Appledore Island, Isle of Shoals, Kittery, Maine
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Shoals Marine Laboratory
Marine Mammal Biology (BIOSM 1500/MEFB 403)
May 30 – June 13 2022

Course Syllabus and Schedule

Faculty: Dr. Nadine Lysiak (nlysiak@suffolk.edu), Suffolk University

TA: Jess Veo (jessveo@gmail.com)

Prerequisites: Completion of first year of college

Class enrollment limit: 18

Credit hours: 3

Course Objectives/Goals:
This course will explore the biology and conservation of the whales and seals, with a particular focus on species of the Gulf of Maine. Lectures will examine many facets of marine mammal science including: taxonomy and species diversity, morphological and physiological adaptations for life in the sea, foraging ecology and behavior, reproductive cycles, bioacoustics, conservation and health, anthropogenic interactions, and management of threatened species. Land and open-water observations of whale and seal behavior will give students hands-on opportunities to study marine mammals in the field. Field and laboratory sessions expand on topics covered in lecture. Students will complete a field study on seal population monitoring and laboratory dissections of a small marine mammal.

Course Materials:
1. Background readings and research literature, will be provided for students electronically.
2. Google Drive: https://drive.google.com/drive/folders/1HeBbpoNqNMPoZAs988R7J3bjgH1ZqVB8?usp=sharing

Reference reading for additional information is available at SML Library

Classroom: Hamilton, downstairs
Laboratory: Palmer-Kinney
Housing: Dorm 2

Assignments & Grading:

Three quizzes will be given during the course. The schedule (next page) lists what content will be on each quiz. Field and lab activities will periodically be assigned for credit. Students will also complete an independent synthesis activity that will be graded as a final project.

Quizzes	30%
Field & Lab Projects	30%
Final Project	20%
Participation/Community	20%

Participation: Success at Shoals requires a positive attitude and a willingness to accept changes in the schedule with grace. Island living demands respect for your fellow classmates, and residents on Appledore. Students are expected to actively participate in all facets of this course, and to display good citizenship while at Shoals. 20% of your grade will be based on the faculty's subjective evaluation of your personal involvement in course activities. If you have any questions or comments about the course, please contact the instructors directly.

Expectations and Conduct:

Students are responsible for fully understanding all of the information presented in this syllabus. If there are any questions regarding this information, it is the student's responsibility to bring it to the instructor's attention. In addition, students are responsible for attending all activities associated with this course and completing all assignments. Students are responsible for asking questions anytime they need clarification (remember, there is no such thing as a bad question).

Every student is responsible for their own behavior- specifically in being respectful and collegial to other students and with instructors. Students are responsible for fully understanding and adhering all of the information presented in the SML Appledore Handbook (http://www.sml.cornell.edu/sml_forms.html)

1. *Personal Technology.* Do not use cell phones or similar devices in the classroom or during course activities. If you take notes with your computer or tablet, disable wireless access during lecture.
2. *Computer Facilities.* The lab has a modest computer facility in Laighton Library; please treat this shared facility with respect. Printers are available, but please limit printing to your FINAL document (if required).
3. *Transmission of Course Materials.* Students are not authorized to replicate, reproduce, copy or transmit lectures and course materials presented, or derivative materials including class notes, for sale or free distribution to others without written consent of the instructors who are the original source of the materials.
4. *Academic Integrity***.** Any work submitted must be your own. Uncredited use of another person's words, data or images is considered plagiarism, a serious violation of the Code, whether the material comes from another student, a web site, or a published paper. Students must adhere to Cornell's and UNH's Policy for Academic Honesty/Plagiarism and Discrimination
    i. Cornell: http://cuinfo.cornell.edu/aic.cfm
    ii. UNH: http://www.unh.edu/vpsas/handbook/welcome-university-new-hampshire
5. *Disabilities & ADA Accommodation*: Students with a disability must contact Cornell's (420 CCC building; 607-254-4545) or UNH's Student Disability Serviceshttp://www.unh.edu/disabilityservices) four weeks prior to start of class for confidential discussion of needs and for registration to verify eligibility for academic accommodations. No retroactive accommodations can be made.
6. *Mental Health:* Shoals Marine Laboratory cares about you and your well-being. If you experience unusual personal or academic stress during the course or need to talk with someone about a personal problem, seek support from your instructors as soon as possible. In addition, any SML staff is available for consultation 24/7. Find staff in the office in the Hamilton House between 8am – 7pm or knock on the door of Bartell House after hours

Schedule: Tentative, WILL change due to weather and tides. Check whiteboard in Kiggins Common for updated schedule postings.

