Practicum	150 pts
Class Project Report.....	100 pts
Notebook (Lab and Field 200 pts total).....	100 pts
Participation/Attendance	50 pts

TOTAL: **475 pts**

Field Studies -

Field trip summaries.....	200 pts
Participation/Attendance	100 pts
Field Trip Report	50 pts
Notebook (Lab and Field 200 pts total).....	100 pts

TOTAL: **450 pts**

GRADING SCALE (% TOTAL)

100 - 94 = **A** , 93 - 90 = **A-**, 89 - 87 = **B+** , 86 - 84 = **B**, 83 - 80 = **B-**, 79 - 75 = **C+**,
74 - 70 = **C**, 69 - 65 = **C-**, 64 - 61 = **D+**, 60 -58 = **D-**, <55 = **F**

Biology Department Withdrawal Policy. – Unrestricted withdrawal are permitted only until the end of the third week. Thereafter, requests to drop a class will be honored only when a verifiable serious and compelling reason exists and when there is no viable alternative to withdrawal. Poor performance is NOT an acceptable reason for withdrawal. During the last three

weeks of the semester withdrawal will not be approved except when a student is withdrawing from ALL classes for verifiable medical reasons.

Cheating and plagiarism - All forms of cheating and plagiarism (the claiming of work of others as your own) are expressly forbidden by University rules and will not be tolerated. Any student observed cheating will be subject to disciplinary action by the University and may receive a grade of F for an assignment, or for the entire course (in short, don't do it).

Course Note: This class introduces students to the diversity and ecology of marine life. This is not an easy class (this isn't underwater basket-weaving)! The grade I report at the end of the semester is the one you have earned (There will be no "victims" in my classes, and I don't play favorites).

COURSE SCHEDULE

<u>TOPIC</u>	<u>LAB</u>	<u>READING</u>
UNIT I: INTRODUCTION		
Introduction; Course Logistics	Check-in; Midwater Id.	Chap 1
Pelagic Environment	Midwater Nekton Id.	"
Sampling Methodology	"	"
UNIT II: SURVEY OF PELAGIC ORGANISMS		
Phytoplankton	Class Midwater Nekton Project (CMNP)	Chap 2
Zooplankton	CMNP	"
Nekton: Crustaceans	CMNP	Chap 3
Nekton: Cephalopods	CMNP	"
Nekton: Epipelagic Fishes	CMNP	Chap 4
Nekton: Deep Sea Fishes	CMNP	"
Nekton: Marine Reptiles	CMNP	Chap 3
Nekton: Marine Birds	CMNP	"
Nekton: Marine Mammals	CMNP	"
UNIT IV: ADAPTATIONS TO PELAGIC LIFE		
Buoyancy & Locomotion	Group Research Project (GRP)	Denton, 1974
Thermoregulation & Warm-bodied Fishes	GRP	Carey, 1973
Vertical Migration	GRP	Dietz, 1962
Bioluminescence	GRP	Robison, 1995
Orientation and Navigation	GRP	Lohman, 1992
Echolocation and Communication	GRP	Norris <i>et al.</i> , 1961
Diving Adaptations	GRP	Kooyman <i>et al.</i> , 1981

UNIT V: FISHERIES BIOLOGY

Fisheries
Whaling
Tuna Ecology & Fisheries

GRP
GRP
GRP

Chap 11
Allen, 1980

TENTATIVE EXAM & REPORT DUE DATES

Mar 10 W MIDTERM EXAM
Mar 05 W MIDTERM PRACTICUM; CMP DUE
May 7 W PROJECT REPORTS; GP DUE
May 7 W LAB PRACTICUM FINAL
May 12 M FINAL EXAM (1245-1445 hrs)

TENTATIVE FIELD TRIP SCHEDULE

Feb 06 W FISH MARKET SURVEY
Mar 12 W R/V YELLOWFIN - MIDWATER TRAWLING (1200-2200 hrs)
TBA VISIT TO MONTEREY AQUARIUM (mid to late February) AND/OR
TBA VISIT TO SEA WORLD, SAN DIEGO

Additional Course Requirements:

Lab and Field Assignments (200 pts): You are required to keep a notebook that contains the sketches, observations, and data recorded during labs and any field trips. The purpose of this book is to help focus your thinking and provide a detailed record of all of your observations. A loose-leaf binder with blank paper is best so you can remove pages, but keep the rest for study. Don't skimp on the detail! For diagrams and illustrations, it is best to use plain white 3-hole paper. Use a fairly hard (#3) drawing pencil and colored pencils if you wish. The drawings are to help you remember detail, and understand the organisms. Artistic ability is not required, but attention to detail is.

The field trips are designed to enhance your learning experience.