

## BIOLOGY 393: COASTAL ORNITHOLOGY

### Marine Science Consortium- Summer Term 2

**Instructor:** Dr. Nathan E. Thomas

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#### Meeting Time

Due to the nature of this course, we will have meeting times that change every day. It is your responsibility to make sure you know when we are supposed to meet and what we will be doing during that time. In general, we will meet from Monday through Friday for the duration of this course.

#### Books

##### Required:

Dunn, J. L., J. Alderfer. 2011. *National Geographic Field Guide to the Birds of North America, 6<sup>th</sup> ed.* National Geographic. ISBN: 9781426208287

Ehrlich, P. R., D. S. Dobkin and D. Wheye. 1988. *The Birder's Handbook.* Simon and Schuster. ISBN: 0671659898

##### Very Strongly Recommended:

Scott, G. 2010. *Essential Ornithology.* Oxford. ISBN: 0198569971

#### Prerequisites

One year of introductory biology or consent of the instructor.

#### Course Goals

This course is designed so that the student will achieve a strong understanding of a variety of aspects in ornithology with the strongest focus on field techniques, including identification. Material covered will include evolution, anatomy, physiology, behavior and ecology. A portion of the course will include an overview of the avian families of North America, especially those found in coastal regions along the mid-Atlantic seaboard. The field component for this course will include mist netting, census techniques and field identification. Emphasis will be placed on field research and a portion of the course will involve the development of a novel research idea in ornithology.

#### Course Structure

Each day will be split into three different sections; lecture topic discussion, lab identification, and field activities. During lecture I will talk about the topics shown in the Schedule of Activities below. Please be prepared to discuss these topics and have your own thoughts about the subject matter ready for inclusion in the lecture. Lectures will cover material in the text, but will also include outside material. Your lecture notes are of vital importance. Anything said in lecture could appear on an exam. You may wish to bring your books to lecture, as we will often reference points made in the book and discuss them further.

#### Birder's Handbook

In addition to our normally covered lecture material we will regularly be using information found in the Birder's Handbook. At the end of each day every student will be responsible for one bird that they must read about in this book. Most of the entries direct you to additional essays found on the right hand pages of this book, you are also responsible for reading these. Sometime during the next day, likely while we are in the field, every student will inform the others about the bird that they investigated the night before. This will provide more detailed information for every student about each bird that we see.

### Tentative Schedule of Activities

This syllabus is approximate with regard to timing. We will almost certainly diverge from the information listed here and adjust the pace of the course, as well as the material, as necessary. If I go faster or slower than the schedule indicates, I will make an adjustment and only the information covered will be on each respective exam.

Week Day	Topic	Reading	Laboratory Identification	Field
Week 1 Mon	Birding, Flight and Avian Evolution	1, 2	Anseriformes, Galliformes	Birding Etiquette, Bird Parts, Easy ID
Week 1 Tue	Finish Avian Evolution and Evolution of Flight	2	<b>Topo Quiz;</b> Gaviiformes, Podicipediformes, Procellariiformes, Suliformes, Pelecaniformes	Sunrise Assateague
Week 1 Wed	Avian Physiology		Accipitriiformes, Falconiformes, Gruiformes	AM Monitor
Week 1 Thur	More Physiology and Foraging		Charadriiformes (Charadriidae, Haematopodidae, Recurvirostridae, Scolopacidae)	Wallops AM
Week 1 Fri	Energetics and Metabolism; Start Behavior and Vocalizations	6	<b>Quiz 1</b>	
Week 2 Mon	All Day Trip	5, 6	Charadriiformes (Laridae, Stercorariidae)	All Day Trip
Week 2 Tue	Finish Behavior and Vocalizations	5, 6	Columbiformes, Cuculiformes, Strigiformes, Caprimulgiformes, Apodiformes, Coraciiformes, Piciformes	AM/All Day Parker
Week 2 Wed	<b>Exam 1</b> and Start Breeding Strategies		Passeriformes (Tyrannidae, Vireonidae, Corvidae, Alaudidae, Hirundinidae)	Warblers
Week 2 Thur	Breeding and Breeding Systems	4	Passeriformes (Paridae, Sittidae, Certhiidae, Troglodytidae, Polioptilidae, Regulidae, Turdidae, Mimidae, Sturnidae, Motacillidae, Calcariidae)	<b>Field Exam</b>
Week 2 Fri	Nests, Incubation and Parental Care		<b>Presentations</b>	
Week 3 Mon	Migration and Habitat Use	5	Passeriformes (Parulidae)	Shoreline
Week 3 Tue	Ecology	3, 7	<b>Quiz 2;</b> Passeriformes (Emberizidae, Cardinalidae, Icteridae, Fringillidae, Passeridae)	AM Monitor
Week 3 Wed	Conservation	7	Catch-up	<b>Field Exam</b>
Week 3 Thur	<b>Exam 2</b>	7	<b>Presentations</b>	
Week 3 Fri	Summary and Final Activity	7		

## Research Project

Reading and familiarity of primary literature in ornithology are important in structuring a sound understanding of fundamental concepts. Each student is required to use a variety of sources, including primary literature, to generate a brief presentation for the class. The topic will be one group of coastal birds that you will investigate on your own. You are responsible for understanding when the birds use a coastal environment, what resources are used, their current conservation status and what the current and potential future major conservation threats are for each group as well as how to mitigate each. These will be presentations that are approximately 12 minutes long with a few more minutes for questions. Presentations will be graded by your instructor as well as your peers.

## Exam and Grading Policy

The exams may include multiple choice, fill-in-the-blank, definitions, short answer, and essay questions. Lab exams will be fill-in-the-blank questions. Exams and quizzes will be given only at the scheduled times, but these dates may change. Any change to the schedule will be announced to the class. For exams, if you have any questions, they must be presented to me within two days of when the exams are returned. In addition, if you feel your answer was correct you may present this in writing, documenting the correctness of your answer. Discussions concerning your request will be made at an agreeable time outside of the scheduled class period. I will not debate the correctness of your answer in the classroom. You may see me after class or by appointment. All assignments are due at the start of the lecture or lab period on the due date or they are considered to be late. LATE WORK will lose 15% of the total points available for each day it is late. If you miss more than one lab/field activity, I will mark your final grade down 15% for each class missed. If you miss three or more class or lab periods you will receive an F for the course.

## Academic Honesty

All work must be your own. Read and understand the SU Academic Dishonesty policies ([www.ship.edu/~senate/AcademicPolicies\\_000.swf](http://www.ship.edu/~senate/AcademicPolicies_000.swf)). Cheating or plagiarism will result in an **F for the course**, and referral to the Dean of Students at your home institution.

## Cell Phone, Pagers, and MP3 Players

All cell phones, pagers and MP3 players need to be turned off and put away (in a backpack or some other bag) before coming to class and need to stay turned off during class. Please do not put phones on vibrate as they still make noise and require your attention during class.

## Point Allocation in the Course

Assignment	Points	My Points
Exam 1	100	
Exam 2	100	
Quiz 1	50	
Quiz 2	50	
Field Exam 1	25	
Field Exam 2	25	
Presentation	50	
<b>Total</b>	<b>400</b>	

**Approximate Grade Scale:** 90-100% = A, 80-89 = B, 70-79% = C, 60-69% = D, 59% or lower = F

I will use the full grading scale for final grades: A, A-, B+, B, B-, C+, C, D, and F.