Meals (Mon-Sat):	Breakfast: 7:30	Lunch: 12:30	Dinner: 18:00	
Meals (Sunday):	Brunch: 10:00		Dinner: 17:00	
Abbreviations:	Lec: Lecture	Lab: Laboratory	F: Field	G: Guest Lecture

Date	Low Tide	Time	
Mon May 30			**ARRIVAL DAY (~15:30)**
		Afternoon	Introduction to SML, Fire & Water
			F: Campus Tour, unpack and get settled
	17:59		
		Evening	Course & Island Intro, syllabus, Island community expectations
Tue May 31		Morning	SF Lec: Physical & Oceanographic GoM
			Lec: Species Diversity & project
			SF/Parasites: Island Walk @ 11:00
	06:38	Afternoon	Lab: Species Diversity
	18:37		
			SF/Parasites: Intertidal @ 16:00
		Evening	ROCK TALK - Larry Alade (via Zoom @ 20:00)
Wed Jun 1		Morning	Lec: Anatomy & Physiology I - Bones
			Lab: Skulls & Skeletons
	07:15	Afternoon	Lec: Anatomy & Physiology II - Guts
	19:14		SF: Lobster Gear
		15:30	*FOOD RUN*
		Evening:	Lab: Species Presentations (19:30)
Thur Jun 2		Morning	SF Lec: Ocean Policy
			Lec: Management of Marine Mammals
			Lec: Anatomy & Physiology III - Diving
	07:53	Afternoon	**SF G: Heidi Henninger**
	19:52		**SF G: Jon Hare**
			Joint Lecture: Whales & Parasites
		Evening	Study Time
Fri Jun 3		Morning	***Quiz #1: Diversity, Distribution, Anatomy & Physiology***
			Whale Watch 11-3
	08:31		
	20:32	Afternoon	Lec: Seal Population Biology, Survey Methods (JV)
		Evening	Video Night: *Inside Nature's Giants - Sperm Whale*

Sat Jun 4		Morning	**R/V Heiser: Seal Survey 09:00 AM**
			Lab: Duck Island Population Census
		Afternoon	Lab: Seal Diet & Parasite Lab @ PK
	09:12		
	21:16		
		Evening	Sunset art project - Scrimshaw
Sun Jun 5		Pre-Brunch	Dorm clean up
		Post-Brunch	Seal Necropsy
	09:55		
	22:03		
		Evening	Field Ornithology Symposium (Kiggins @ 19:15)
Mon Jun 6		Morning	Lec: Nervous & Sensory Systems
			Lec: Sound Reception & Production
	10:39	Afternoon	Lab: Passive Acoustic Monitoring
	22:54		
		Evening	Video Night: *Sonic Sea*
Tues Jun 7		Morning	Lec: Foraging Ecology & Behavior
			F: Plankton tow @ 19:00
		Afternoon	Lab: Process plankton tow in P-K
	11:25		
	23:47		***Quiz #2: Diving, Sensory Systems***
		Evening	ROCK TALK: Dr. Ian Owens (on island @ 20:00)
Wed Jun 8		Morning	Lec: Reproductive Biology & Behavior
			F: *R/V Heise*r Duck Island Seal Survey
	12:13	Afternoon	Lec: Stranding Science & Response
			F: Group Hike
		15:30	*FOOD RUN*
		Evening	
Thur Jun 9		Morning	Lec: Human Interactions & Management
			Lec: Marine Mammal Health
	00:42		**G: Dianna Schulte - Blue Ocean Society**
	13:03	Afternoon	beach clean up marine debris app

			Project Time
		Evening	Video Night: *The Last Right Whales*
Fri Jun 10		Morning	Lec: Modern Commercial & Subsistence Harvests
			Project Time
	01:40 13:55	Afternoon	***Quiz #3: Reproduction, Foraging, Human Interactions, Strandings***
		Evening	Career Panel w Faculty and Staff of SML
Sat Jun 11		Morning	Project Time, practice presentations
	02:36 14:47	Afternoon	Project Time
		Evening	Marine Mammal Symposium @ 19:00
Sun Jun 12		Pre-Brunch	
		Post- Brunch	
	03:31 15:39		Island & Classroom Cleanup
			Paper due @18:00, Fisheries & Parasites Symposium @ 18:00
		Evening	Night lighting w SFisheries
Mon Jun 13	04:23	Morning	Pack, Final Dorm & Lab Clean up
			DEPARTURE DAY (9:45 AM)